Out Of The Box

Consultancy

SENSATIONAL STUDY BUDDY

THIRD EDITION

Study Guide and Strategies

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Who are we?

Out Of The Box Consultancy

We are a performance improvement consultancy that has expertise and wide experience in the areas of; health, welfare, education and also the business sector.
As our name suggests, we take a refreshing innovative approach to both our services and products, always ensuring that there is performance improvement.
Our customers range from school students through to management teams.
Out Of The Box Consultancy was established in December 1995 by Paul Butler and Linda Norfolk,
Paul Butler is principal consultant and is joined by a number of associates with various expertise and experience in both the domestic and international arena.
We are now based in the town of Foxton on the North Island of New Zealand, and service most of the North Island. Over the last seven years we have entered the world of e-commerce, and now have over 7000 customers purchasing our products and services in 8 countries.

For more information on our services and products please visit our web site: www.outofthebox.co.nz

Sensational Study Buddy

It has been said that learning chiefly involves application: the application of the seat of the pants to the seat of the chair. This is something of an oversimplification, perhaps, but it does hold true for most of us. It's true that a high I.Q. and a photographic memory are helpful, but they are seldom enough in themselves. We all know of bright, intelligent individuals who aren't making the most of their talents because they are reluctant to work.

What we're talking about, of course, is motivation. Most of us have to work at learning, and this means studying. It means hard work. It means squirming in an uncomfortable chair, trying to concentrate on abstract ideas about the causes of World War I, for example, when we're wondering--and often worrying about--what's going to happen to us tomorrow. So how do you get yourself into the frame of mind in which the things you *need* to think about take precedence over the things you *want* to think about? It's not easy. As young children, we have a great ability to learn and to see past setbacks. As we begin to meet expectations created by our families, schools, and our environment, the motivation of our early years shifts from our goals to pleasing others, and often our desire to learn suffers.

The purpose of these study guides and study strategies is to assist students with **motivation**, with **what** to learn, and also with **how** to learn. There were 78 guides and strategies in The Sensational Study Buddy which broadly cover: *Preparing to learn.- How to Study.- Classroom Participation. - Learning with Others. - Reading Skills. - Writing Skills.- Science and Maths.- Preparing for Tests/Exams. – Taking Tests/Exams. – Presenting Projects/Speeches.*
The Sensational Study Buddy (2nd edition) was added in 2004 with a further 19 tools to assist in the areas of: *Mnemonics. – Lateral Thinking – Decision Making.* The third edition was added in 2007 and has an additional comprehensive tool covering the area of: *Self Hypnosis and Study.*
This study guide compilation is designed to be of use to intermediate/middle school students, secondary school students through to tertiary students, although it should be noted that some of the tools, guides and strategies may need to be adapted for use with intermediate/middle school children.

We acknowledge the work of Joe Landerberg, St Thomas University, Minnesota, USA who has compiled many of the following study guides and strategies found in the "The Sensational Study Buddy"

PREPARING TO LEARN

Learning to Learn

Some very important basic rules:

Before class:

- **Do your homework!**
  Read critically; form your own opinions.
- **Review your notes**
  from the previous lecture and reading for the day.
- **Communicate immediately with teachers**
  about any study problems.
- **Focus on the task at hand before class:**
  Take a moment of silence to gather your thoughts and mentally prepare yourself to the topic.
- **Write any objectives**
  that come to mind at the head of your notepaper:
  - Preparing for an up-coming test.
  - Understanding a particular concept.
  - Gaining a good foundation on a topic.
  - Understanding or reviewing the readings.

In Class:

- **Arrive on time for class.**
  Teachers do not take lateness lightly.
- **Position yourself in the classroom**
  to focus on the subject matter; consider the best location for:
  - Listening.
  - Asking questions.
  - Seeing visual materials.
  - Discussing--not only with the teacher but also your classmates.
- **Avoid distractions**
  that may interfere with your concentration (see Chapter “Studying” pg 39) (daydreaming, looking around the room, talking to a friend, passing notes, dozing).
- **Evaluate as you listen:**
  - Decide what is important and should be placed in your notes (see Chapter “Classroom Participation” pg 55) and what can be left out.
  - Listen long enough to be sure you understand what was said before writing.
  - *Ask clarifying questions* (but wait for "breaks" in the teacher's stream).
- **Review your class objective(s)** throughout the class period.
  - Did your objective(s) mesh with the teacher’s introductory remarks?
  - Has the class digressed from stated objectives, yours or the teacher’s?

- **Write a "to do" list** including:
  - Assignments.
  - Reviewing difficult concepts.
  - Joining study groups.
  - Making appointments with a study pal, teacher, or instructor. One resource often overlooked is a classmate who seems to have a good grasp of the material. If it seems appropriate, seek the individual out for help.

Periodically ask yourself if the course is meeting your objectives. If you find yourself dissatisfied with a particular class or the course in general, make an appointment with the teacher/instructor to discuss your expectations.

The earlier the better.

Material adapted from: Gail M. Zimmerman, Assistant Dean of First-Year Students and Academic Counselor, Dartmouth College and Bob Nelson, et al, Learning Resource Centres, Rutgers University

Time Management

Time Management is setting *and following* a schedule of study
in order to organise and prioritise your studies
in the context of competing activities of work, family, etc.

Guidelines:

- Monitor your time.
- Reflect on how you spend your time.
- Be aware of when you are wasting your time.
- Know when you are productive.

Knowing how you spend your time should aid you in planning and predicting project completion:

- Have a "To Do" list. Write down things you have to do, then decide what to do at the moment, what to schedule for later, what to get someone else to do, and what to put off for a later time period.
- Have a daily/weekly planner. Write down appointments, classes, and meetings on a chronological logbook or chart. Always know what's ahead for the day, always go to sleep knowing you're prepared for tomorrow.
- Have a long-term planner. Use a monthly chart so that you can always plan ahead. Long term planners also serve to remind you to plan your free time constructively.

Planning for an effective study schedule:

- Allow sufficient time for sleep, a well-balanced diet, and leisure activities.
- Prioritise assignments.
- Prepare for discussion/recitation courses before class.
- Schedule time to go over lecture material immediately after class; remember: Forgetting is greatest within 24 hours without review
- Schedule fifty-minute blocks of study.
- Choose a place free from distractions to study.
- Plan to use "dead time".
- Schedule as much study time as possible during daylight hours.
- Schedule a weekly review.
- Be careful not to become a slave to your schedule.

The satisfaction of "crossing off" the completed task can yield a sense of accomplishment, and even a little sense of reward!

Goal Setting and Schedules

Set Your Goals:

List your major goals:	More important	Less important
Long term		
Long/short term		
Short term		

Determine how you spend your time:

Column I: list the amount of time you expect to spend in weekly activities in hours.		Column II: multiply your recurring daily activities by five (weekdays) or seven (weekly) to estimate the number of hours you engage in these recurring activities in a week.	
Class time	_____	Commuting/Travel time (multiplied by 5=)	_____
Study Time	_____	Meal preparation/eating (multiplied by 7=)	_____
Employment/Internship	_____	Personal care (multiplied by 7=)	_____
Family	_____	Sleep (multiplied by 7=)	_____
Volunteer Activities	_____		
Exercise	_____		
Regularly scheduled functions	_____		
(clubs, church, etc.)	_____		
Socialising with friends	_____		
Chores and Errands	_____		
Other	_____		

Total A:	_____	Total B:	_____
Total A + B = Total C: _____ hours			
There are 168 hours in a week. Subtract Total C from 168 = _____ Uncommitted hours (168 - total C)			

Evaluate Your Time Management:

- How much time have you set aside to meet your goals (above)?
- Does your time allocation reflect the priority of your goals?
- Can your uncommitted hours be reallocated to meet your priorities?

List four activities you would like to do in your uncommitted time

Make your schedule:

Semester Calendar:
This is the macro view, don't include too much detail**.**

- **Pick up a copy of your institution's/teacher's semester calendar.**
- **Enter important dates**
  such as mid-term and final exams, holidays, breaks, study days, etc.
- **Enter dates for course quizzes and exams,**
  important papers and projects, even social activities!
- **Post this schedule in your study area**
  for referral and review, and to chart your progress.

Projected weekly schedule.
This is the micro view, plan your activities in blocks of hours throughout the week

- Fill in all on-going activities, such as classes, study times, appointments, work, and social events.

Actual weekly schedule

- Modify and detail the Projected Weekly Schedule.
- Evaluate your time usage for modification according to priorities.

  Are you using your time to best achieve your goals?
  Are you studying when you said you would?
  Can you identify areas when you can use your time more efficiently?

Daily schedule or "To Do List"

- Complete the night before or the first thing each morning.
- Include things you intend to accomplish that day, including assignments, appointments, and errands.
- Check off items you have done to give yourself a sense of completion.

Benefits of Following a Schedule:

- Written plans make responsibilities seem more manageable and less overwhelming.
- Scheduled tasks are more likely to be completed.
- If you are current on reading and homework assignments, you will avoid the need for last minute cramming for tests.

Stress Management

First, you must learn to recognise stress:

> Stress symptoms include mental, social, and physical manifestations. These include exhaustion, loss of/increased appetite, headaches, crying, sleeplessness, and oversleeping. Escape through alcohol, drugs, or other compulsive behaviour are often indications. Feelings of alarm, frustration, or apathy may accompany stress.

If you feel that stress is affecting your studies,
a first option is to seek help through your educational counselling service.

Stress Management is the ability to maintain control when situations, people, and events make excessive demands. What you can do to manage your stress? What are some strategies?

Look around
See if there really is something you can change or control in the situation

Remove yourself from the stressful situation
Give yourself a break if only for a few moments daily

Don't sweat the small stuff
Try to prioritise a few truly important things and let the rest slide

Selectively change the way you react,
but not too much at one time. Focus on one troublesome thing and manage your reactions to it, him/her

Avoid extreme reactions;
Why hate when a little dislike will do? Why generate anxiety when you can be nervous? Why rage when anger will do the job? Why be depressed when you can just be sad?

Learn how to best relax yourself
Meditation and breathing exercises have been proven to be very effective in controlling stress. Practice clearing your mind of disturbing thoughts.

Set realistic goals for yourself
Reduce the number of events going on in your life and you may reduce the circuit overload

Don't overwhelm yourself
by fretting about your entire workload. Handle each task as it comes, or selectively deal with matters in some priority

Change the way you see things
Learn to recognise stress for what it is. Increase your body's feedback and make stress self-regulating

Do something for others
to help get your mind off your self

Get enough sleep
Lack of rest just aggravates stress

Work off stress
with physical activity, whether it's jogging, tennis, gardening

Avoid self-medication or escape
Alcohol and drugs can mask stress. They don't help deal with the problems

Develop a thick skin
The bottom line of stress management is "I upset myself"

Try to "use" stress
If you can't fight what's bothering you and you can't flee from it, flow with it and try to use it in a productive way

Try to be positive
Give yourself messages as to how well you can cope rather than how horrible everything is going to be. "Stress can actually help memory, provided it is short-term and not too severe. Stress causes more glucose to be delivered to the brain, which makes more energy available to neurons. This, in turn, enhances memory formation and retrieval. On the other hand, if stress is prolonged, it can impede the glucose delivery and disrupt memory." **All Stressed Up**, St. Paul Pioneer Press Dispatch p. 8B, Monday, November 30, 1998

Most importantly, if stress is putting you in an unmanageable state or interfering with your schoolwork, social and/or work life, **seek professional help at your school counselling centre**

Before a test:

- **Be prepared!**
  Learn your material thoroughly.
- **A programme of exercise is said to sharpen the mind.**
- **Get a good night's sleep the night before the exam**
- **Approach the exam with confidence:**
  View the exam as an opportunity to show how much you've studied and to receive a reward for the studying you've done.
- **Don't go to the exam with an empty stomach.**
  Fresh fruits and vegetables are often recommended to reduce stress. Stressful foods can include processed foods, artificial sweeteners, carbonated soft drinks, chocolate, eggs, fried foods, junk foods, pork, red meat, sugar, white flour products, chips and similar snack foods, foods containing preservatives or heavy spices.
- **Take a small snack, or some other nourishment**
  to help take your mind off of your anxiety. Avoid high sugar content (lollies) which may aggravate your condition.

- **Allow yourself plenty of time**,
  especially to do things you need to do before the test and still get there a little early.

- **Relax just before the exam.**
- **Don't try to do a last minute review.**

During a test:

- **Read the directions carefully.**
- **Budget your test taking time**.
- **Change positions to help you relax.**
- **If you go blank, skip the question and go on.**
- **If you're taking an essay test**
  and you go blank on the whole test, pick a question and start writing. It may trigger the answer in your mind.
- **Don't panic**
  when students start handing in their papers. There's no reward for being the first done.

Check out local centres and resources in your school for assistance!

If you are aware that you have a problem with test anxiety,
be sure your teacher or instructor knows before any testing begins (and not the hour before!). There may be other options to evaluate your knowledge or performance within the subject matter.

Thinking Like a Genius

Even if you're not a genius, you can use the same strategies as Aristotle and Einstein to harness the power of your creative mind and better manage your future.

The following eight strategies encourage you to think productively, rather than reproductively, in order to arrive at solutions to problems. "These strategies are common to the thinking styles of creative geniuses in science, art, and industry throughout history."

1. Look at problems in many different ways, and find new perspectives that no one else has taken (or no one else has publicised!).

Leonardo da Vinci believed that, to gain knowledge about the form of a problem, you begin by learning how to restructure it in many different ways. He felt that the first way he looked at a problem was too biased. Often, the problem itself is reconstructed and becomes a new one.

2. Visualise!

When Einstein thought through a problem, he always found it necessary to formulate his subject in as many different ways as possible, including using diagrams. He visualised solutions, and believed that words and numbers as such did not play a significant role in his thinking process.

3. Produce! A distinguishing characteristic of genius is productivity.

Thomas Edison held 1,093 patents. He guaranteed productivity by giving himself and his assistants idea quotas. In a study of 2,036 scientists throughout history, Dean Keith Simonton of the University of California at Davis found that the most respected scientists produced not only great works, but also many "bad" ones. **They weren't afraid to fail**, or to produce mediocre in order to arrive at excellence.

4. Make novel combinations. Combine, and recombine, ideas, images, and thoughts into different combinations no matter how incongruent or unusual.

The laws of heredity on which the modern science of genetics is based came from the Austrian monk Grego Mendel, who combined mathematics and biology to create a new science.

5. Form relationships; make connections between dissimilar subjects.

Da Vinci forced a relationship between the sound of a bell and a stone hitting water. This enabled him to make the connection that sound travels in waves. Samuel Morse invented relay stations for telegraphic signals when observing relay stations for horses.

6. Think in opposites.

Physicist Niels Bohr believed, that if you held opposites together, then you suspend your thought, and your mind moves to a new level. His ability to imagine light as both a particle and a wave led to his conception of the principle of complementarity. Suspending thought (logic) may allow your mind to create a new form.

7. Think metaphorically.

Aristotle considered metaphor a sign of genius, and believed that the individual who had the capacity to perceive resemblances between two separate areas of existence and link them together was a person of special gifts.

8. Prepare yourself for chance.

Whenever we attempt to do something and fail, we end up doing something else. That is the first principle of creative accident. Failure can be productive only if we do not focus on it as an unproductive result. Instead: analyse the process, its components, and how you can change them, to arrive at other results. Do not ask the question "Why have I failed?" but rather "What have I done?"

Adapted from: Michalko, Michael, **Thinking Like a Genius: Eight strategies used by the super creative, from Aristotle and Leonardo to Einstein and Edison** (New Horizons for Learning) as seen at http://www.newhorizons.org/wwart_michalko1.html (June 15, 1999) This article first appeared in *THE FUTURIST*, May 1998

Mapping Information

Many of us have learned to outline information
in our studies, as:

I. First item
II. Second item
  A. sub item
  B. sub item
    1. sub sub item
    2. sub sub item
III. Third item

Alternatives to outlining are Mind- and Concept-Mapping.

How do I map?

First reject the idea of an outline, or of paragraphs using sentences.

Think in terms of key words or symbols
that represent ideas and words.

You will need:

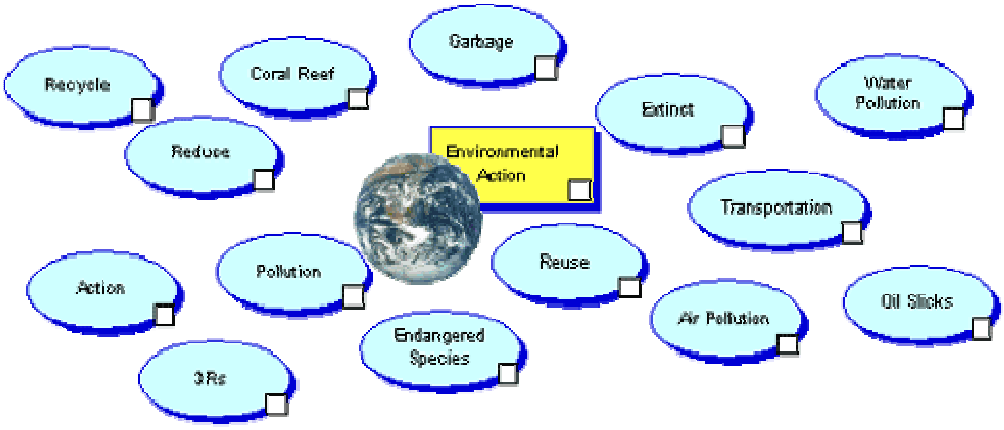
- A pencil (you'll be erasing!) and a blank (non-lined) big piece of paper.
- A blackboard/whiteboard and (coloured) chalk/pens.
- "Post-it" notes.

Write down the most important word

or short phrase

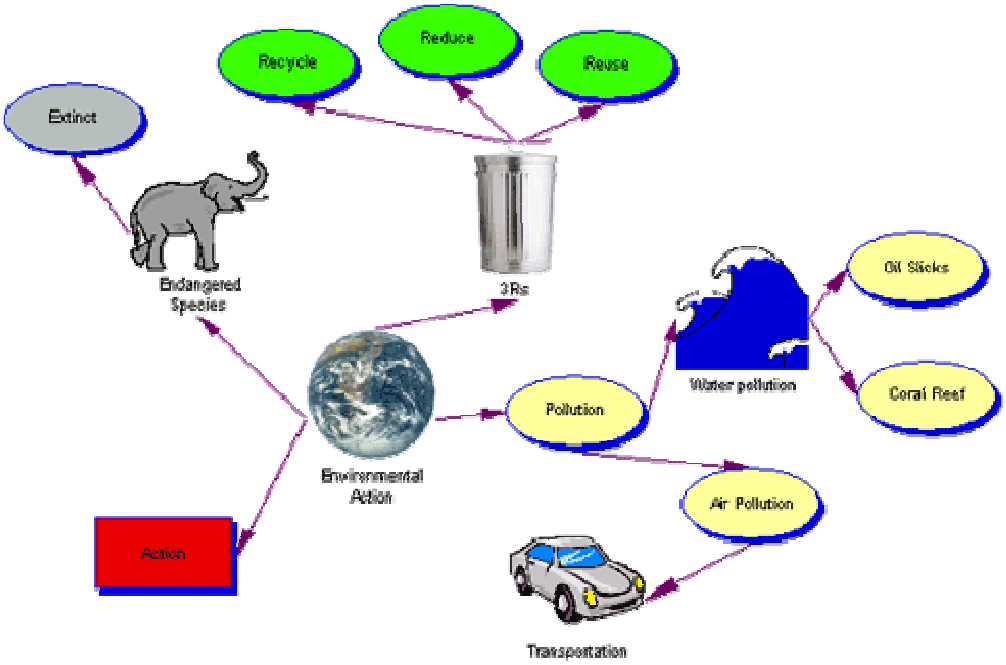
or symbol for the centre.
Think about it; circle it.

Post other important concepts and their words outside the circle



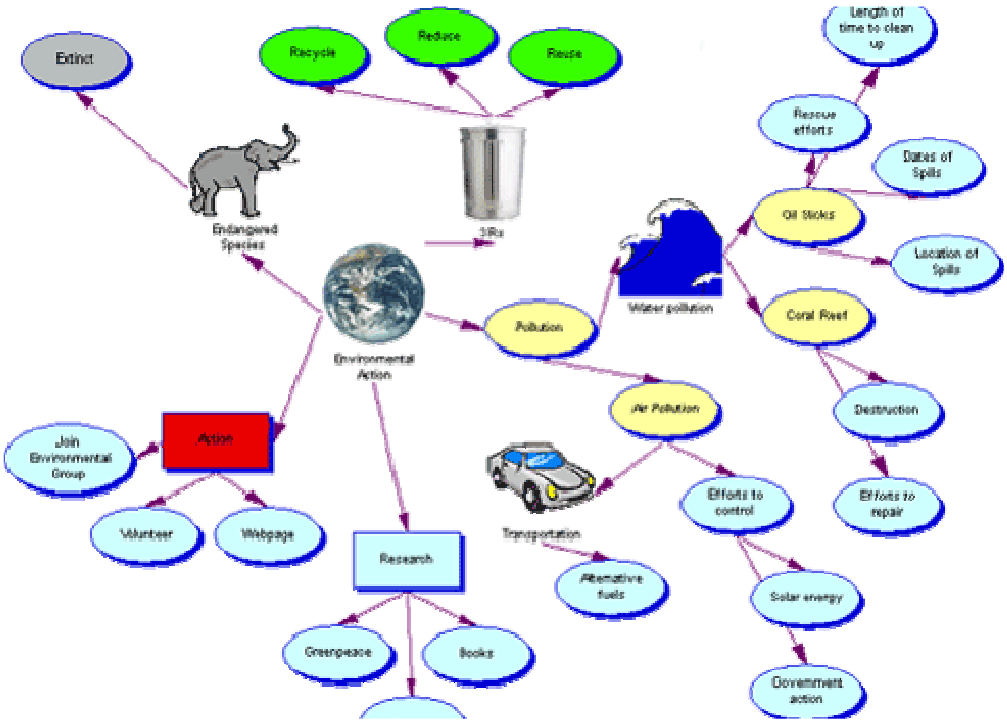
Edit this first phase.
Think about the relation of outside items to the centre item
Erase, edit, and/or shorten words to key ideas.
Relocate important items closer to each other for better organization
If possible, use colour to organise information.
Link concepts with words to clarify their relationships.

Continue working outward
Freely and quickly add other key words and ideas (you can always erase!)
Think weird: combine concepts to expand your map or; break boundaries
Develop in directions the topic takes you--not limited by how you are doing the map
As you expand your map, tend to become more specific or detailed.



Set the map aside.
Later, continue development and revision.
Stop and think about relationships you are developing
Expand the map over time (right up to an exam if necessary!).

This map is your personal learning document.
It combines what you knew with what you are learning
and what you may need to complete your "picture".



* Version and edits thanks to Kendra Grant, Peel School District School Board 2001, Mississauga Canada.

Mind mapping was developed by Tony Buzan: "The Mind Map Book: How to Use Radiant Thinking to Maximize Your Brain's Untapped Potential", Penguin Books, New York. More information is available in a Mind Mapping FAQ (Frequently Asked Questions) Document. (http://www.ozemail.com.au/~caveman/Creative/Mindmap/index.html) (May 2002)

Becoming Motivated

As young children, we have a great ability to learn and to see past setbacks.

As we begin to meet expectations created by our families, schools, and environment, the motivation of our early years shifts from our goals to pleasing others, and often our desire to learn suffers.

How can **you** motivate **yourself**?

With this exercise, try to:

- Recognise your sense of discovery.
- Take responsibility for your learning.
- Accept the risks inherent in learning with confidence, competence, and autonomy.
- Recognise that "failure" is success**:**
  learning what doesn't work is on the same path as learning what does work.
- Celebrate your achievement in meeting your goals.

There are seven stages to this exercise:

1 What you want to learn? (Description).

2 Intrinsic motivation.

3 Extrinsic motivation.

4 Project description.

5 Mentoring.

6 Progress.

7 Conclusion/Evaluation.

1 Description.

Be brief and specific.	**Don't be too ambitious.** (remember: this is a first project)	**Cover a two month period at most**

On a scale of 1 - 10, how curious am I in this subject?

Must be greater than 5 or choose something else!
This project should have significant appeal to you.

Each page of this sequence is intended to be printed/copied, and then completed.

Create a wallboard in a visible "study" space and post, or create a notebook diary and post this as the first page.

2 Intrinsic Motivation.

Write three reasons you want to learn:
focus on your needs, curiosity, and pleasure.

1.

2.

3.

Post on your wallboard, or in your notebook diary.

Studies have found that you will:

Put in more effort	Try different ways to succeed
Be more persistent	Learn more deeply

if you are intrinsically* motivated.

*** Intrinsic motivation** is **your** motivation, and includes your goals, your values, and your interests. This is what turns you on!
Examples:

I want to learn to type faster to communicate with my friends.
I want to learn about Africa to learn about my family's history.
I want to work and learn in a ski shop to ski better.
I want to learn joinery to make my stereo cabinet.

3 Extrinsic Motivation.

Write three reasons someone else wants you to learn this:

1

2

3

Do not post this on your wallboard but place it aside for later;
or place it as the last page in your notebook diary.

> **Extrinsic motivation** comes from **outside** yourself and is not as effective as intrinsic motivation. It includes the goals, values, and interests of others as they affect you. You learn in order to avoid punishment, or to get a reward, or to please someone. Examples:
>
> I learn dates to pass a history test.
> I learn this computer programme as a job requirement.
> I learn how to kick to please my coach.
>
> Extrinsic motivation is not bad, it just isn't as effective as intrinsic motivation.
> Keep intrinsic reasons first whenever possible.

4 Project Description.

Are there sequences to learn? Chapters, concepts, skills, levels, etc.	

How much time will I dedicate to this project? Number of hours? Weekly schedule?	
Who are the experts? Reference librarians, tutors, teachers, professionals, consultants, etc. How did others learn in this area?	
What are the sources of information? Text books, reference books, manuals, other print material, web sites: in-school resources, out-of-school resources	
How will I check what I am learning? Tests, reports, grades, feedback from a group or teacher or expert or professional, pages read, tasks completed, etc	
When will I record my progress? Daily/weekly/monthly; when I complete a "section", etc.?	
What are my rewards as I progress? Rewards should match your effort, the degree of difficulty, or the task.	

Where do I go if I'm not getting the results I want?	

Post this on your wallboard, or in your notebook.

5 Mentoring.

Who will be your mentor?

A mentor will monitor your progress	• Be a person you trust. • Understand your motivation. • Understand your project. • Ask you how you are doing from time to time. • Not test your learning (this is not his/her role!). • Give encouragement without being judging. • Be able to suggest ways of getting around obstacles. • Confront you if you are avoiding him/her or the project.

Communications:

How?	Person - phone - e-mail.
When?	
How often?	Meet at least three times in person, beginning, middle, and wrap up.

Where?	

Copy your project name, your intrinsic motivations, project description, and this page for your monitor.

Both initial here:

Post this on your wallboard, or place in your notebook.

6 Project Process.

As you learn about the subject, you will need some markers of progress:

What are the stages of learning? Are there steps? chapters? concepts? and what is the sequence? Are there short-term goals? These should be as specific as possible.	
What skills am I developing as I learn? These can be used in other situations and should be recognised!	

What have I learned that won't work? Will I need to retrace my steps to find alternatives?	
Does something not make sense? Tasks that involve "a moderate amount of discrepancy or incongruity" are beneficial because they stimulate curiosity	
How am I rewarding myself? We can reward ourselves for effort or tasks!	
Am I thinking positively with my goals in mind? Avoid avoidance!	

7 Conclusion/Evaluation.

It is important first to recognise that if you have not succeeded in learning what you first wanted, that you have not failed. Success is not always determined by quantity of knowledge. We are not all meant to be brain surgeons, soccer players, plumbers, or even spellers. But we can recognise that some subject matter can be gained/enjoyed in other ways: consulting a specialist; watching or refereeing a game; hiring a plumber; using a spell checker.

Success in learning is also determined by an evaluation of your process, and what you have learned from this process. Consider these questions, and answer from your experience:

Was the subject matter as important or interesting as you first thought?

What intrinsic motivations did you satisfy?

Was the process of learning that you chose effective?

Did you learn anything you didn't expect?

Was a mentor/monitor helpful? Were communications good?

Retrieve your extrinsic motivations.
What role did they play in your learning process?

Was this self-motivation exercise effective?

Decision Making and Problem Solving

We solve problems and make decisions everyday/all day: at home, at work, at play, even at the supermarket!

Some problems and decisions are very challenging, and require a lot of thought, emotion, and research. The steps in this guide are designed to help you make good decisions. Good luck!

Problem-Solving Steps:

- **Define the problem.**
- **Gather information.**
- **Develop alternatives.**
- **Weigh alternatives.**
- **Select the best alternative.**
- **Implement the solution.**
- **Monitor progress.**

Flexibility

This procedure looks as if one moves neatly from step to step. This isn't the case. These steps simply provide a structure for working on the problem. They overlap, and you may have to return to earlier steps or work them simultaneously as you find the best solution.

Examples of flexibility:

- Information gathering occurs in all steps—from recognition of the problem to implementation of its solution.
- New information may force you to redefine the problem.
- Alternatives may be unworkable. and you'll have to find new ones
- Some steps may be combined or abbreviated.

Define the Problem

What prevents you from reaching your goal?

You may need to state the problem in broad terms since the exact problem may not be obvious.

- You may lack information to define it.
- You can confuse symptoms with underlying causes.

Prepare a statement of the problem and find someone you trust to review it and to talk it over. If the problem is a job situation, review it with your supervisor or the appropriate committee or resource.

Consider these questions:

- What is the problem?
- Is it my problem?
- Can I solve it? Is it worth solving?
- Is this the real problem, or merely a symptom of a larger one?
- If this is an old problem, what's wrong with the previous solution?
- Does it need an immediate solution, or can it wait?
- Is it likely to go away by itself?
- Can I risk ignoring it?
- Does the problem have ethical dimensions?
- What conditions must the solution satisfy?
- Will the solution affect something that must remain unchanged?

Gather Information

Stakeholders
Individuals, groups, organizations that are affected by the problem, or its solution. Begin with yourself. Decision makers and those close to us are very important to identify.

Facts & data

- Research.
- Results from experimentation and studies.
- Interviews of "experts" and trusted sources
- Observed events, past or present, either personally observed or reported

Boundaries
The boundaries or constraints of the situation are difficult to change. They include lack of funds or other resources. If a solution is surrounded by too many constraints, the constraints themselves may be the problem.

Opinions and Assumptions
Opinions of decision makers, committees or groups, or other powerful groups will be important to the success of your decision. It is important to recognise truth, bias, or prejudice in the opinion. Assumptions can save time and work since is often difficult to get "all the facts." Recognise that some things are accepted on faith. Assumptions also have a risk factor, must be recognised for what they are, and should be discarded when they are proven wrong.

Develop Alternatives

- Look at your problems in different ways;
  find a new perspective that you haven't thought of before.
- Brainstorming, or rapid noting of alternatives no matter how silly,
  is an excellent discovery process.
- Once you have listed or mapped alternatives, be open to their possibilities.
  Make notes on those that:
  - Need more information
  - Are new solutions
  - Can be combined or eliminated.
  - Will meet opposition.
  - Seem promising or.

Weigh Alternatives

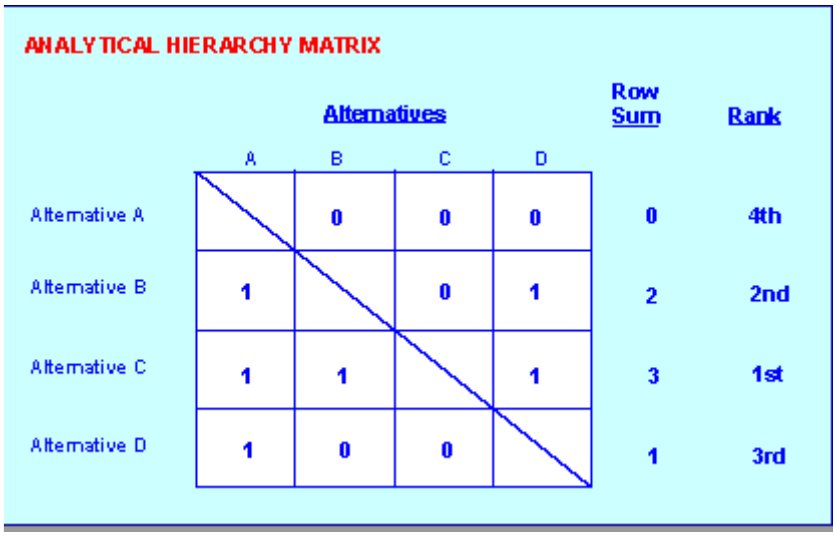
After listing possible alternatives,
evaluate them without prejudice,
no matter how appealing or distasteful.

Consider all criteria.
While a suitable solution may solve the problem, it may not work if resources aren't available, if people won't accept it, or if it causes new problems.

Techniques in weighing alternatives:

Thomas Saaty's Analytical Hierarchy Matrix.

List alternatives in columns and rows as depicted in the matrix above. Starting with Alternative A, go across columns in the matrix and rate each alternative against all the others.



When the alternative under consideration has more value than the others	**Then** give the more valuable alternative a score of 1
When the alternative has less value than the others.	Give the less valuable alternative a score of 0

Add the scores for each row/alternative; highest score is the highest rated alternative according to the criteria you. used. In the matrix above, Alternative C scores highest, so it's the highest rated alternative.

SFF Matrix: Suitability, Feasibility & Flexibility

	Suitability	Feasibility	Flexibility	Total
Alternative A				
Alternative B				
Alternative C				
Alternative D				

Rate each alternative on scale of 1 - 3 for its

- **Suitability: refers to**
  the alternative itself, whether it is ethical or practical. Is it appropriate in scale or importance? an adequate response? too extreme?
- **Feasibility: refers to**
  how many resources will be needed to solve the problem (i.e. Is it affordable?).
  How likely will it solve the problem?
- **Flexibility: refers to**
  your ability to respond to unintended consequences, or openness to new possibilities? the alternative itself, and whether you can control outcomes once you begin.

Total a score for each alternative, compare, prioritise your alternatives...

Select the best alternative

- **Don't consider any alternative as "perfect solution."**
  If there were, there probably wouldn't be a problem in the first place.
- **Consider your intuition,**
  or inner feelings in deciding on a course of action.
- **Return to your trusted outsider:**
  Is there something you missed?
  Does he/she see a problem with your solution?
- **Compromise**
  Consider compromise when you have a full grasp of the problem, and your alternatives. Competing solutions may yield a hybrid solution.

Implement the solution.

Until it's acted on, a decision is only a good intention.

Develop a plan for implementation.
Elements:

- Step-by-step process or actions for solving the problem.
- Communications strategy for notifying stakeholders.
  Where important or necessary, inform those who care for you and/or will be affected by the change. Prepare them as necessary about your decision.
- Resource identification/allocation.
- Timeline for implementation.

Monitor progress

Your implementation will only be successful
if you are monitoring your solution, the effects of it on resources and stakeholders, your timeline, and your progress.

As you monitor your progress,
if results are not what you expect, review your options and alternatives.

Whether or not you achieved your goals,
it is important to consider what you have learned from your experience: about yourself, about what you consider important.

Lastly, if you have done your best,
you have your effort as one measure of success.

An alternative to this strategy is: Whole Brain Solutions (1998) P Butler and L Norfolk.
http://www.geocities.com/out_of_the_box_2001/index.html

Adaptive Decision Making

Adaptive techniques for solving problems are a combination of logic and common sense.
While not precise, can produce satisfactory solutions.

If you cannot follow the complete problem solving process use these techniques when you:

- Have little time for research.
- Don't need exhaustive analysis.
- Can accept the risks.
- Can make reversible decisions.

Considerations in adaptive decision-making:

Decision staggering
Make incremental decisions to achieve an objective and avoid up-front commitment to a decision you cannot change.

> Example: Before installing air-conditioning, try screens, shades, and fans. These alone may do the job. If not, these improvements will still have helped cool the building and increase air-conditioning efficiency if later installed.

Exploration
Use information available to probe for a solution.
Exploring is a modified trial-and-error strategy to manage risk. Unlike a throw of dice, however, it requires a firm sense of purpose and direction. Use this technique to move cautiously in small steps toward a solution.

> Example: Doctors avoid committing to a single, incomplete diagnosis of an illness. Through tentative but precise exploration, they determine the cause of an illness and its cure.

Managing by exception
Work on those matters that are critical to you, and leave matters to others that are not. Strategising and prioritising

> Example: You tutor a child in maths. You become aware that the family situation is troubled, but you haven't the skills to help. You inform the case manager for their action, but continue to focus on the supporting the child with his/her homework

Hedging
Spread risk by avoiding decisions that lock you into a single choice if you are not prepared to commit.

> Example: astute investors don't "put all their eggs in one basket." They spread risks with a balanced portfolio of stocks, bonds, and cash.

Intuition
Options based on your experience, values, and emotions, values, your gut feelings and your heart! While often able to arrive at the truth through intuition, don't rely on it exclusively. It can trigger snap judgments and rash decisions. Use logic first, then your intuition to make the decision "feel" right.

Delay
If an immediate decision isn't necessary and there's time to develop options, go slow or let it wait. Sometimes doing nothing is the best decision; the problem either goes away, or events overcome it.

Delegation to another
If the problem can be solved better by someone else, if the problem is not really yours in the first place (identify stakeholders!) or your resources (time, money, etc.) will not be adequate.

Vision, opportunity, and options
Focus on the future to uncover hidden opportunities and options. With options, we make better decisions. Without them, decisions become forced choices. By finding tomorrow's opportunities and developing options, you can make enduring, quality decisions.

Barriers to effective decision-making

Indecision
Avoiding decisions to escape the unpleasant aspects of risk, fear, and anxiety.

Stalling
Refusing to face the issue; obsessive gathering of endless facts.

Overreacting
Letting a situation spin out of control; letting emotions take control.

Vacillating
Reversing decisions; half-heartedly committing to a course of action.

Half measures
Muddling through. Making the safest decision to avoid controversy but not dealing with the whole problem.

Adult Learning

Does higher education seem like a foreign culture to you?

You have expectations
as you register for and take classes, as well as work through your programme in higher education.

Higher education also has expectations of you!
It has its own rules, patterns, and culture. There are important differences between private and state schools, community colleges and universities, liberal arts and research institutions, graduate schools, etc.

Key concepts in higher education
include disciplines/departments, scholarship, research, verbal orientation, tenure, collegiality, academic freedom, etc.
Take time to understand the culture of higher education.

Significant groups include faculty and students,
administrators and trustees, alumni, and even larger communities and legislators. They all are important resources. Staff also are there to help you, and wait for you to appear so that their services and centres can help you succeed.

Do you wonder about your skills
in finding your way around this strange land of higher education?

As an adult learner, you

- Tend to be self-directed.
- Have a rich reservoir of experience that can serve as a resource for learning.
- Are frequently affected by your need to know or do something.
- Tend to have a life-, task-, or problem-centred orientation to learning as opposed to a subject-matter orientation.
- Are generally motivated to learn from within (internally/intrinsically) as opposed to being obligated, or subject to, external or extrinsic forces.

adapted from
Imel, Susan, Guidelines for Working with Adult Learners
ERIC Digest No. 154 ERIC Identifier: ED377313, 1994-00-00

Adult learners, as they return to, and progress through their education, often question and re-evaluate their original assumptions and motivation as they use education to re-create their lives.

As such, your learning will be more successful if you:

- **Take an active role**
  in planning, monitoring, and evaluating your education.
- **Discard preconceived notions**
  about what college is and isn't; open your mind to the experience.
- **Choose subjects and courses that**
  are most relevant to your job/profession or personal life
  that fit into your academic programme.

Course descriptors
important to adult learning

Outcomes	Process	Content
Shared responsibility for learning objectives.	Integrates thinking and learning.	Applies learning to practical applications.
Continuous negotiation, or openness to renegotiation.	Problem-centred rather than content oriented.	Issue-centred curricula.
Non-prescriptive; open to change.	Demand mutual respect & equality for learners.	Multiple/diverse sources of information.
Value process.	Incorporate, promote dialogue & openness.	Variety of format.
Intrinsic motivation.	Recognises the value of experience in contributing to learning.	
	Includes projects and/or active learning (as opposed to lectures and/or passive learning).	
	Built in monitor for feedback and evaluation.	

adapted from:
Explorations in Learning & Instruction:
The Theory Into Practice Database (TIP); Andragogy (M. Knowles)

Helpful strategies in a programme of learning:

Write out your goals and expected time commitments.
This will be helpful in avoiding stress and over-scheduling yourself.
Refer to the Guide on Goal Setting and Schedules (pg 7).

Establish a good rapport with your teachers in the classes you take.
This will be helpful in negotiating optional learning projects
that have more relevance to your situation and goals.
Refer to the Guide on Influencing Teachers (pg 56).

Develop an awareness of how you learn, or have learned best in the past. This will help you focus your energies in the most productive way, and alert you to areas where you may need help
(i.e. speaking, writing, maths, testing, etc.).

> **Your learning style** defines how you acquire and process information (learn!) and has nothing to do with being "smart." You could refer to it as to how your brain works, or the parts of your brain work. Each person has a very particular way of learning. Research has identified many "learner characteristics" and ways of typing them.
>
> **Your academic counselling centre or study skills centre** is a good place to begin. They not only have testing instruments to help you, but also the professionals who are able to interpret and apply the results.

Self-assessment web sites on learning styles:

DVC Learning Style Survey for College
http:www.metamath.com/sweb/duclearn.htm
has a good introduction, four categories of styles (visual/verbal; visual nonverbal; tactile/kinesthetic; auditory/verbal), and a self-assessment web-based tool.
Results/scores are based upon 32 questions.

Index of Learning Styles Questionnaire (Felder/Silverman)
http://www2.ncsu.edu/unity/lockers/users/f/felder/public/Learning_Styles.html
introduction, learning preferences on four dimensions (active/reflective, sensing/intuitive, visual/verbal, and sequential/global); and a self-assessment instrument self-scored.
Results/scores are based upon 44 questions.

The SuccessTypes Learning Style Type Indicator (Pelley)
http://www.ttuhsc.edu/success/LSTIntro.htm
based on the Myers Briggs Type Indicators (Extraversion, Introversion,

Sensing, Intuition, Thinking, Feeling, Judging, Perceiving)
Introduction and links to related Myers Briggs type indicators.
Results/scores are based upon 28 questions.

Learning Disabilities Resource Community's
http://www.ldrc.ca/projects/miinventory/
self-assessment instrument is based upon Howard Gardner's work on multiple intelligences (linguistic, mathematic, visual/spatial, body/kinaesthetic, naturalistic, music, interpersonal, intra-personal).
Results/scores are based upon 80 questions.

Learning Styles Evaluation, University of Northwestern Ohio
http://www2.nc.edu/vertcol/ss/learn.html#styles
Returns a score on preference for visual, audio, or "haptic" learning.
Begins with an introduction on learning styles, and description of each.
Results/scores are based upon 30 questions.

Resources for learners in higher education:

* Academic counselling centres.
* Learning Centres.
* Writing centres.
* Reading and/or study skills centres.
* Multicultural/cultural centres.
* Women's study centres.
* Academic dean's offices and services.
* Dean of students offices and services.
* Department chairs.

STUDYING

Study Habits

You can prepare yourself to succeed in your studies.
Try to develop and appreciate the following habits:

- **Take responsibility for yourself.**
  Responsibility is recognition that in order to succeed you can make decisions about your priorities, your time, and your resources.
- **Centre yourself around your values and principles.**
  Don't let friends and acquaintances dictate what you consider important.
- **Put first things first.**
  Follow up on the priorities you have set for yourself, and don't let others, or other interests, distract you from your goals.
- **Discover your key productivity periods and places.**
  Morning, afternoon, evening; study spaces where you can be the most focused and productive. Prioritise these for your most difficult study challenges.
- **Consider yourself in a win-win situation.**
  You win by doing your best and contributing your best to a class, whether for yourself, your fellow students, and even for your teachers and instructors. If you are content with your performance, a grade becomes an external check on your performance, which may not coincide with your internally arrived at benefits.
- **First understand others, then attempt to be understood.**
  When you have an issue with a teacher/instructor, for example a questionable grade, an assignment deadline extension, put yourself in the teacher/instructor's place. Now ask yourself how you can best make your argument given his/her situation.
- **Look for better solutions to problems.**
  For example, if you don't understand the course material, don't just re-read the material. Try something else! Consult with the professor, a tutor, an academic advisor, a classmate, a study group, or your school's study skills centre.
- **Look to continually challenge yourself.**

Partially adapted from the audio cassette by Steven Covey, ***Seven Habits of Highly Effective People***

Critical Thinking

Critical Thinking is "the careful, deliberate determination of whether we should accept, reject, or suspend judgment about a claim, and the degree of confidence with which we accept or reject it."

From ***Critical Thinking*** by Moore and Parker.

Strategies for Critical Reading

Ask yourself the following questions:

- What is the issue?"
- What conclusion does the author reach about the issue?"
- What are the author's reasons for believing as he does?"
    - Be alert to bad reasoning (i.e. pity, fear, misuse of statistics etc.) that can fool you.
- Has the author used facts or opinions?
    - Facts can be proven.
    - Opinions cannot be proven and may or may not be based on sound reasoning.
- Has the author used neutral words or emotional words?
    - Critical readers look beyond the language to see if the reasons are clear.

Characteristics of Critical Thinkers

- They are honest with themselves.
- They resist manipulation.
- They overcome confusion.
- They ask questions.
- They base judgments on evidence.
- They look for connections between subjects.
- They are intellectually independent.

Adapted from Vincent Ryan Ruggiero: *Critical Thinking*

Concentration

The **art or practice of concentration**, no matter if studying biology or playing pool, is to eliminate distraction and focus on the task at hand. If you find that you read through material **a**nd suddenly discover that you have no idea about what you've just read, or if you attend lectures and have difficulty paying attention to what is being said, these tips may help:

- **Stick to a routine,**
  efficient study schedule.
- **Study in a quiet environment.**
- **For a study break,**
  do something different from what you've been doing (e.g., walk around if you've been sitting), and in a different area.
- **Avoid daydreaming**
  by asking yourself questions about the material as you study it.
- L**ook over the notes before lectures**
  or the previous lecture and read the course material pertaining to the lecture so that you can anticipate the main ideas that the teacher/instructor will cover.
- **Show outward interest during lectures**
  (attentive expression and posture) to self-motivate internal interest.
- **Resist distractions**
  by sitting in front of the room away from disruptive classmates and by focusing on the teacher/instructor through listening and note taking.

Adapted from J. R. Hayes, *The Complete Problem Solver*, Franklin Institute Press, 1981

Memory Skills

1. **Acronyms and Acrostics: (for information involving key words)**
   An acronym is an invented combination of letters. Each letter is a cue to an idea you need to remember. Example: BRASS is an acronym for how to shoot a rifle--Breath, Relax, Aim, Sight, Squeeze.
   An acrostic is an invented sentence where the first letter of each word is a cue to an idea you need to remember. Example: EVERY GOOD BOY DESERVES FUN is an acrostic to remember the order of G-clef notes on sheet music--E, G, B, D, F.

2. **Peg: (for ordered or unordered lists)**
   First, memorise key words that can be associated with numbers. For instance, bun with one; shoe with two, tree with three, door with four, hive with five, etc.
   Next create an image of the items you need to remember with key words. For example, if you had to remember the four basic food groups-- diary products; meat, fish, and poultry; grains; and fruit and vegetables--imagine cheese on a bun, livestock with shoes on, a sack of grain suspended in a tree, and opening a door to a room stocked with fruits and vegetables.

3. **The Loci Method: (for approximately twenty items)**
   Select any location that you have spent a lot of time in and have easily memorised. Imagine yourself walking through the location, selecting clearly defined places--the door, sofa, refrigerator, shelf, etc. Imagine yourself putting objects that you need to remember into each of these places by walking through this location in a direct path. Again, you need a standard direct path and clearly defined locations for objects to facilitate the retrieval of these objects. For example if you had to remember George Washington, Thomas Jefferson, and Richard Nixon, you could imagine walking up to the door of your location and seeing a dollar bill stuck in the door; when you open the door Jefferson is reclining on the sofa and Nixon is eating out of the refrigerator.

4. **The Keyword Method: (for foreign language vocabulary)**
   First, after considering the foreign word you need to remember, select a key word in English that sounds like the foreign word.
   Next, imagine an image, which involves the key word with the English meaning of the foreign word.
   For example, consider the Spanish word "cabina" which means "phone box." For the English keyword, you might think of "cab in a ... ." You could then invent an image of a cab trying to fit in a phone box. When you see the word "cabina" on the test, you should be able to recall the image of the cab and you should be able to retrieve the definition "phone box."

5. **The Image-Name Technique: (for remembering names)**
   Simply invent any relationship between the name and the physical characteristics of the person. For example, if you had to remember Shirley

Temple's name, you might ingrain the name in memory by noticing that she has "curly" (rhymes with Shirley) hair around her temples.

6. **Story Method: (for ordered or unordered lists)**
   Create a story where each word or idea you have to remember cues the next idea you need to recall. If you had to remember the words Napoleon, ear, door, and Germany, you could invent a story of Napoleon with his ear to a door listening to people speak in German.

Adapted by Bob Nelson from *The Complete Problem Solver* by J.R. Hayes, 1989.

For a more comprehensive list of Mnemonic Systems go to page 170

Thinking Aloud

When we learned as infants and children, thinking aloud or saying what we are thinking (private speech), was accepted as a way of demonstrating our knowledge, or of opening ourselves to "get it right." We sounded out words, expressed ideas, formed sentences. When corrected, we practiced until we imitated correctly, or conformed to the model of our family, neighbourhood, school, etc.

Thinking aloud was essential to our early learning. Thinking aloud is also called private speech.

As we grow older, thinking aloud is internalised, and speech shifts to communicating with others.

> "Nevertheless, the need to engage in private speech never disappears. Whenever we encounter unfamiliar or demanding activities in our lives, private speech resurfaces. It is a tool that helps us overcome obstacles and acquire new skills".

We tend to use only phrases and incomplete sentences in private speech. What is said reflects our thoughts, but only what is puzzling, new, or challenging. We omit what we already know or understand. So also private speech decreases as our performance or understanding improves.

Applications of private speech in learning include planning, monitoring progress, or guiding ourselves in working through challenging tasks and mastering new skills. It can help us manage situations and control our behaviour by verbalising our feelings, or venting to ourselves.

Private speech is a useful tool in learning. The more we engage our brain on multiple "levels," the more we are able to make connections and retain what we learn. We read, create images or diagrams, listen, use music or motion, talk with others (collaborative learning) and with ourselves. Some of us like to talk things through with someone or in a group, either to help us understand or to remember better. And some of us don't need another person around to talk with in this process! This can be a learning style, and a very effective one.

We use multiple senses and experiences to process and reinforce our learning, and the combination of these strategies is very individual.

Applications of private speech in learning include:

- Memorising vocabulary by saying the words.
- Appreciating poetry by "dramatising" it.
- Editing papers by reading the text aloud.
- Talking through maths problems to arrive at solutions.

Procrastination

Is your procrastination related to a project? or is it a habit?

To remedy procrastination:

Begin with one, modest project.
Answer these basic questions.
Keep the answers before you as you mark your progress:

What do you want to do?

- **What is the final objective, the end result?**
  It may be obvious, or not.
- **What are the major steps to get there?**
  Don't get too detailed: think big.
- **What have you done so far?**
  Acknowledge that you are already part of the way,
  even if it is through thinking!
  The longest journey begins with a first step.

Why do you want to do this?

- **What is your biggest motivation?**
  Do not concern yourself if your motivation is negative!
  This is honest and a good beginning.
  However, if your motivation is negative,
  re-phrase and re-work it until it is phrased positively
- **What other positive results will flow from achieving your goal?**
  Identifying these will help you uncover benefits that you may be avoiding:
  Dare to dream!

List out what stands in your way

- **What is in your power to change?**
- **What resources outside yourself do you need?**
  Resources are not all physical (i.e. tools and money),
  and include time, people/professionals/elders, even attitude.
- **What will happen if you don't progress?**
  It won't hurt to scare yourself a little...

Develop your plan, list.

- **Major, realistic steps:**
  A project is easier when it is built in stages;
  Start small; Add detail and complexity as you achieve and grow.
- **How much time each will take.**
  A schedule helps you keep a progress chart and reinforce that there are way stations on your path.

- **What time of day, week, etc. you dedicate yourself to work. This helps you**
  develop a new habit of working, build a good work environment, and distance distractions (It is much easier to enjoy your project when distractions are set aside.).
- **Rewards you will have at each station**
  and also what you will deny yourself until you arrive at each station.
- **Build in time for review.**
  Find a trusted friend, elder, or expert to help you motivate yourself or monitor progress.

Admit to:

- **False starts and mistakes as learning experiences.**
  They can be more important than successes, and give meaning to "experience".
- **Distractions and escapes.**
  Do not deny they exist, but deny their temptation.
- **Emotion.**
  Admit to frustration when things don't seem to be going right.
  Admit that you have had a problem, but also that you are doing something about it.
- **Fantasy.**
  See yourself succeeding.

Finally: if procrastination is a habit of yours, forget it.
Focus on the tasks and project at hand, and build from there!

M.U.R.D.E.R. System

- **Mood:**
  Set a *positive* **mood** for yourself to study in.
  Select the appropriate time, environment, and attitude.
- **Understand:**
  Mark any information **you don't understand** in a particular unit.
  Keep a focus on one unit or a manageable group of exercises.
- **Recall:**
  After studying the unit, stop and put what you have learned **into your own words.**
- **Digest:**
  Go back to what you did not understand and **reconsider the information**.
  Contact external expert sources (e.g., other books or an instructor) if you still cannot understand it.
- **Expand:**
  In this step, ask **three kinds of questions** concerning the studied material:
  - If I could speak to the author, what questions would I ask or what criticism would I offer?
  - How could I apply this material to what I am interested in?
  - How could I make this information interesting and understandable to other students?
- **Review:**
  Go over the material you've covered,
  Review what strategies helped you understand and/or retain information in the past and apply these to your current studies.

Adapted from Hayes, John R., *The Complete Problem Solver*, Lawrence Erlbaum Publishers, Hillsdale, NJ: 1989. ISBN: 0805803092

Index System

Here is a method of studying that gives you
an accurate perception of how well you know the material, and forces you to think about it, rather than just look over it.

- **Review your notes and readings frequently, so the material is "fresh".**
- **As you're reading your text or reviewing your notes,**
  generate and write down questions about the material.
  Imagine you're teaching the course. What questions would you ask on the exam?
- **Keep track of any terms you need to know.**
- **Write each question or term on the back of an index card.**
- On the front of each index card, **write an answer**
  or an explanation for the question or term on the back.
  Use your notes and text for a reference, but put the answer or explanation in your own words whenever possible.
- **Shuffle the index cards** (so you can't figure out any answers based on their location in the deck.
- **Look at the card on the top of the deck:**
  Try to answer the question or explain the term. If you know it, great! Put it on the bottom of the deck. If you don't know it, look at the answer, and put it a few cards down in the deck (so you'll come back to it soon).
- **Proceed through the deck of cards until you know all of the information.**

Some Tips:

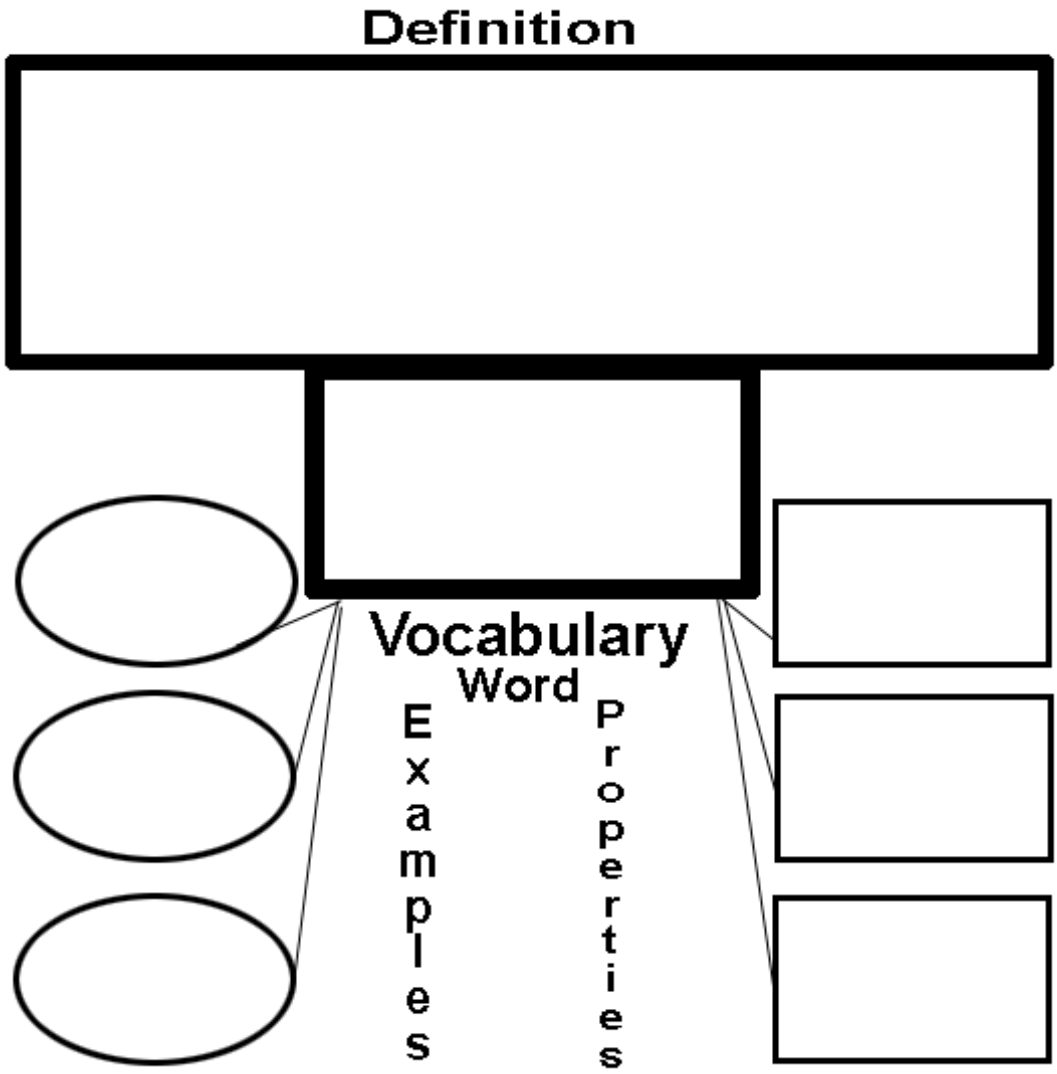
- **Carry your cards with you everywhere.**
  Take advantage of little pockets of time. Test yourself while you're waiting on line, on the bus, etc.
- **If you think you know an answer**,
  but can't put it into words, you probably don't know it well enough.
  Being able to explain the information is the only way to be sure that you know it. It's also the best way to prevent test anxiety.
- **Consider testing yourself someplace where nobody can see you**
  (and think you're crazy), and reciting the answers out loud. That's the best way to be sure that you can explain them.
- **Study with a friend from your class.**
  You can share ideas and help each other out with concepts. Also, you can use each other to make sure that you're explaining your answers adequately.

Vocabularary Building Exercise

Use the diagram below or create your own format to learn difficult vocabulary, or to get a better understanding of a word.

Items include:

- **Vocabulary word.**
  (e.g.: "cow").
- **Definition/brief description.**
  (e.g.: "a domestic mammal, or the mature female of cattle of the genus *Bos*).
- **Properties or characteristics or attributes that would help you recognise it:**
  (Usually 4-5 feet tall; various colours--white, brown, reddish, black; found on farms; raised for its milk or meat; may have horns; feeds on grasses.).
- **Examples that would be recognised as one of that "group".**
  (Guernsey, brown and white breed from the island of Guernsey raised for milk;
  Angus, black hornless breed from Scotland raised for meat;
  Holstein, black and white breed from Germany/Holland raised for milk).



ADHD and Studying

Attention-Deficit Hyperactivity Disorder (ADHD)

You are not alone if you have attention-deficit hyperactivity disorder. About 4% of school age children have this. In addition, other students have one or a few of the characteristics of ADHD.

Characteristics of ADHD:

In class:	• You might interrupt or answer out of turn. • You might not be able to take good notes. • You might have trouble with commands or instructions.
Doing homework:	• You might have trouble concentrating. • You might not be attentive to details, or make little mistakes. • You might forget things, even to turn in your homework.
Getting help:	You might need help learning, and determining your preferred learning style.

The strategies below are suggested as part of a professionally organised programme of assistance. They are derived from the American description of ADHD[1]. However, as a student, you also have your own personal learning style, including "intelligences" (c.f. Kolb), personality types (c.f. Myers-Briggs), etc. These will be helpful to know and develop in overcoming ADHD

In class:

To help you follow instructions:

- Simplify instructions down to a basic one or two, and build from there. Verify these with your teacher, or ask your teacher to break down assignments into steps for you to follow.

To contribute in class
Answering out of turn, or interrupting the class or teachers is normal for ADHD, but it is best to remember that you are trying to learn.

- Write your question or comment down on paper before speaking.
- Practice raising your hand before volunteering.

To take good notes is task for all students.
These techniques may give you an advantage:

- Bring a tape recorder to class.
- Study with a classmate taking the same class.

- With ADHD, lecture is not the best form of learning. Ask your teacher for a printed summary of the lecture, or alternative methods to get the same information.

Homework:

To help you concentrate:

- Find a quiet place in your home, to avoid distraction such as movement and noise of your family, pets, TV, telephones, music, etc.
- If space in your home is limited, your parents or tutor may find space in a library, religious structure, neighbour's house, or other sympathetic place
- Special "headsets" can block out noise and help you focus.
- Get into a routine, a consistent time you study.

To help you remember:

- Develop routines/habits!
  For example, before going to school, organise your schoolwork in the same way each day. Have some one help you begin to establish this pattern.
- Keep you assignments in the same pocket of your backpack. Tell your teacher about it.
- Keep a list of things to remember in a pocket of your backpack.

To help with details

- Review your homework with your parents, a classmate, a tutor.
- Use grammar and spell checkers regularly for computer work.

Remember that making mistakes, or overlooking details, is not for lack of intelligence, but rather a sign of impatience, a characteristic of this condition.

Help with learning

Take care of yourself; get the help you need:

Patience is a challenge for those with ADHD.
If you are feeling angry, discouraged, or frustrated over your progress, find some support. All learning involves family, teachers, professionals, classmates, as well as ourselves. We all need patience. Their messages should be steady and consistent, but try to understand if they aren't always so.

According to the American Surgeon General "Inattention or attention deficit may not become apparent until the child enters the challenging environment of elementary school. Such children then have difficulty paying attention to details and are easily distracted by other events that are occurring at the same time; they find it difficult and unpleasant to finish their schoolwork; they put off anything that requires a sustained mental effort; they are prone to make careless mistakes, and are disorganised, losing their school books and assignments; they appear not to listen when spoken to and often fail to follow through on tasks.

Distance Learning and Studying

There are a several forms of distance education courses:

- Independent study courses.
- Courses that meet in multiple locations at a specific time for lectures, course information delivery, and/or student interaction.
- Courses that do not meet at any specific time, in one or many locations.

> "Distance education is based on the premise that students are at the centre of the learning process, take responsibility for their own learning, and work at their own pace and in their own place. It is about ownership and autonomy." *****

The good news: studies have shown that below grade students perform better in distance education courses if they finish them; and that at-grade or better students perform about the same.

The bad news: students tend to procrastinate and drop out at higher levels than in traditional courses, especially below grade students.

Conditions for a successful distance education course:

Course information:

- Course website address.
- Instructor's name, office location and hours, telephone number, fax number, e-mail address.
- Teaching assistant name, office location and hours, telephone, fax, e-mail address.
- Tutor name, office location and hours, telephone, fax, e-mail address.
- Librarian/research assistant name, office location and hours, telephone, fax, e-mail address.
- Resource centre (RC) location and hours, telephone number; RC manager with e-mail address.

Logistics

- Course materials you can expect.
- How you will receive the course materials.
- How you will be notified, or learn, of course announcements and class cancellations.

Technical requirements:

- Computing and internet hardware, platform, and specifications.

- Software type and version.
- Multimedia accessibility.

Schedule yourself, and stick to an assignment schedule, that:

- Coincides with the course syllabus.
- Is negotiated or verified with the instructor.

Schedule yourself daily/weekly for course communications for:

- Peer learning/fellow student interaction via discussion groups, case studies, etc.
  Often you will be required to work on group projects or case studies, whether at one location or through the Internet.
- Feedback to the instructor/teacher in a face-to-face course, an instructor/teacher relies on feedback from students, whether with questions or facial/physical expressions. In a distance situation this is most difficult, and you carry the responsibility to inform the instructor/teacher how you are doing in the course, whether by appointment or through phone conversations or e-mail.
- Assignment progress and submission.
- Progress reports: The instructor/teacher must provide feedback to you on your progress through the course. Request an evaluation schedule, conditions, and methods for your progress through the material. Methods include:
  - Tests reflecting knowledge acquisition or performance of tasks.
  - Reports, projects, case studies, course portfolio, etc.
  - Qualitative and quantitative input into course discussions and projects.

***** Wheeler, Steve, "Convergent technologies in distance learning delivery", **Tech Trends**, Volume 43, Issue 5, November 1999, p. 19.

Classroom Participation

Preparing for Classroom Learning

Before class:

- **Do your homework!**
  Read critically; form your own opinions.
- **Review your notes**
  from the previous lecture and reading for the day.
- **Communicate immediately with teachers**
  about any study problems.
- **Focus on the task at hand before class:**
  take a moment of silence to gather your thoughts and mentally prepare yourself to the topic.
- **Write any objectives**
  that come to mind at the head of your notepaper:
  - Preparing for an up-coming test.
  - Understanding a particular concept.
  - Gaining a good foundation on a topic.
  - Understanding or reviewing the readings.

In Class:

- **Arrive on time for class.**
  Teachers do not take lateness lightly.
- **Position yourself in the classroom**
  to focus on the subject matter; consider the best location for:
  - Listening.
  - Asking questions.
  - Seeing visual materials.
  - Discussing--not only with the teacher but also your classmates.
- **Avoid distractions**
  that may interfere with your concentration (daydreaming, looking around the room, talking to a friend, passing notes, dozing).
- **Evaluate as you listen:**
  - Decide what is important and should be placed in your notes and what can be left out.
  - Listen long enough to be sure you understand what was said before writing.
  - Ask clarifying questions (but wait for "breaks" in the teacher's stream).
- **Review your class objective(s)** throughout the class period.
  - Did your objective(s) mesh with the teacher's introductory remarks?
  - Has the class digressed from stated objectives, yours or the teacher's?
- **Write a "to do" list** including:
  - Assignments.
  - Reviewing difficult concepts.
  - Joining study groups.

- Making appointments with a study pal, tutor, or the teacher.
  One resource often overlooked is a classmate who seems to have a good grasp of the material. If it seems appropriate, seek the individual out for help.

Material adapted from: Gail M. Zimmerman, Assistant Dean of First-Year Students and Academic Counselor, Dartmouth College and Bob Nelson, et al, Learning Resource Centers, Rutgers University

Influencing Teachers

How you communicate with your teacher affects how well you do in a course/subject. In general, teachers are likely to be impressed with students who show a genuine interest in their course material and ask good questions. The best way to get on your teacher's good side is to be an "interested" student.

The following are some strategies to demonstrate your interest and curiosity:

- Don't criticise, condemn, or complain to the teacher about his or her performance, rather focus on, and discuss the material and your understanding of it.
- Let the teacher know what you appreciate about the course.
- Smile.
- Know and use the teacher's name.
- Listen to what the teacher has to say about himself or herself.
- Talk in terms of what the teacher is interested in.
- Let the teacher know that you think he or she is important.
- Avoid arguing.
- If you are wrong, admit it quickly and emphatically.
- Ask questions rather than give orders (often statements generate resistance whilst questions generate answers).
- Try honestly to see the teacher's point of view.
- Let the teacher know that you sincerely want to do well in the course.
- Always have the course textbook in your hand whenever you see the teacher.
- Hand in all assignments on time throughout the term.

Adapted from *How to Win Friends and Influence People*, by Dale Carnegie, New York: Simon and Schuster Inc., 1936

Note Taking in Lectures

A good strategy of note taking in class will pay off in terms of effectiveness and time savings.

The keys to good note taking are the five "R's" from the Cornell Notetaking System (Dartmouth College, Hanover, NH):

Record * Reduce * Recite * Reflect * Review

You can develop your own system
based on a few elementary strategies:

Get a good loose-leaf notebook.
This will enable you to add, delete, and re-sequence pages and materials.

Develop an organisational system, include:

1. **Headings, the date, even the number of the class** (e.g. 3/34).
2. **Any guest speakers' names, including your fellow students' contributions.**
3. **A system of "sections"** to organise your notes. Leave plenty of white space for additions.

   Think in terms of three main sections:

   1. **A central space for identifying** the main points **capturing** the main ideas not **quoting** the lecturer (if you want to quote someone, bring a tape recorder if it is permitted).
   2. **A marginal space for editing or annotating** what you have written, **linking information** from the text or other sources, **adding definitions.**
   3. **A "condensing" or summary section.**

Paying Attention in the Classroom

If you attend lectures and have difficulty paying attention to what is being said:

- Before lectures, look over the notes of the previous lecture and read the course material pertaining to the lecture.
- If you have questions about material from the previous class or text, ask the teacher before class about them.
- Resist distractions by sitting in front of the room and by focusing on the teacher through listening and note taking.
- Show outward interest during lectures (attentive expression and posture) to self-motivate internal interest.
- Take good notes! See Note Taking in Lectures (pg 58).
- When appropriate: ask a question, ask for more clarity, or engage the teacher and the class in dialogue.
- Schedule time to go over lecture material immediately after class. Remember: forgetting is greatest within 24 hours without review.
- Schedule a weekly review for each course.

Being Heard

How to contribute to the discussion.

At the appropriate time in classroom discussions, don't be afraid to voice your opinion, even if you differ from your teacher or classmates. Your opinion can and should be based on the text, other readings, class discussions, library sources, experts in the topic, as well as your own experience.

- In class, listen carefully to what a teacher or other students are saying.
- Mark or make notes of the points you wish to **answer** or **discuss** or **question.** Remember: a question is as valuable as an opinion in the course of discussion. It shows that you are trying to understand others, as well as be understood!
- Introduce your contribution with a quick summary of the discussion or point... "As I understand it...."Restating the discussion/author's main idea also shows that you are trying to understand, and shows where you are in understanding. It is very likely that if you have questions or information, others will share them.
- Be certain it is clear to the class and teacher when you are summarising and when you are giving your opinion.
- Try to keep your comments to the point and don't hesitate to refer to your notes.
- In making an argument, begin with examples from the author or teacher (imitation can be a form of flattery), but generally use your own examples to show your agreement with their point of view. This demonstrates independent thinking which should be valued in an academic setting.
- After you have spoken, it is appropriate to ask for feedback if

    - Others understand what you have said
    - If others agree/disagree with you, demonstrate openness and dialogue: you should score points with your teacher!

Assumptions:

A sense of competition underlies the informality of the classroom.

Voicing a well-informed opinion is important to your overall academic evaluation.

First listen and try to understand others' opinions, respect theirs, and insist on being respected for yours.

Evaluations are made by teachers throughout the term;
Final grades are not simply determined by your score on the final exam.

Focus your contribution on your analysis of the topic, your reaction, your opinion, and finally your openness to understand others.

If discussion is based upon readings:

- Study course lectures, articles, texts
- Find the author's thesis and restate it in your own words
- Decide what your opinion or reaction is to the author's thesis

Material taken from Gail M. Zimmerman, *Tips for International Students*
Asst. Dean of First-Year Students and Academic Counselor
Dartmouth College

Problem Based Learning

Problem-based learning (PBL) is an exciting alternative
to the traditional classroom approach to learning. With PBL, your teacher presents you with a problem, not lectures or assignments or exercises. Since you are not handed content, your learning becomes active in the sense that you discover and work with content that you determine to be necessary to solve the problem.

Often the problem is assigned to you in a group,
and is ill defined. It is up to you as the learner to:

- Analyse it.
- Determine what you know about the subject to form a foundation toward solving it.
- Determine what you do not know about its content.
- Determine resources that will be necessary to solve it.
- Set your strategies in order to solve the problem.
- Select the best solution and test it.
- Present, and even defend, your process and solution.

In PBL, your teacher acts as facilitator and mentor,
rather than a source of "solutions."

Problem based learning provides opportunities to:

- Examine and try out what you know.
- Discover what you need to learn.
- Develop your people skills for achieving higher performance in teams.
- Improve your communications skills.
- State and defend positions with evidence and sound argument.
- Become more flexible in processing information and meeting obligations.
- Practice these skills that you will need after your education.

A Summary of Problem-Based Learning:
It is a model where steps can be repeated and recycled.
Steps two through to five may be conducted concurrently as new information becomes available and redefines the problem.
Step six may occur more than once--especially when teachers place emphasis on going beyond "the first draft."

1. Explore the issues:
Your teacher introduces an "ill-structured" problem to you.
Discuss the problem statement as you understand it and list its significant parts. You may feel that you don't know enough to solve the problem but that is the challenge! You will have to gather information and learn new concepts, principles, or skills as you engage in the problem-solving process.

2. List "What do we know?"
What do you know to solve the problem?
This cannot only be what you actually know, but who has what strengths and capabilities. Enter everyone's input, no matter how related or unrelated you consider it. This information is kept under the heading: This includes data from the situation as well as information based on prior knowledge.

3. Develop, and write out, the problem statement in your own words:
A problem statement should come from your/the group's analysis of what you know, and what you will need to know to solve it. You will need:

- A written statement.
- The agreement of your group on the statement.
- Feedback on this statement from your teacher
  (This may be optional, but is a good idea).

Note: The problem statement is often revisited and edited as new information is discovered, or "old" information is discarded.

4. List out possible solutions.
List them all, then order them from strongest to weakest.
Choose the best one, or most likely to be successful.

5. List "What should we do?" with a timeline.
List actions to be taken.

- **What do we have to know and do to solve the problem?**
- **How do we rank these possibilities?**
- **How do these relate to our list of solutions? Is there agreement?**

6. List "What do we need to know?"
Research the knowledge and data that will support your solution.
You will need to get information to fill in missing gaps.

- **Discuss possible resources:**
  Experts, books, web sites, etc.
- **Assign and schedule research tasks, especially deadlines**

If your research supports your solution, and if there is general agreement, go to (7). If not, go to (4)

7. Write up your solution with its supporting documentation, and submit it. As part of closure, teachers may require you to present your findings and/or recommendations to a group or your classmates. This should include the problem statement, questions, data gathered,

analysis of data, and support for solutions or recommendations based on the data analysis: in short, the process and outcome.

Presenting and defending your conclusions:
The goal is to present not only your conclusions,
but the foundation upon which they rest. Prepare to

- State clearly both the problem and your conclusion.
- Summarise the process you used, options considered, and difficulties encountered.
- Convince, not overpower. Bring others to your side, or to consider without prejudice your supporting documentation and reason.
- Help others learn, as you have learned.
- If challenged and you have an answer, present it clearly and if you don't have an answer, acknowledge it and refer it for more consideration.

Sharing your findings with teachers and students is an opportunity in demonstrating that you have learned. If you know your subject well, this will be evident. If a challenge arises that you cannot respond to, accept it as an opportunity to be explored. However, take pride in your attention to quality when you present.

8. Review your performance.
This debriefing exercise applies both to individuals and the group. Take pride in what you have done well; learn from what you have not done well. Thomas Edison took pride in unsuccessful experiments as part of his journey to successful outcomes!

9. Celebrate your work!

Writing Skills

Writing Basics

Writing essays, term papers, lab reports, etc.
no matter the topic, is a process:

- **Establish, narrow, and define your topic.**
  State your thesis or theme in a sentence or two at most.
- **Define your audience.**
  Is it your teacher who grades you or a teaching assistant?
  Your classmates who will critique your work?
  A conference of professionals for review?
  Keep your audience in mind as you write.
- **Plan ahead.**
  Set a time line and allow for unexpected developments and planned revision
- **Gather resources:**
  People: teacher, instructor, teaching assistant, research librarian, tutor, subject matter experts, professionals.
  References: textbook, reference works, web sites, journals, diaries, professional reports.
- **Research:**
  read, interview, experiment, gather data, etc. and take notes completely as possible and document sources. Either use index cards or a system in word processing.
- **Organise your notes with a prewriting exercise:**
  focused freewriting, brainstorming, mapping, and/or outlining.

- **Write your first (rough) draft.**
  Determine how you will develop your argument: Use good logic in a reasoned argument to develop the theme and/or support the thesis. Will you compare or define? Will you criticize or describe?

  Your first paragraph

  - **Introduce the topic!**
  - **Inform the reader of your point of view!**
  - **Entice the reader to continue** with the rest of the paper!
  - **Focus on three main points** to develop.

  The first paragraph is often the most difficult to write. If you have trouble, just get it down with the intention of re-writing it later, even after you have finished with the rest. But remember this first entry draws your audience into your topic, your perspective, and its importance to continue with the rest. So:

Development

- **Establish flow from paragraph to paragraph**
  - Transition sentences, clauses, or words at the beginning of paragraph connect one idea to the next
    (See the guide on Transitional Words and Phrases pg 88).
  - Topic sentences in each paragraph, also near the beginning, define their place in the overall scheme.
  - Avoid one and two sentence paragraphs which may reflect lack of development of your point.
- **Keep your voice active**
  - "The Academic Committee decided..." not "It was decided by..."
  - Avoid the verb "to be" for clear, dynamic, and effective presentation.
    (Avoid the verb "to be" and your presentation ~~will be~~ effective, clear, and dynamic).
  - Avoiding "to be" will also avoid the passive voice.
- **Use quotations to support your interpretations**
  - Properly introduce, explain, and cite each quote.
  - Block (indented) quotes should be used sparingly; they can break up the flow of your argument
- **Continually prove your point of view throughout the essay**
  - Don't drift or leave its primary focus of the essay.
  - Don't lapse into summary in the development--wait until its time, at the conclusion.

Conclusion

- **Read your first paragraph and the development**.
- **Summarise, then conclude, your argument.**
- **Refer back** (once again) to the first paragraph(s) as well as the development:
  - Do the last paragraphs briefly restate the main ideas?
  - Reflect the succession and importance of the arguments.
  - Logically conclude their development?
- **Edit/rewrite the first paragraph**
  to better set your development and conclusion.

<u>Take a day or two off!</u>

- **Re-read your paper**
  with a fresh mind and a sharp pencil.

  Re-read aloud,
  as if you want to communicate with a trusted friend or family member. The person/people can be real or imaginary. You will be surprised what you find to change!

- **Edit, correct, and re-write as necessary.**
- **Hand in the paper**.
- **Celebrate a job well done,** with the confidence that you have done your best.

This last is very important.

Portions adapted with permission from K. Austin Kerr,*Some Tips on Writing Papers for History Courses*, Ohio State University. Suggestion by Carolla J. Ault, Writing Instructor, The College of Lake County.

Organising Research

with Word Processing and/or the Note Card System.

When it comes to organising information for a term paper or even a short two or three page paper, the "Note Card System" can be very useful. By using this system, you create note cards from blank 3x5 or 5x7 index cards that you fill with information pertinent to the subject that you are researching. The organization of the information can readily be adapted to use with word processing...

How to Create a Note Card:

code	author
fact quote thought	

- In the upper left corner of the card, **"code"** the topic of your paper, and where in the outline it may fall.
- In the upper right corner, **place the author's name** and/or title and page number.
- **In the body of the card**, enter one single fact or thought you'd like to include in your paper. Make sure the information is expressed in your own words, unless it is a quotation.
  Use good sentence structure: this will save you time when you start to write the paper.
- **Organise the cards** to coincide with the outline of your paper.
- **Write the term paper following this sequence.**
  Use topical, concluding, and transitional sentences to link the information on the cards.
- **Keep a separate set of cards** with the complete information of books, magazines, films, etc. These will be used for entering footnotes and endnotes, and when compiling the bibliography.

Follow this same process in word processing!

- Create a file organised with page breaks, or a series of files as your "notecards".

- Print your pages and separate thoughts making sure that each section is properly identified.
- Organise the information by cutting, pasting, and sequencing.
- Edit as usual in word processing.

See also: Mapping Information (pg 16)

Prewriting and Drafts

A rough draft is "a late stage in the writing process". It assumes that you have adequate information and understanding, and are near or at the end of gathering research.

What you need:

- **Adequate time period** for focus.
- **Clear study area**
  to eliminate distractions, whether other school projects or friends' demands, in order to concentrate on the task at hand.
- **Notes on ideas**
  to include from your research.
- **Target audience**
  or a clear idea for whom you are writing:
  your teacher, an age group, a friend, a profession, etc.
- **Preparation and research**
  with as much current and historical data and viewpoints as necessary.
- **Review**
  all the above. Don't "study" it; just refresh yourself on the main concepts for now.

What you will not need:

- **Title or introduction,**
  derive these from your rough draft.
- **Reference works, printouts, quotes,** etc.
  Rely on your notes, and don't overwhelm yourself with facts. Details can be added; you now want to focus on developing your argument.
- **Edits!**
  Do not revise as you write, or correct spelling, punctuation, etc. Just write, write, write. This is the first draft, so what you put down will be revised and organised "after".

Prewriting:

Prewriting exercises provide key words, meaning, and structure to your research before you write, and may overcome "writers block." They help you.

- **Focus intellectually**
  clearing distractions while opening your mind to ideas within your subject.
- **Narrow and define topics for your paper**
  beginning the process of translating research into your own words.
- **Develop logical or architectural structure to topics you have identified**.
  This provides a visual and verbal document for reaction, review, discussion, and/or further development in your rough draft. However, these exercises are dynamic or subject to change in the actual writing process as you understand,

develop, and build your argument. Some topics will go, some will stay, some will be revised.

- **Provide a context for "project management"** to further define the topic, set timelines, identify gaps in information, etc.

Four exercises in prewriting:

Focused Freewriting:

1. **Use a blank paper or computer screen** and set a time limit of 5 - 15 minutes.
2. **Summarise the topic in a phrase or sentence;**
   generate a free flow of thought.
3. **Write <u>anything</u> that comes to mind**, whether on topic or off, for the period of time you chose.
4. **Don't pause**, don't stop,
   don't rush; work quickly.
5. **Don't review**
   what you have written until you have finished.
6. **At the end of your time**, refer back to the beginning:
   Rephrase the initial topic.
   Repeat a word, phrase, or important thought or emotion that makes sense.
7. **Review:**
   are there words or ideas you can grab onto for the topic?
   Is there a main idea to this sequence of ideas?

Brainstorming:

1. **Use a blank paper or computer screen** and set a time limit of 5 - 15 minutes.
2. **Summarise the topic in a phrase or sentence;**
   generate a free flow of thought.
3. **Write down <u>everything</u>** that comes to mind to generate a free flow of thought:
   - **Think of ideas** related to this topic, the crazier the better: be wild and amuse yourself; eliminate nothing.
   - **Make up questions and answers** about the topic, no matter how strange: Why am I doing this? What could be interesting about this to me? Why don't I like this? What colour is it? What would my friend say about it?
4. **Review:**
   are there words or ideas you can grab onto for the topic?
   Is there a main idea within this sequence of ideas?

Mindmapping:

1. Think in terms of key words or symbols that represent ideas and words.
2. Take a pencil (you'll be erasing!) and a blank (non-lined) big piece of paper or use a blackboard and (coloured) chalk.

Listing and Outlines:

This is a more structured and sequential overview of your research to date. You may also outline to organise topics built from freewriting, brainstorming, or mindmapping:

1. Arranges items or topics, usually

3. **Write down the most important word or short phrase or symbol in the centre.**
   Think about it; circle it.
4. **Write other important words outside the circle.**
   Draw over-lapping circles to connect items, or use arrows to connect them (think of linking pages in a web site).
   Leave white space to grow your map for
   - Further development.
   - Explanations.
   - Action items.
5. **Work quickly**
   without analysing your work.
6. **Edit this first phase**
   Think about the relation of outside items to the centre.
   Erase and replace and shorten words for these key ideas.
   Relocate important items closer to each other for better organization.
   Use colour to organise information.
   Link concepts with words to clarify the relationship.
7. **Continue working outward.**
   Freely and quickly add other key words and ideas (you can always erase!).
   Think weird: tape pages together to expand your map; break boundaries.
   Develop in directions the topic takes you--don't bet limited by the size of the paper.
   As you expand your map, tend to become more specific or detailed.

without punctuation or complete sentences.

2. Lists topics and phrases them in a grammatically similar or parallel structure (subjects, verbs, etc.).
3. Sequences topics in importance, defining what "level" of importance they are. Items of equal importance are at the same level.

Take a break!
Refresh yourself

- **Review the ideas, topics, themes, questions**
  you have come up with in your prewriting exercise. Try reading the prewriting text out loud (a type of self-mediation). Listen for patterns that seem most interesting and/or important. Summarise them.
- **Evaluate the ideas, topics, themes, questions**
  whether by scoring, prioritising, or whatever method seems best.
  Keep this list in case your first choice(s) don't work.
- **Sequence** what you have prioritised as in outlining, above.

For writing the first draft refer to pg 70

The Five-Paragraph Essay

The five-paragraph essay measures a student's basic writing skills,
and is often a timed exercise.
Use this Guide to help you practice and succeed at this form of writing.

Getting started means getting organised.

Analyse the assignment; determine what is required.
With a highlighter, note important words that define the topic.
Then organise your plan.

For example, you have been given this writing prompt:

> You have a present that was really memorable. It could have been given for an important occasion or just for no reason at all. Tell us about the present and why it was memorable. Include the reason it was given, a description of it, and how you felt when you got it.

The objective is to write a narrative essay about a present you were given.

The subject is a **memorable present.**
The three main subtopics are:

- **The reason it was given.**
- **A description of it**.
- **How you felt when you got it.**

Outline your five-paragraph essay; include these elements:

Introductory Paragraph General Topic Sentence: **Memorable present.** 1. Subtopic One: **The reason it was given.** 2. Subtopic Two: **A description of it.** 3. Subtopic Three: **How you felt when you got it.** (Transition)		
First Supporting	**Second Supporting**	**Third Supporting**

Paragraph	**Paragraph**	**Paragraph**
Restate Subtopic One Supporting Details or Examples Transition	Restate Subtopic Two Supporting Details or Examples Transition	Restate Subtopic Three Supporting Details or Examples Transition
Closing or Summary Paragraph Synthesis and conclusion of the thesis rephrasing main topic and subtopics.		

Write the essay!

Think small, then build the full essay gradually.
Divide your essay into sections and develop each separately and incrementally.

The Introductory Paragraph

- **The opening paragraph sets the tone**
  It not only introduces the topic, but where you are going with it (the thesis). If you do a good job in the opening, you will draw your reader into your "experience." Put effort up front, and you will reap rewards.
- **Write in the active voice**
  It is much more powerful. Do that for each sentence in the introductory essay. Unless you are writing a personal narrative, do not use the pronoun "I."
- **Varying sentence structure**
  Review to avoid the same dull pattern of always starting with the subject of the sentence.
- **Brainstorm to find the best supporting ideas**
  The best supporting ideas are the ones about which you have some knowledge. If you do not know about them, you cannot do a good job writing about them. Don't weaken the essay with ineffective argument.
- **Practice writing introductory paragraphs on various topics**
  Even if you do not use them, they can be compared with the type of writing you are doing now. It is rewarding to see a pattern of progress.

Supporting Paragraphs

- **Write a transition to establish the sub-topic.**
  Each paragraph has to flow, one to the next.
- **Write the topic sentence.**
  The transition can be included in the topic sentence.

- **Supporting ideas, examples, details must be specific** to the sub-topic.
  The tendency in supporting paragraphs is to put in just about anything.
  Avoid this: the work you have made above with details and examples will help you keep focused.
- **Vary sentence structure.**
  Avoid repetitious pronouns and lists.
  Avoid beginning sentences the same way (subject + verb + direct object).

The Ending or Summary Paragraph.

This is a difficult paragraph to write effectively.
You cannot assume that the reader sees your point.

- **Restate the introductory thesis/paragraph** with originality.
  Do not simply copy the first paragraph.
- **Summarise your argument** with some degree of authority
  this paragraph should leave your reader with no doubt as to your position or conclusion of logic.
- **Be powerful** as this is the last thought that you are leaving with the reader.

Edit and revise your essay.

Check your spelling and grammar.
Subjects and verbs agree, and verb tenses are consistent.

Examine your whole essay for logic
Thought builds and flows?
Avoid gaps in logic, or too much detail.

Review individual sentences.

- **Use active verbs to be more descriptive.**
  Avoid passive constructions and the verb "to be"
- **Use transitional words and phrases.**
  Avoid sentences beginning with pronouns, constructions as "There are..."
  Example: "There is a need to proofread all works" becomes "Proofreading is a must."
- **Be concise**
  though vary the length and structure of sentences.

Ask a knowledgeable friend to review and comment on your essay
and to repeat back what you are trying to say. You may be surprised.

Adapted and revised from: Kasper, J. **The Five Paragraph Essay** 14 January, 1999

Literature Essays

Brainstorm the question/assignment:

- **Restate key words**
  in the assignment with synonyms or in your own words.
- **Use these equivalent terms**
  throughout your paper to keep focused.
- **Write down everything**
  you can think of that is related to the assignment.
- **Generate two or three specific sentences**
  that answer a question posed by the assignment.
- **Write your introduction last,**
  after you've had a chance to work your way to a conclusion.
- **Often it helps to take your conclusion,**
  use what you've learned, and then write the introduction in the next draft.

Refine your focus:

- **After writing your initial "guiding sentence"**
  (thesis statement), write a draft, then go back to the thesis and perhaps re-write. it;
- **Include in each paragraph an explicit reference**
  to the language you use in your thesis. If the paragraphs are not an extension of something in your thesis, either rewrite your thesis statement, edit the paragraph, or cut it. Often you can revise the paragraph by adding words that more explicitly make the connection.

Make sure that your essay is developed out of your close analysis of selected passages found in the readings:

- **Choose one or two short passages**
  from the text(s) to help focus your paper.
- **If using a quote, elaborate**
  on its meaning using words from it. Don't leave it up to the reader to figure out how to interpret the language quoted.

Think about how to organise your paragraphs to create an effective argument.

- **Is there a "scheme"**
  you can use to organise your thoughts to help structure your paper?
- **How will your examples**
  "build" upon each other? Think of logical possibilities:
  less important to more important, or vice versa;
  similar ideas versus contrasting ideas.
- **Is there a central concept**
  or metaphor you can weave throughout your paper to add coherence?

For short papers, start fast.

- **Provide an immediate, specific answer**
  to a question posed by the assignment.

Adapted from: Ida Masters Hollowell, James A. Levernier, A. Franklin Parks, ***Structuring Paragraphs: A Guide to Effective Writing***. 2nd ed. New York: St. Martin's,1986.

Expository Essays

When writing an essay, follow these eight basic steps:

- **Select a topic:**
  Be sure the topic is narrow enough to make it manageable within the space of an essay.
- **Write a thesis sentence:**
  Be sure the thesis statement (or sentence) expresses a controlling idea that is neither too broad nor too specific to be developed effectively.
- **Select a method of development:**
  Check through all the methods before you finally settle on the one which will best serve your thesis:

definition	example
compare and contrast	cause and effect
classification	process analysis

- **Organise the essay:**
  Begin by listing the major divisions which the body paragraphs in your essay will discuss; then fill in the primary supports that each body paragraph of the essay will contain.
- **Write topic sentences for the body paragraphs of the essay:**
  For each body paragraph, furnish a topic sentence that directly relates to the thesis sentence.
- **Write the body paragraphs of the essay:**
  Each body paragraph should develop the primary support covered in that paragraph's topic sentence.
- **Furnish a paragraph of introduction:**
  An introductory paragraph should state the thesis of the essay, introduce the divisions in the body paragraphs of the essay, gain the interest of the reader.
- **Write a paragraph of conclusion:**
  A concluding paragraph should restate the thesis and divisions of the essay bring the essay to an appropriate and effective close without digressing into new issues.

Source: Ida Masters Hollowell, James A. Levernier, A. Franklin Parks, ***Structuring Paragraphs: A Guide to Effective Writing.*** 2nd ed. New York: St. Martin's,1986.

Persuasive Essays

In persuasive writing, we try to convince others to agree with our facts, share our values, accept our argument and conclusions, and adopt our way of thinking.

Elements toward building a good persuasive essay include:

- **Establishing facts**
  to support an argument.
- **Clarifying relevant values**
  for your audience (perspective).
- **Prioritising, editing, and/or sequencing**
  the facts and values in importance to build the argument.
- **Forming and stating conclusions.**
- **"Persuading" your audience** that your conclusions
  are based upon the agreed-upon facts and shared values.
- **Having the confidence**
  to communicate your "persuasion" in writing.

Here are some strategies to complete a persuasive writing assignment:

Write out the questions in your own words.

- **Think of the questions posed in the assignment**
  while you are reading and researching. Determine:
  - Facts.
  - The source of the facts for reliability and later reference.
  - Source of the facts for prejudice.
  - Values that colour the facts or the issue.
  - What you think of the author's argument.
- **List out facts**; consider their importance:
  prioritise, edit, sequence, discard, etc.
  Ask yourself "What's missing?"
- **What are the "hot buttons"** of the issue?
  List possible emotions/emotional reactions and recognise them for later use.

Start writing a draft! (refer to: Writing Basics**.** pg 65).
Start as close as possible to your reading/research.
Do not concern yourself with grammar or spelling.

- **Write your first paragraph:**
  - Introduce the topic.
  - Inform the reader of your point of view!
  - Entice the reader to continue with the rest of the paper!
  - Focus on three main points to develop.
- **Establish flow from paragraph to paragraph.**
- **Keep your voice active.**
- **Quote sources** to establish authority.

- **Stay focused** on your point of view throughout the essay.
- **Focus on logical arguments.**
- **Don't lapse into summary**
  in the development--wait for the conclusion.
- **Conclusion**
  - **Summarise, then conclude, your argument.**
  - **Refer** to the first paragraph/opening statement as well as the main points:
    - Does the conclusion restate the main ideas?
    - Reflect the succession and importance of the arguments.
    - Logically conclude their development?
- **Edit/rewrite the first paragraph**
  to better telegraph your development and conclusion.

Take a day or two off!

- **Re-read your paper**
  with a fresh mind and a sharp pencil.
  - **Ask yourself:**
    Does this make sense? Am I convinced?
    Will this convince a reader?
    Will they understand my values, and agree with my facts?
  - **Edit, correct, and re-write** as necessary.
  - **Check spelling and grammar!**
  - **Have a friend read it** and respond to your argument.
    Were they convinced?
  - **Revise** if necessary.
  - **Hand in the paper.**
  - **Celebrate a job well done,**
    with the confidence that you have done your best.

  How to respond to criticism:
  Consider criticism as a test of developing your powers of persuasion.
  Try not to take it personally.

  If your facts are criticised, double check them, and then cite your sources.

  If your values are criticised, sometimes we need agree "to disagree". Remember: your success in persuading others assumes that the other person is open to being persuaded!

Fear: If you are not used to communicating,
especially in writing, you may need to overcome fear on several levels. Writing, unlike unrecorded speech, is a permanent record for all to see, and the "context" is not as important as in speech where context "colours" the words. For example: your readers do not see you, only your words. They do not know what you look like, where you live, who you are.

Hopefully in school, and class, we have a safe place
to practice both the art of writing and of persuasion. Then later, when we are in our

communities, whether work, church, neighbourhoods, and even families, we can benefit from this practice.

Persuasion also has another dimension:
it is built with facts, which illustrate conclusions. Of course, this means you need to know what you are talking about, and cannot be lazy with your facts, or you will not succeed in convincing anyone. This shows another level of fear: Fear of making a mistake that will make your argument or persuasion meaningless. Since you are writing, and the words are on paper for all to see (or on a web site!), you need to work to make sure your facts are in order.

Writing for the Web

What not to do:

Print this and read it and you will find it is easier than reading it on the screen. Writing for the Web is not like writing on an 8.5 X 11" piece of paper. When you write on a piece of paper your eyes can scan down the discreet print format, jump to headings and paragraphs, turn pages, etc. The document is readily accessible, and our eyes have been trained and have adapted to paper as the medium. It is different for a computer screen's monitor. Small type is difficult to read because of the resolution of the type's display. Sentences fill the width of the monitor, and often are too wide. The writing style differs. Instead, browsers (you) on the web want to know immediately if the page is relevant to what they are looking for. For that reason, a "bottom down" approach is necessary, with the conclusion or summary at the top. This may seem like a superficial treatment of subject matter, and it can be. However, keep in mind that millions of websites compete to deliver information, and if your website is written in a clear, direct manner, you will succeed in delivering information.

Badly designed websites comes in several varieties: One of the worst is a page that is text heavy, which reads like "Moby Dick". Interminable text goes on and on demanding perseverance to get to the good parts. "Computer eyes" tire way before they get to this point. This is not to say that a page of heavy text is not appropriate for the web! Rather, the web can be a very effective way of delivering information that is *printed*, and then read. It is said that "reading" webpages is 25% slower than on paper.

Another variety of bad design is graphics heavy: extensive graphics not only take a long time to download, but can obscure your message. Often little ditsy graphics blinking and bouncing across the screen distract the reader. Banners (advertisements?) which have nothing to do with the content similarly overwhelm or obscure the message. Confusing images mislead the browser, confusing where to go in the website for more information, or leaving you in a limbo of irrelevant information. Often graphics take an inordinate time to download, and a long download time yields impatience. The end result: viewers move on.

Writing effective Web pages:

- **The topic, its main idea, and its conclusion**
  should be immediately visible, locatable, or knowable.
- **Ideas rule structure**
  main ideas at the "top" of the screen;
  supporting and secondary information below.
- **Structure of the content and the website**
  should be readily recognizable to your visitor.
- **Simple constructions are best**;
  limit one idea to a group of words, whether sentence, phrase, paragraph.
- **Avoid technical terminology**
  unless you clearly and intentionally have its purpose in mind and definition available.
- **Data, detail, and complexity**
  are subjects for subsequent pages and should be logically placed.
- **Each subsequent page's content**
  should be apparent by its link, and consistent with its predecessor.

- **Detailed information**
  can be accessed through links for printing.
- **Edit out the superfluous**
  no matter how clever if it detracts from your message.
- **Spell check,**
  then have your pages independently proofread.
- **Always focus on your message.**
  Invite feedback with a "mailto" for comments, suggestions, questions to enhance the effectiveness of your website; ignore (don't respond to or waste your time on) idiotic responses.
- **Formatting:**

    - Each page should be consistent in design.
    - Use a table, one row/one column, to centre your text in the monitor's display (80% or so) to create margins left and right.
    - Leave wide space between paragraphs to enhance readability.

- **The use of graphics** can:

    - Reinforce text.
    - Elaborate on text.
    - Highlight text.
    - Replace text.
    - Be meaningless and distracting.

Modifiers and Commas

Grammar refers to the rules regarding the current standard of correctness in speech and writing. Advances in word processing software have included grammar-checking features.

Using Commas: Do these sentences need commas?

1. **My father went to the store for some dessert and bought ice cream.**

   No. Two verb phrases describing the action of the same subject does not need a comma if the conjunction separating them is "and."

2. **My father went to the store for some dessert, bought ice cream, and came home in time to see his favourite TV show.**

   Yes. Three or more verb phrases describing the action of the same subject need commas to separate them.

3. **The text *Who Built America?* describes Reconstruction as a noble failure.**

   Yes and no. Technically, the phrase *Who Built America?* can be set off by two commas (not just followed by one comma) because it is describing the word "text." Since it looks awkward to place a comma immediately after a question mark, it is okay to leave the commas out. If readers understand that *Who Build America?* is a text, it might be best to edit out "The text" and have the sentence read:

   Who Built America? describes Reconstruction as a noble failure.

Practice using commas.
Insert commas where needed in the following sentences; then read the explanations below.

1. The restaurant dessert tray featured carrot cake coconut cream pie and something called death-by-chocolate.
2. Because I was three hours short of graduation requirements I had to take a course during the summer.
3. The weather according to last night's forecast will improve by Saturday.
4. Students hurried to the campus store to buy their fall textbooks but several of the books were already out of stock.
5. My sister asked "Are you going to be on the phone much longer?"

1. **The restaurant dessert tray featured carrot cake, coconut cream pie, and something called death-by-chocolate.**

   The comma separates the items in a series.
2. **Because I was three hours short of graduation requirements, I had to take a course during the summer.**

   The comma separates an introductory phrase or dependent clause from the rest of the sentence.
3. **The weather, according to last night's forecast, will improve by Saturday.**

   The phrase "*according to last night's forecast*" interrupts the main clause, so it is set off by commas.
4. **Students hurried to the campus store to buy their fall textbooks, but several of the books were already out of stock.**

   The comma separates an independent clause from a dependent clause.
5. **My sister asked, "Are you going to be on the phone much longer?"**

   The comma separates a direct quotation from the rest of the sentence.

Misplaced/dangling modifiers

A modifier is a word or group of words
that describes another word and makes its meaning more specific. Often modifying phrases add information about "where", "when", or "how" something is done. A modifier works best when it is right next to the word it modifies. For example, consider the modifiers in the following sentence (they are underlined for you):

The awesome dude rode a wave breaking on the shore.

The word "awesome" is an adjective (or, a one-word modifier). It sits right next to the word "dude" it modifies.
The phrase "breaking on the shore" tells us where he rode the wave; thus, "breaking on the shore" is a modifying phrase that must be placed next to the "wave" it modifies.

Below are some examples
of poorly placed modifiers. See if you can identify the problems:

1. **Roger looked at twenty-five sofas shopping on Saturday.**

   Obviously twenty-five sofas were not shopping on Saturday. Because "shopping on Saturday" is meant to modify Roger, it should be right next to Roger, as follows:

Shopping on Saturday, Roger looked at twenty-five sofas.

---

2. **The woman tore open the package she had just received with her fingernails.**

Had the woman really received the package with her fingernails? The writer meant that she tore open the package with her fingernails.

With her fingernails, the woman tore open the package she had just received.

---

3. **The waiter brought the pancakes to the table drenched in blueberry syrup.**

What's drenched according to the sentence? The waiter, the table, or the pancakes? Actually, the pancakes were drenched:

The waiter brought the pancakes, drenched in blueberry syrup, to the table.

---

4. **Lying in a heap on the closet floor, Jean found her son's dirty laundry.**

It sounds as if Jean was lying on the closet floor when she found her son's laundry!

Jean found her son's dirty laundry lying in a heap on the closet floor.

This page modified thanks to Naoko Shibusawa, University of Hawaii.

Transitional Words and Phrases

Using transitional words and phrases
helps papers read more smoothly by providing coherence.

A coherent paper allows the reader
to flow from the first supporting point to the last.

Transitions indicate relations,
whether from sentence to sentence, or from paragraph to paragraph.
This is a list of "relationships" that supporting ideas may have,
followed by a list of "transitional" words and phrases
that can connect those ideas:

Addition:
also, besides, furthermore, in addition, moreover, again.

Consequence:
accordingly, as a result, consequently, hence, otherwise,
so then, therefore, thus, thereupon.

Summarising:
after all, all in all, all things considered, briefly, by and large, in any case, in any event, in brief, in conclusion, on the whole, in short, in summary, in the final analysis, in the long run, on balance, to sum up, to summarise, finally.

Generalising:
as a rule, as usual, for the most part,
generally, generally speaking, ordinarily, usually.

Restatement:
in essence, in other words, namely, that is, that is to say,
in short, in brief, to put it differently.

Contrast and Comparison:
contrast, by the same token, conversely, instead, likewise,
on one hand, on the other hand, on the contrary, rather,
similarly, yet, but, however, still, nevertheless, in contrast.

Sequence:
at first, first of all, to begin with, in the first place, at the same time, for now, for the time being, the next step, in time, in turn, later on, meanwhile, next, then, soon, the meantime, later, while, earlier, simultaneously, afterward, in conclusion.

Diversion:
by the way, incidentally.

Illustration:
for example, for instance, for one thing.

Similarity:
likewise, similar, moreover.

Direction:
here, there, over there, beyond, nearly, opposite, under, above,
to the left, to the right, in the distance.

Spelling

English spelling rules are complex, with many exceptions.
If you find spelling to be a particular challenge, here is one strategy to follow:

As a foundation:

- Practice your spelling.
- Keep a "spelling notebook" and list words you commonly misspell or have trouble with.
- Keep a list of commonly misspelled English words, or words that may be spelled correctly, but misused (e.g. who's * whose).
- Keep a list of rules for spelling.
  This book can also help you build your vocabulary.

As regards important documents you send, or hand in to others:

- **Spell check the document if it is electronic.**
  Note: Some e-mail software (ie. MS Outlook) can be set to automatically check spelling and grammar before you can send.
- **Re-read the printed document carefully for errors:**
  Pay attention to words you commonly misspell or that are spelled correctly but misused.
  Note these words in your spelling notebook.
- **Have someone you trust and respect review the document.**
  This is often difficult for us since often we get comments regarding text as well as spelling. But that is a plus, since we don't have to change the text, but rather appreciate the suggestions and go on...
- **If you have a Centre for Writing Assistance,**
  take advantage of it.

Using Dictionaries: a dictionary contains more than the spelling of a word!
It also contains the spelling of its derivatives: plural forms and participles. Internet resources include:

> Dictionary.com, http://www.dictionary.com/ (dictionary, thesaurus, and access to foreign dictionaries)
>
> Merriam-Webster OnLine, http://www.m-w.com/ (dictionary, thesaurus, look up feature for bad spellers, word of the day, word games, and access to vocabulary in 230 languages).
>
> Since English is so exceptional in its spellings, any dictionary assists you in finding exceptions to the rules of spelling. Alternative spellings, especially British vs. American, should also be noted.

Spell checkers in word processing**:**

- Spell check each and every word-processed document as a habit.

- Proofread each document after spell-checking!
  A spell checker will only find words incorrectly spelled. It will not find words correctly spelled but misused.

Common errors:

from and **form:** a common typing inversion;
of, **or:** another case of mistaken keyboarding;
to, **too**, **two; there, their; whether, weather**: common confusion of usage.

Remembering a "spelling":

- **Check a dictionary**
  for the correct pronunciation of the word. This will help you remember how to spell the word.
- **Check for the meaning and history of the word.**
  This provides additional information.
- **Practice spelling the word to yourself** before you close the dictionary. Write it down or visualise it in your mind's eye.
  Check the spelling in the dictionary again to ensure that you have learned to spell the word correctly.
- **Learn basic spelling rules** (see below).

Adapted from "Steps to Becoming a Good Speller" in *Basic English Revisited* by Patrick Sebranek and Verne Meyer.

A Few Key Spelling Rules

- Write "i" before "e" except after "c," or when sounding like "a" as in "neighbour" and "weigh." When the "ie/ei" combination is not pronounced "ee," it is usually spelled "ei."

Examples: fiery, friend, mischief, view,
ie believe

Examples: reign, foreign, weigh,
ei neighbour, weird, receive

- If a word ends with a silent "e," drop the "e" before adding a suffix which begins with a vowel:

state--stating; like--liking

- Do not drop the "e" when the suffix begins with a consonant:

state--statement; like--likeness; use--
useful

- When "y" is the last letter in a word and the "y" is preceded by a consonant, change the "y" to "i" before adding any suffix except those beginning with "i":

  beauty--beautiful; fry--fries; hurry--
  hurried; lady--ladies

- When forming the plural of a word which ends with a "y" that is preceded by a vowel, add "s":

  toy--toys; play--plays; monkey--monkeys

- When a one-syllable word ends in a consonant preceded by one vowel, double the final consonant before adding a suffix which begins with a vowel:

  bat--batted, --batting; prod--prodded, --
  prodding

- When a multi-syllable word ends in a consonant preceded by one vowel, and the final syllable is accented, the same rule holds true: double the final consonant:

  control--controlled; sum--summary;
  god--goddess; prefer--preferred

- But when the final syllable does not have the accent it is at least preferred, and in some cases required, that you NOT double the consonant. (The preference characterises American English; British English seems to prefer doubling, though it often allows its omission. But a number of words disallow doubling in both American and British English.).

  focus--focused; pardon--pardoned;
  worship--worshiped; trumpet--trumpeted; gallop--galloped

See also Vocabulary Building Exercise (pg 49)

Sebranek, Patrick.; Meyer, Verne. *Basic English revisited : a student handbook.* [Lexington, Mass.] : Write Source, 1994

Words commonly misspelled, or spelled correctly but not used properly:
Note: these are British spellings!

A: absence, accidentally, accommodation, according, ache, again, against, aisle, allegory, almost, always, although, ancient, airplane, aging, agonise, apologise

B: beautiful, beginning, believe, body, build, business

C: calendar, consensus, cemetery, coolly, confidence, criticise

D: defendant, disappoint, drunkenness, despair, distance, disguise, difference, describe, decided, double, divide, dilemma, disappear

E: easiness, exceed,

F: famous, finish, forest, familiar, from, form

G: guest, guarantee, guilty, government, guardian, gauge

H: halve, happened, here, hear, height, high

I: illegible, indispensable, information, interest, imagine, immediately, independent, instead, irresistible

J: judgment, juice

K: knowledge

L: liquefy, a lot, language, listen, league,

M: maintenance, month, mountain, machine, measure, meant, merchandise, memorandum,

N: necessary, neither

O: occurrence, occasion

P: pastime, paragraph, period, phrase, possible, preferred, pressure, prominent, purchase, purpose, pursue

Q: quite, quiet, queue, questionnaire

R: recommend, receive, region, remember, receipt, reference

S: separate, soldier, sugar, sure, sergeant, says, several, similar, sincerely

T: tyranny, thousands, temperature, thorough, tomorrow, theatre, to, two, too, there, their, they're, truly, tournament

U: unfortunately, until, usually, unanimous, unforgettable

V: vacuum, variety, various, vary, vehicle, vicious, village, villain

W: wear, where, we're, weird

X:

Y: yacht, yield

Z: zucchini

Writing Strategies

- **Writing helps clarify your thinking.**
  You don't really know what you think until you write it.
- **Writing on a regular basis makes you a better writer**.
  Like anything else, the more you practice, the better you get.
- **Deadlines can be helpful.**
  They can give you the energy and concentration you need to write.
- **Length limits are good for your style.**
  Eliminating wordiness improves your emphasis and impact.
- **Good writing is edited writing.**
  You never outgrow your need for a good editor.
- **Letting your first draft "rest," will help you edit it more effectively.**
  Certain problems become obvious if you allow time to pass between drafting and editing.
- **Some stages of writing are inefficient and sloppy.**
  Accepting the imperfection of the first draft is a wonderful freedom.
- **Making it fun keeps it fresh.**
  As with most things, a column on business writing doesn't need to be dry and boring.
- **Writing counts**.
  Writing is a reflection of your personality and style, a statement of your professional standards. It counts as much as anything else you do.

Print Bibliography

Writing Essays, Research Papers and Reports.

Baker, Sheridan. **The Practical Stylist**. New York: Harper & Row, Publishers, 1985.
The Practical Stylist examines essay writing, from determining a thesis statement to writing grammatical sentences. The chapter on writing a thesis is particularly effective. There is a good section on revision and examples of essays for different disciplines.

Buckley, Joanne. **Fit to Print**. Toronto: Harcourt Brace Jovanovich, 1991.
Fit to Print is a brief guide to essay writing that covers the essentials without belabouring the point. It's a book to use as an aid to writing essays because it follows the natural course from selecting a topic to revising and proof reading.

Carney, Tom, and Barbara Carney. **Liberation Learning: Self-Directed Learning for Students.** Windsor, Ontario: Para-Publishing Enterprises, 1988.
Liberation Learning: Self-Directed Learning for Students presents information and approaches to virtually every issue that university students encounter during their studies. The first chapter examines writing and suggests strategies for overcoming blocks. Another chapter examines learning and teaching styles and the relationship between them. Chapters on time management assume that the students are just out of high school so not be appropriate for mature adult students.

Deese, James, and Ellin K. Deese. **How to Study.** New York: McGraw-Hill Book Company, 1969.
How to Study is an introduction to study skills for on-campus students. The book covers time management, reading, and essay writing, and also provides tips for studying foreign languages, math, and science.

Ellis, David B. **Becoming a Master Student.** Rapid City, South Dakota: College Survival, Inc., 1993.
Becoming a Master Student is one of the best study skills books available. The book is updated yearly but the essential ideas remain constant. Ellis believes that studying is a skill that can be learned and improved. There are chapters on just about any issue that can perplex students, from time management to memory, reading, note taking, relationships, health and money. The ideas, exercises, and self-tests, encourage students to interact with others and become active learners. The writing style and layout are informal. The pages have bold, colourful headings and illustrations, charts to emphasize main points, and lots of white space for notes.

Fleet, Joan, Fiona Goodchild, and Richard Zajchowski. **Successful Learning**. London, Ontario: University of Western Ontario, 1987.
Successful Learning is an introduction to study skills, an earlier version of *Learning for Success*. There is an inventory at the beginning to help students identify their strengths and weaknesses followed by chapters on time management, essay writing, science problem solving, exam preparation, and others. The authors encourage students to be strategic, to study "smarter not harder."

--**Learning for Success.** Toronto: Harcourt Brace Jovanovich, 1990.
Learning For Success covers the usual study skills? topics, such as writing and note taking, as well as non-typical topics such as memory and seminar presentation. Much of the information is presented in points, exercises, and inventories. At just under 150 pages, the book is one of the briefest introductions to study skills.

Frew, Robert, Richard Guches, and Robert Mehaffy. **Writer's Workshop**. Palo Alto, California: Peek Publications, 1984.
Writer's Workshop provides information and exercises on every aspect of writing, from sentences to formal essays. The book is effective for acquiring new skills or as a reference book for writers. It contains a thorough table of contents and index.

Kennedy, Mary Lynch, and Hadley M. Smith. **Academic Writing**. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1986.
Academic Writing examines, analyses, and gives exercises for understanding university readings and for writing many types of assignments. The book also discusses how to approach various kinds of essay topics (e.g. compare and contrast).

Lewis, Roger, and John Inglis. **Report Writing**. Cambridge: National Extension College, 1982.
Report Writing is a clear and concise book that demonstrates an approach to writing effective reports for school or business. The book contains numerous examples and exercises to help the reader interact with the information.

MacFarlane, Polly, and Sandra Hodson. **Studying Effectively and Efficiently: An Integrated System**. Toronto: University of Toronto, 1983.
Studying Effectively and Efficiently: An Integrated System provides a brief introduction (46 pages) to study skills. Topics include concentration, time scheduling, listening and lecture note taking, reading and learning from textbooks, writing papers, and preparing for exams. The book contains a brief, clear explanation of the mechanisms of learning and memory.

Nilsson, Virginia. **Improve Your Study Skills.** Athabasca, Alberta: Athabasca University, 1989.
Improve Your Study Skills is a handbook in seven modules covering everything from reading to note taking, essay writing, and maintaining motivation. The modules present study skills that research has shown to be effective with adult students. Athabasca University students can obtain the modules, free of charge, from the Athabasca University Students Association (AUSA).

Norton, Sarah, and Brian Green. **The Bare Essentials, Form B**. Toronto: Holt, Rinehart and Winston of Canada, Limited, 1988.
The Bare Essentials, Form A or Form B, is an excellent source of information on spelling, grammar, and essay writing. The spelling section uses standard Canadian spelling. *The Bare Essentials* uses a conventional, top down approach to essay writing: finding a thesis, writing an outline and draft, and polishing the final draft. The book is in standard textbook format, but the content is presented in workbook form. The language is informal and encouraging.

---. **Essay Essentials**. Toronto: Holt, Rinehart and Winston of Canada, Limited, 1991.
Essay Essentials is a thorough guide to planning, researching, writing, and revising essays. There are chapters on grammar, punctuation, and spelling. The authors describe the book as combining the "bottom up" and "top down" approaches to essay writing. The bottom up approach uses free writing and brainstorming whereas the top down approach proceeds from defining a topic, to writing, revision, and a final draft. Students may be inclined towards one method or another depending on their experience and the topic. The book is organised with headings, sub-headings, tables, anecdotes, exercises, and self-tests.

Roth, Audrey J. **The Research Paper: Process, Form, and Content**. Belmont, California: Wadsworth Publishing Company, 1986.
The Research Paper: Process, Form, and Content is a book that takes you through the process of writing a research paper. The book begins with a planning guide and proceeds to examine each topic in detail. Although the information on library searches is dated? Libraries have changed dramatically in the past few years? The information is sound and helpful.

Smith, H. Wendell. **Readable Writing**. Belmont, California: Wadsworth Publishing Company, 1985.
Final drafts of students? Essays can sometimes fail to live up to the students? or their professors? expectations. *Readable Writing* is a book that can help. The author uses a step-by-step approach to manuscript preparation, examining everything from writing the first draft, to revising for substance, order, and clarity. There is a detailed table of contents and index, and check lists for revising drafts.

Strunk, William, and E. B. White. **The Elements of Style**. New York: Macmillan Publishing Co., Inc., 1972.
If you have time to read only one book on writing, make it this 92-page classic, *The Elements of Style*. There are chapters on grammar, composition, and an especially useful one on word usage that could save students from embarrassing errors.

Sullivan, Kathleen E. **Paragraph Practice**. New York: Macmillan Publishing Co., Inc., 1984.
If professors or tutors criticize students' paragraphs, *Paragraph Practice* can help. It explains what a paragraph is and how it differs from other writing. The author breaks the paragraph down into its parts, and shows how several of them can be united to form a brief composition? the kind of composition written for exams and tutor marked assignments.

English Grammar

Frew, Robert, Richard Guches, and Robert Mehaffy. **Writer's Workshop**. Palo Alto, California: Peek Publications, 1984.
Writer's Workshop provides information and exercises on every aspect of writing from sentences to formal essays. The book is effective for acquiring new skills or as a reference book for writers. It contains a thorough table of contents and index.

Lewis, Norman. **Instant Spelling Power**. New York: Amsco College Publications, 1976.

Instant Spelling Power may not be quite as fast as the title promises but does provide tactics for remembering how to spell tricky words. There are chapters on words with "ly" endings, "ie" or "ei" in the middle, and many others. If you know that particular types of words sabotage your best efforts, you can choose a specific chapter to help.

Norton, Sarah, and Brian Green. **The Bare Essentials, Form B**. Toronto: Holt, Rinehart and Winston of Canada, Limited, 1988.
The Bare Essentials, Form A or Form B, is an excellent source of information on spelling, grammar, and essay writing. The spelling section uses standard Canadian spelling. *The Bare Essentials* uses a conventional, top down approach to essay writing? defining a thesis, writing an outline and draft, and polishing the final draft. The book is in standard textbook format, but the content is presented in workbook form. The language is informal and encouraging.

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If you have time to read only one book on writing, make it this 92-page classic, *The Elements of Style*. There are chapters on grammar, composition, and an especially useful one on word usage that could save students from embarrassing errors.

Sullivan, Tony. **Grammar.** Cambridge: The National Extension College, 1979.
Grammar is an introduction to the subject for those who have never studied it formally, or don't remember what they studied.

Internet Bibliography for Writing

Grammar

- **The Elements of Style, Rules of usage and elements of composition,** William Strunk, Jr., Project Bartleby (est. 1994) Archive, Columbia University, New York (an incredible resource for English courses)
- **Guide to Grammar & Writing - Sentence, paragraph, and essay levels**
- **On-Line English Grammar - alphabetical listing of topics and explanations** by Anthony Hughes, St. John's Wood School of English, London England
- **Grammar & Style Notes - alphabetical listing of grammatical topics and explanations**
- **Guide to Grammar and Writing**, Professor Charles Darling, Capital Community College. Organized by "levels" including word and sentence, paragraph, essay and research paper, etc. and presented text-only, illustrated, and framed versions.

Organising the Essay and its Process

- **OWL, Purdue University's Online Writing Lab. With a great** list of handouts organized by category.
- **The Writing Process - very comprehensive** Writing Center, University of Richmond, Virginia
- **Graphic Organizers - the basic spidering approach with lots of graphics** North Central Regional Educational Laboratory
- **Graphic Organizers - types are graphically presented** San Diego County Office of Education, California
- **Graphic Organizers - excellent indexed grid by types (can be copied for educational purposes)** Greg Freeman, Bend, Oregon
- **Writing Center handouts on writing - 5 paragraph essay & Generating Sensory Details**, Maple Woods Writing Center, Missouri
- **Writing University Essays,** University of Guelph, Ontario Canada

Writing the Essay

- **Essay Writing Tips - parts of an essay, how to write an essay, kinds of essays** Writing Den by TestDen
- **Eleven rules of Writing - basics, basics, basics** Junket Studies Internet Services

- **Structure of the 5 Paragraph Essay - explanation and examples** English Department, Glendale Community College, Arizona
- **Five Paragraph Essay - background information with the emphasis on planning**

- **Thesis Statement - good explanation and examples**

- **Writing Effective Introductions - clear advice with examples**
- **Paragraph Development - has a great opening paragraph example**
- **Writing Effective Conclusions - good ideas with examples**
- **Conclusion: Re-Emphasis of the Thesis - good example and suggestions**
- **Using Transitions - explains why and gives examples**

Editing the Essay

- **Editing Paragraphs** - list of things to check

Evaluating your writing:

- **Writing to Persuade - in easy-to-understand language**

- **6 Trait Analytical Model - comprehensive explanation**
- **Rubric for Descriptive Writing - on several pages**

- **Middle School Writing Rubric - similar to ones used on some state tests**
- **Kid Language Writing Rubrics - written so eighth graders would understand**
- **Writing Rubric - kid friendly 5 point scale**

Tools for writing

- **Roget's Thesaurus**
- **Hypertext Webster (dictionary) Gateway**

Citing Web Sites

- **The Columbia Guide to Online Style (MLA and APA)**
- **Citing from the Internet: APA Style**

Other Compendiums of Internet Resources

- **Writing-Related Internet Sites**
  "Write Your Way to a Higher GPA: Indispensable Writing Resources" in four categories: On-Line Writing Labs and Centers on the Web; General Writing/Grammar Resources on the Web; Subject-Specific Writing Resources on the Web; Miscellaneous Collection of Writing-Related Sites
- **Writing-Related Resources**, an excellent compendium by topic (including getting published!) produced by the Writing Lab at Purdue University.

Reading Skills

Taking Notes from a Text Book

First: read a section of your textbook chapter

- Read just enough to keep an understanding of the material.
  Do not take notes, but rather focus on understanding the material.

  It is tempting to take notes as you are reading the first time, but this is not an efficient technique: you are likely to take down too much information and simply copy without understanding.

Second: Review the material

- Locate the main ideas, as well as important sub-points.
- Set the book aside.
- Paraphrase this information:
  Putting the textbook information in your own words forces you to become actively involved with the material.

Third: write the paraphrased ideas as your notes

- Do not copy information directly from the textbook.
- Add only enough detail to understand.

See: Mapping Information for Learning (pg 16)

Review, and compare your notes with the text,
and ask yourself if you truly understand.

Learning from Multiple Sources

Course information can be delivered through a variety of formats:

Lecture by teacher or guests.		**Textbook**
Original source material as diaries, government documents, proceedings, minutes.	**Duplicates/hand-out** of (text) chapters, magazine articles.	**Interview and biography** eyewitness accounts or commentaries.
Fictional story/novel	**Electronic media** such as videos, radio programmes.	**Internet** web site pages, discussion groups.

Stahl, et al (1998) found that using multiple-text sources can only be effective if we are taught to use them properly. As beginners, we tend to be more consistent in what information we select from short, well-constructed texts. Longer, less structured documents tend to be more confusing.

Text books

- Provide a foundation of facts and viewpoints to provide an overview.
- Sequence information and facts to understand issues.
- Create a context for comparing and understanding other sources.
- Are written in a neutral, objective tone.

Problems with a single text
for a subject or course include:

- Information is often "academic" lacking the drama of real life experience, adventure, and experimentation.
- Bias is hidden or concealed. Ignoring competing facts, priorities, and minority viewpoints.
- A single interpretation limits how reported facts are prioritised/sequenced restricting viewpoint (Euro/Caucasian) or subject testing (white male).
- Original/eyewitness sources of information are secondary to interpretative accounts.

Additional readings and alternative sources
of information can assist you to:

- **Create a richer understanding**
  with additional information and perspective.
- **Interact or engage with facts, actors, circumstances**
  of the material.

- **Practice and familiarise**
  yourself with new subject vocabulary and concepts.
- **Process opposing, even conflicting**,
  points of view in order to assess, evaluate, defend.

Conflicting information however can impede your learning,
unless you can:

- **Analyse it** for commonalties.
- **Reorganise or synthesize**
  your model for understanding it.
- **Consider the impact of, and evaluate, conflicts.**
- **Filter it with another context presented in the basic text**.

Some Recommendations:

- **Read your text**
  to provide the factual framework from which to begin
  (see also Note Taking from Text Books (pg 102).
- **Proceed to shorter, more focused sources**
  of information especially if you are inexperienced in the subject.
- **Practice with multiple texts** to improve your evaluative skills:
  - Compare and contrast your sources.
  - Analyse them for bias or viewpoint.
  - Note when and where they were written, and how that affects the viewpoint.
- **Understand the connections**
  between events, actors, and circumstances rather than learn a series of "facts" which can be easily be forgotten.
- **Use in-class or on-line discussion time**
  to test your understanding and ask questions!

Inspired and adapted from the study "What Happens When Students Read Multiple Source Documents in History?" Co-authors: Steven A. Stahl, Cynthia R. Hynd, Bruce K. Britton, Mary M. McNish (University of Georgia)

Understanding/Reading Essays

Note: this excellent process can be applied
to books, chapters in books, articles, and all manner of reading.

What is the title?

What does it tell you about what the essay is about?
What do you already know about the subject?
What do you expect the essay to say about it--especially given when it was written and who the author was (see next questions)?

When was the essay written?

Do you know anything about the state of the historical literature on the subject at that time?
If so, what do you expect the essay to say?

Who wrote it? What do you expect him or her to say here?

What are the author's credentials, or affiliations?
What are his/her prejudices?
Are you familiar with the authors' other work related to the subject?

Read the essay, marking the information that is crucial to you. When the text gives you crucial information, mark and note it:

What exactly is the subject?
How does it correspond to the title?
What are the main points--the theses?
What is the evidence that the author gives to sustain the thesis or theses?

What is the factual information that you want to retain?

Is there a good description of something you knew, or did not know, that you want to remember its location? If so, mark it. If for research, make out a research note on it.

Does the author cite some important source that you want to retain for future reference?
If so, mark it. If for research, make out a bibliographic note either now or on reviewing the article for such citations.

Once you have finished the article, reflect on:

What have you learned?
How does it relate to what you already know?
Did you find the argument convincing on its own terms?

Given what you know about the subject, do you think the main point(s) might be correct even if the argument was not convincing?
Can you think of information that makes you doubt the main point(s), even if the essay argued it well?
How does the essay relate to other things you have read--that is, how does it fit in the historical literature.

***** Adapted with from Professor M. Les Benedict, Department of History, Ohio State University

Reading Difficult Material

- **Choose a moderate amount of material or a chapter**
  to begin.
- **Get a grasp of how the material is organised:**
  Scan the section
  for titles, headings, sub-headings, and topic sentences to get its general idea; pay attention to graphs, charts, and diagrams.
  If there is a summary at the end of a chapter, read it.
  Check the beginning and the end for leading questions and exercises.
- **Read first for what you do understand,**
  and to determine difficulty.
  Mark what you do not understand to review later.
- **As you read, practice the "look-away method:"**
  Periodically look away from the text and ask yourself a stimulus question relating to the text.
  Phrase the question positively!
  Respond, or restate, in your own words.
  Make connections and associations, but don't use this exercise to memorise--but rather understand.
- **Look up words.**
  Look up words whose meanings are important to your understanding of the material, but you cannot discern from the context.
- **Read to the end.**
  Do not get discouraged and stop reading.
  Ideas can become clearer the more you read. When you finish reading, review to see what you have learned, and reread those ideas that are not clear.
- **Organise your notes by connecting ideas**
  you choose into an outline or concept map (pg 16). Pay attention to relationships between ideas.
  Do not confine yourself to words!
  Use representations, graphics, pictures, colours, even movement to visualise and connect ideas. Use whatever techniques work to help you understand.
  At this point, if you do not understand your reading, do not panic! Set it aside, and read it again the next day.
  If necessary, repeat. This allows your brain to process the material, even while you sleep. This is referred to as distributed reading.
- **Re-read the section you have chosen with the framework (**outline or concept map**)** you have constructed in mind.
  Separate out what you do understand from what you do not.
- **If the reading is still a challenge,**
  consult with either your teacher, academic counsellors, or reading specialists.
  Good luck!

Speed and Comprehension

- **Reading rates**

  Each type of reading has a different rate. For example, an exciting novel is a quicker read than a text in biology.

  Textbooks also vary in how well they are written, and as a consequence some are more difficult to read.

  Each semester, **time yourself** reading a chapter in each of your textbooks. See how many pages an hour you can read. Once you have an accurate estimate of your reading rate, you can better plan your reading time and studying time.

- **Comprehension**

  Scan the chapter first. Identify the sections to which the author devotes the most amount of space. If there are lots of diagrams for a particular concept, then that must also be an important concept. If you're really pressed for time, skip the sections to which the least amount of space is devoted.

  Read the first sentence of every paragraph more carefully than the rest of the paragraph.

  Take notes on headings and first sentence of each paragraph before reading the chapter itself. Then, close your book and ask yourself what you now know about the subject that you didn't know before you started.

  Focus on nouns and main propositions in each sentence. Look for the noun-verb combinations, and focus your learning on these.

  For example, consider the following text:

  > *Classical conditioning is learning that takes place when we come to associate two stimuli in the environment. One of these stimuli triggers a reflexive response. The second stimulus is originally neutral with respect to that response, but after it has been paired with the first stimulus, it comes to trigger the response in its own right.*

Rather than read every word, you might decode this text graphically:

Classical conditioning = learning = associating two stimuli
1st stimulus triggers a response
2nd stimulus = originally neutral, but paired with 1st --> triggers response.

Rather than reading and re-reading your text, take notes in this form, so that you've re-written the important parts of the text. Once you have written notes, you don't have to worry about the text itself.

See also Note Taking From Textbooks (pg 102)

Adapted from "*Being a Flexible Reader*" by Gail Kluepfel, Rutgers University

Underlining and Marking

Read a section of your text
that you consider "manageable" but make no entries.

Review the section:

Number important or sequential ideas in the margins.

Underline or highlight:

- **Main subjects.**
- **Examples of these main ideas**
  that help you understand them.
- **Unfamiliar vocabulary and/or definitions.**

Jot down paraphrases, questions, and summaries
in available space within the text.

Develop a system to coordinate various sources
of information: workbooks, CDs, Web sites, classroom notes, etc.

SQ3R Method

Survey! Question! Read! Recite! Review!	
Before you read, **Survey the chapter:**	• The title, headings, and subheadings. • Captions under pictures, charts, graphs or maps. • Review questions or teacher-made study guides. • Introductory and concluding paragraphs. • Summary.
Question while you are surveying:	• Turn the title, headings, and/or subheadings into questions. • Read questions at the end of the chapters or after each subheading. • Ask yourself, "What did my instructor say about this chapter or subject when it was assigned?" • Ask yourself, "What do I already know about this subject?" **Note:** If it is helpful to you, write out these questions for consideration. This variation is called SQW3R
When you begin to Read:	• Look for answers to the questions you first raised; • Answer questions at the beginning or end of chapters or study guides • Reread captions under pictures, graphs, etc. • Note all the underlined, italicised, bold printed words or phrases. • Study graphic aids. • Reduce your speed for difficult passages. • Stop and reread parts which are not clear. • Read only a section at a time and recite after each section.
Recite after you've read a section:	• Orally ask yourself questions about what you have just read and/or summarise, in your own words, what you read. • Take notes from the text but write the information in your own words. • Underline/highlight important points you've just read. • Use the method of recitation which best suits your particular learning style but remember, the more senses you use the more likely you are to remember what you read - i.e., TRIPLE STRENGTH LEARNING: Seeing, saying, hearing- QUADRUPLE STRENGTH LEARNING: Seeing, saying, hearing, writing!!!

Review: an ongoing process.	• Day One. After you have read and recited the entire chapter, write questions for those points you have highlighted/underlined in the margins. If your method of recitation included note taking in the left hand margins of your notebook, write questions for the notes you have taken. • Day Two. Page through the text and/or your notebook to re-acquaint yourself with the important points. Cover the right hand column of your text/note-book and orally ask yourself the questions in the left hand margins. Orally recite or write the answers from memory. Make "flash cards" for those questions which give you difficulty. Develop mnemonic devices for material which need to be memorised. • Days Three, Four and Five Alternate between your flash cards and notes and test yourself (orally or in writing) on the questions you formulated. Make additional flash cards if necessary. • Weekend. Using the text and notebook, make a Table of Contents - list all the topics and sub-topics you need to know from the chapter. From the Table of Contents, make a Study Sheet/ Spatial Map. Recite the information orally and in your own words as you put the Study Sheet/Map together. • Now that you have consolidated all the information you need for that chapter, periodically review the Sheet/Map so that at test time you will not have to cram.

Mathematics and Science

Following the Scientific Method

Observe * Research * Hypothesise * Test * Conclude

The scientific method is a process
for forming and testing solutions to problems, or theorising about how or why things work. It tries to reduce the influence of "faith" or bias or prejudice of the experimenter so that the process is valid anywhere in our world.

You can also use the scientific method to solve
everyday problems! If the lights are out in your residence, you can guess many reasons why: you didn't pay your electricity bill, there was storm that knocked out power, the toaster and microwave overloaded a circuit, etc.

- Look for the options or possibilities (**research**).
- Select the best explanation (**form a hypothesis**).
- **Test** it.
- Form a **conclusion or theory**.

If you think toaster and microwave were the answer, you can repeat this condition, and predict the outcome (**experiment** or **test your theory**). If not paying your bill was the problem, you can repeat that also, but it can be expensive and inconvenient!

The Scientific Method

State the problem and observe conditions

You observe or wonder about something in your world, or in your class, and wonder how, why, when, something occurs.

- **Create a short, meaningful title**
  of your project.
- **Write out a statement of purpose**
  that describes what you want to do.
- **Make a careful, step-by-step notation**
  of your observations. Be objective! and do not guess why something is happening. That takes place later.
- **Gather information** of similar research.
  This is a literature review.
- **Identify significant conditions**
  or factors of the situation.
- **Summarise the problem**
  in a clear, simple statement. Emphasize the end result or effect.

Form your hypothesis

- **Research options:**
  - What are possible causes for what you observed?
    Could they reliably and consistently predict or determine the same outcome?
  - What causes are the least likely to affect the outcome?
  - What are the best choices?
- **Choose the best option** or answer to your problem as your **hypothesis**. This will be an "educated guess" based upon both your observation and past experiences.
- **State your hypothesis** in a simple, clear statement.

> **Hypothesis: a possible explanation for a cause and effect of a given situation or set of factors that can be tested, and can be repetitively proved right (or wrong!)** (Remember: A hypothesis is not an observation or description of an event, that is in the first, observation stage!)

Test

- **Types of data you need:**
  - The physical sciences of chemistry and physics rely heavily on numbers as data, and on replicable experimentation to measure and calculate results.
  - Sciences such as sociology rely on interviews and observation due to limitations of experimentation with human subjects, and use descriptions and inferences to arrive at results.
- **Design an experiment** to test your hypothesis:
  - **Make a step-by-step procedure**
    with each step's purpose.
  - **List and obtain materials**
    and equipment you will need.
  - **Identify two groups in the test:**
    the control group
    is your reference point; no variables are changed;
    the experimental group
    is the focus of changes to affect the outcome.
  - **Rely on your past experience**
    to identify variables, but consult with a knowledgeable person for a second opinion.
- **Run a series of experiments:**
  - **Change only one variable**
    in each experiment in order to isolate effects reliably.
  - **Make and record accurate measurements.**
  - **Repeat the test**
    as often as necessary with the experimental group to verify your results. Always change only one thing, or variable, in each test.
  - **Repeat successful tests with other groups**
    to verify your findings.

- **Common mistakes:**
  - **The hypothesis is assumed** to be the "answer" and is not supported with testing.
  - **Data is ignored**
    that doesn't support your outcome.
  - **Beliefs/bias blind you**
    to fatal flaws in the testing phase.
  - **Systematic errors are not noticed**
    and are repeated within each experiment. These bias the outcome's standard deviation.
  - **Equipment or conditions are not adequate.**

Draw conclusions

- **Summarise your results and conclusions**
  use graphs and tables to illustrate these.
- **Refer back to**
  your observations, data, and hypothesis for consistency.
- **Note difficulties and problems,**
  items for further research, or what you would do differently if you could.

If you did not prove your hypothesis, **you have succeeded in another sense!**
Unsuccessful experiments:

- Provide information that can lead to answers by eliminating options.
- Save someone the trouble of repeating your experiments.
- Suggest other ways of solving similar problems. Remember research builds on the work of others.

Frank Wolfs, APPENDIX E: Introduction to the Scientific Method,
http://teacher.nsrl.rochester.edu/phy_labs/AppendixE/AppendixE.html

Writing Lab Reports and Scientific Papers

What lab reports and scientific papers do?

- Persuade others to accept or reject hypotheses by presenting data and interpretations.
- Detail data, procedures, and outcomes for future researchers.
- Become part of the accepted body of scientific knowledge when published unless later disproved.
- Provide an archival record for reference and document a current situation for future comparison.

Format

Title:

- Reflect the factual content with less than ten words in a straightforward manner.
- Use keywords researchers and search engines on the Internet will recognise.

Abstract:

Summarise in a concise paragraph the purpose of the report, data presented, and major conclusions in about 100 - 200 words.

Introduction:

- Define the subject of the report: "Why was this study performed?"
- Provide background information and relevant studies: "What knowledge already exists about this subject?"
- Outline scientific purpose(s) and/or objective(s): "What are the specific hypotheses and the experimental design for investigation?"

Materials and methods:

- List materials used, how were they used, and where and when was the work done (especially important in field studies).
- Describe special pieces of equipment and the general theory of the analyses or essays used.
- Provide enough detail for the reader to understand the experiment without overwhelming him/her. When procedures from a lab book or another report are followed exactly, simply cite the work and note that details can be found there.

Results

- Concentrate on general trends and differences and not on trivial details.
- Summarise the data from the experiments without discussing their implications.
- Organise data into tables, figures, graphs, photographs, etc. Data in a table should not be duplicated in a graph or figure.
- Title all figures and tables; include a legend explaining symbols, abbreviations, or special methods.
- Number figures and tables separately and refer to them in the text by their number, i.e.
    1. Figure 1 shows that the activity....
    2. The activity decreases after five minutes (fig. 1).

Discussion

- Interpret the data; do not restate the results.
- Relate results to existing theory and knowledge.
- Explain the logic that allows you to accept or reject your original hypotheses.
- Speculate as necessary but identify it as such.
- Include suggestions for improving your techniques or design, or clarify areas of doubt for further research.

Literature cited

- Cite only references in your paper and not a general bibliography on the topic.
- Alphabetise by last name of the author.
- Follow the recommended format for citations.

General style

- Strive for logic and precision and avoid ambiguity, especially with pronouns and sequences.
- Keep your writing impersonal; avoid the use of the first person (i.e. I or we).
- Use the past tense and be consistent within the report,
  note: "data" is plural and "datum" is singular; species is singular and plural.
- Italicise all scientific names (genus and species).
- Use the metric system of measurement and abbreviate measurements without periods (i.e. cm kg) spell out all numbers beginning sentences or less than 10 (i.e. "two explanations of six factors").
- Write numbers as numerals when greater than ten (i.e. 156) or associated with measurements (i.e. 6 mm or 2 g).
- Have a neutral person review and critique your report before submission.

***** adapted from Biological Investigations, 5th ed. by Warren D. Dolphin 1999, published by McGraw-Hill."

Solving Maths Word Problems

There are two steps to solving maths word problems:

1. Translate the wording into a numeric equation.
2. Solve the equation!

Usually, once you get the maths equation, you're fine.
But getting to the equation can seem difficult.
These strategies may help you translate, but practice will determine your success.

- **Read the problem entirely.**
  Get a feel for the whole problem.
- **List information** and the variables you identify.
  Attach units of measure to the variables (gallons, miles, inches, etc.).
- **Define what answer you need**,
  as well as its units of measure.
- **Work in an organised manner.**
  Working clearly will help you think clearly:
  - Draw and label all graphs and pictures clearly.
  - Note or explain each step of your process;
    this will help you track variables and remember their meanings.
- **Look for "key" words.**
  Certain words indicate certain mathematical operations:

Addition	**Subtraction**	**Multiplication**	**Division**	**Equals**
increased by more than combined together total of sum added to	decreased by minus, less difference between/of less than, fewer than	of times, multiplied by product of increased/decreased by a factor of (this one is both addition/subtraction AND multiplication!)	per, a out of ratio of, quotient of percent (divide by 100)	is, are, was, were, will be gives, yields sold for

Vocabulary

- **"Per" means "divided by"**
  as "I drove 90 miles on three gallons of petrol, so I got 30 miles per gallon"
  Also 30 miles/gallon.
- **"A" sometimes means "divided by"**
  as in "When I tanked up, I paid $3.90 for three gallons, so the petrol was 1.30 a gallon, or $1.30/gallon.
- **"Less than"**
  If you need to translate "1.5 less than x", the temptation is to write "1.5 - x".
  DON'T! Put a "real world" situation in, and you'll see how this is wrong: "He

makes $1.50 an hour less than me." You do NOT figure his wage by subtracting your wage from $1.50. Instead, you subtract $1.50 from your wage.

- **"Quotient/ratio of" constructions**
  If a problems says "the ratio of *x* and *y*",
  it means **"*x* divided by *y*"** or **x/y** or **x÷y**
- **"Difference between/of" constructions**
  If the problem says "the difference of *x* and *y*",
  it means **"*x* - *y*"**

Examples

Wording	Maths expession
What is the sum of 8 and y?	**8 + y**
4 less than y	**y - 4**
y multiplied by 13	**13y**
the quotient of y and 3	**y/3**
the difference of 5 and y	**5 - y**
the ratio of 9 more than y to y	**(y + 9)/y**
nine less than the total of a number (y) and two	**(y + 2) - 9 or y - 7**
The length of a football field is 30 yards more than its width. Express the length of the field in terms of its width y	**y + 30**
Twenty gallons of crude oil were poured into two containers of different size. Express the amount of crude oil poured into the smaller container in terms of the amount y poured into the larger container." The expression they're looking for is found by this reasoning: There are twenty gallons total, and we've already poured y gallons of it. That means that there are X gallons left.	**20 - y**

"Age" problems, involving figuring out how old people are (or will be)
"Area/volume/perimeter" problems, involving very basic geometric formulas
"Coin" problems, involving figuring out how many of each type of coin you have
"Distance" problems, involving speed/rate, distance, time, and the formula "d = rt".
"Investment" problems, involving investments, interest rates, and the formula "I = Prt".
"Mixture" problems, involving combining elements and find prices (of the mixure) or percentages (of, say, acid or salt).
"Number" problems, involving "Three more than two times the smaller number..."
"Percent of" problems, involving finding percents, increase/decrease, discounts, etc.
"Work" problems, involving two or more people or things working together to complete a task, and finding how long they took.

Related topics in the Purplemath web site: canceling units, percent of, solving equations. Purplemath index of lessons: http://www.purplemath.com/modules/modules.htm

Maths Tests

Preparation:

- **Begin preparing early.**
  Pay attention during class: every minute you daydream in class is many more minutes of studying later.
  Do assigned homework problems: maths is a building process and in order to understand the next step you need to comprehend the present, and previous, ones.

- **Simulate test conditions.**
  After you have studied and think you know the material, practice it under test conditions. Solve unassigned homework problems and see if you can finish them in the allotted time for the exam.

- **Know your teacher.**
  Study a copy of the exam of a previous class if available;
  Talk with someone who has worked under the teacher before, preferably someone who has succeeded in the same class.

- **Form a study group of 3-4 dedicated students.**
  Not only will other students be able to help you with problems, but by helping others you will better learn the material. If you are unable teach another student a topic you believe you know, chances are you don't know that topic very well after all. If you can't teach it, you don't know it!

Testing:

Read through the exam.

With reading through the whole exam you can:

Know what is expected of you.
Prioritise items on the test.
Pace yourself.

Carefully read the instructions.

Make sure you are answering the question that is being asked!
Often students know how to solve a problem, but they misread or misinterpret the question itself.

Check that you have correctly rewritten the problem.

If you use a scratch piece of paper make sure that you correctly rewrite the problem. Don't skip steps. Start from the beginning.

Clearly write each step of the solution.

Be neat and don't rush writing numbers down.
Keep checking your solution as you are working.
Neatness makes it easier to recheck your work.

Double-check your maths especially your calculator entries.

Double-check your calculator work immediately.
The chances of hitting a wrong number are high, but the chances of hitting the same wrong number are not.

Don't Dilly Dally.

If you get stuck on a problem move on and come back to it later.
When you are finished, recheck all your work.

Learning with Others

Collaborative/Cooperative Learning

Cooperative or collaborative learning is a team process where members support and rely on each other to achieve an agreed-upon goal. The classroom is an excellent place to develop team-building skills you will need later in life.

Cooperative/collaborative learning is interactive;
as a team member, you:

- Develop and share a common goal.
- Contribute your understanding of the problem:
  questions; insights and solutions.
- Respond to, and work to understand, others' questions, insights and solutions.
  Each member empowers the other to speak and contribute, and to consider their contributions.
- Are accountable to others, and they are accountable to you.
- Are dependent on others, and they depend on you.

What makes for a good learning team?

- Team activities begin with training in, and understanding group processes.
  A teacher begins by facilitating discussion and suggesting alternatives
  but does not impose solutions on the team, especially those having difficulty working together.
- Three to five people.
  Larger teams have difficulty in keeping everyone involved
- Teacher-assigned groups.
  They function better than self-assigned groups.
- Diverse skill levels, backgrounds, experience:
  - Each individual brings strengths to a group.
  - Each member of the group is responsible to not only contribute his/her strengths, but also to help others understand the source of their strengths.
  - Any member who is at a disadvantage or not comfortable with the majority should be encouraged and proactively empowered to contribute.
  - Learning is positively influenced with a diversity of perspective and experience, increasing options for problem solving, expanding the range of details to consider.
- Commitment of each member to a goal that is defined and understood by the group:
  - Confidential peer ratings are a good way to assess who is and who is not contributing.
  - Groups have the right to fire a non-cooperative or non-participating member if all remedies have failed.
    (The person fired then has to find another group to accept him/her)

    - Individuals can quit if they believe they are doing most of the work with little assistance from the others.
      (This person can often easily find another group to welcome his/her contributions)
- Shared operating principles and responsibilities, defined and agreed to by each member. These include:
    1. Commitment to attend, prepare and be on time for meetings.
    2. Have discussions and disagreements focus on issues, avoiding personal criticism.
    3. Take responsibility for a share of the tasks and carry them out on time. You may need to perform tasks that you have little experience, feel ill prepared for, or even think others would do better. Accept the challenge, but be comfortable in stating that you may need help, training, a mentor, or have to resign and take on different task.

Process:

Refer to: Group Learning (pg 128)

- Set up goals, define how often and with what means you will communicate, evaluate progress, make decisions, and resolve conflict.
- Define resources, especially someone who can provide direction, supervision, counsel, and even arbitrate.
- Schedule review of your progress and communication to discuss what is working and what is not working.

Teams with problems should be invited or required to meet with the teacher to discuss possible solutions.

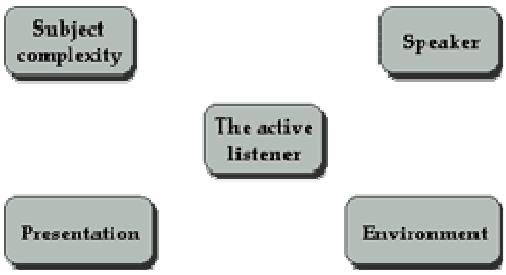
Active Listening

Active, effective listening is a habit,
as well as the foundation of effective communication.

What affects listening?

What do you think of the subject matter?
Is it new or have you a lot of experience with it?
Will it be difficult to understand, or simple?
Is it important to you, or just fun?

Is the speaker experienced or nervous?
What are the non-verbal cues of the speaker?
What frame of mind is he or she?
How personable, threatening, intelligent, etc.?



Is the message illustrated with
with visuals or examples?
Is technology used effectively?
Are concepts introduced incrementally, or with examples?

Is the space conducive to listening?
Or to interaction or exchange with the speaker?
Are there avoidable distractions?

Described above are the external factors.
Now: what about you, the centre, the listener?

Prepare with a positive, engaged attitude

- **Focus your attention on the subject.**
  Stop all non-relevant activities beforehand to orient yourself to the speaker or the topic.
- **Review mentally what you already know about the subject.**
  Organise in advance relevant material in order to develop it further (previous lectures, TV programmes, newspaper articles, web sites, prior real life experience, etc.).

- **Avoid distractions.**
  Seat yourself appropriately close to the speaker.
  Avoid distractions (a window, a talkative neighbour, noise, etc.).
- **Acknowledge any emotional state.**
  Suspend emotions until later, or passively participate unless you can control your emotions.
- **Set aside your prejudices, your opinions.**
  You are present to learn what the speaker has to say, not the other way around.

Actively listen

- **Be other-directed; focus on the person communicating.**
  Follow and understand the speaker as if you were walking in their shoes.
  Listen with your ears but also with your eyes and other senses.
- **Be aware: non-verbally acknowledge points in the speech.**
  Let the argument or presentation run its course.
  Don't agree or disagree, but encourage the train of thought.
- **Be involved:**
  Actively respond to questions and directions.
  Use your body position (e.g. lean forward) and attention to encourage the speaker and signal your interest.

Follow up activities

One-to-one

Give the speaker time and space for rest after talking.

Express appreciation for the sharing to build trust and encourage dialogue.

Check if you have understood:

- **Restate**
  key points to affirm your understanding
  & build dialogue.
- **Summarise**
  key points to affirm your understanding
  & build dialogue.
- **Ask (non-threatening) questions** to build understanding.

- **Reflect on your experience**
  to demonstrate your interest (feedback)

In a group/audience

Give the speaker space to regroup, to debrief after talking.

During Q & A.

If posing a question:

- Quickly express appreciation.
- Briefly summarise a preliminary point.
- Ask the relevant question.

If making a point:

- **Quickly express appreciation.**
- **Briefly restate the relevant idea** as presented.
- **State your idea, interpretation, reflection.**

- **Interpret**
  after you feel you have grasped content
- **Apply what you have learned**
  to a new situation

- **Invite a response**
- **Get contact information**
  for later reference
- **Invite friends/colleagues/etc.**
  for discussion afterward
- **Write out a summary with questions**
  for further review

Group Learning

A Paraphrase: **When your group controls the (learning) process, your learning is faster, more relevant, and sustained. Assessment is built into your group's competency and control.**
Institute for Research on Learning (IRL)

What	Who	How	When:
Self-introductions: interests & qualifications.	all		Meeting #1
Determine convenor and/or clerk, as well as recorder of meetings.	all	• Determined by group process. • Factors to consider: volunteers, experience, expertise, desire to learn. • Manner of distributing/posting minutes o review minutes to track progress.	Meeting #1
Set group communications: frequency & means.	all	• Face-to-face meetings: time & location. • Telephone: list numbers & convenient times. • E-mail: addresses (distribution lists).	Meeting #1
Summarise objectives.	all	*Suggestion:* • Each member independently writes down two or three main objective's of the project. • Group compares and agrees upon objectives.	Meeting #1
Determine process to achieve objectives.	all	• Project planning tools (Gantt, Critical Path, PERT). • Project production tools (word processing, demonstration software	Meeting #?

		(PowerPoint), etc. • Stages of development. • Critical sequencing (timeline). • Assign sub-groups.	
In the case of large sub-groups: begin again above!			
Research.		• Library research. • Field research. • Other:	
Analyse research/findings.		• Mid-stream check-in. • Planning for gaps. • Requests for assistance.	
Outline "product".		• Opening paragraph/thesis statement. • Individual topics.	
Write/Compile document/presentation.		• Opening paragraph. • Body. • Closing arguments/statement.	
Document & create bibliography.			
Test.			
Review and evaluate.		• Product. • Process. • Participation.	
Summarise.			
Rehearse presentation.			
Present final product.			
Celebrate.			

Philosophy of group projects

Group learning, or working in groups, involves shared and/or learned values, resources, and ways of doing things. Effective groups learn to succeed by combining these factors. However, each group, and each individual, will only be as effective as they are willing to embrace and/or respect differences within the group.

Interaction within the group is based upon mutual respect and encouragement.

Often creativity is vague. Ideas are important to the success of the project, not personalities. A group's strength lies in its ability to develop ideas individuals bring.

Conflict can be an extension of creativity; the group should be aware of this eventuality. Resolution of conflict balances the end goals with mutual respect. In other words, a group project is a cooperative, rather than a competitive, learning experience.

The two major objectives of a group project are:

- What is learned: factual material as well as the process.
- What is produced: written paper, presentation, and/or media project.

Role of instructors/teachers/professors:

- The success of the outcome depends on the clarity of the objective(s) given by teachers, as well as guidelines on expectations. The group's challenge is to interpret these objectives, and then determine how to meet them.
- The process of group work is only as effective as teachers or instructors manage and guide the process.
  Group projects are not informal collaborative groups.
  Students must be aware of, and prepared for, this group process.
  Cooperative group projects should be structured so that no individual can coast on the efforts of his/her teammates.

Scoring:

- Rewards ideally should be intrinsic to the process, with group members deriving their reward from their contributions to the group and project.
- External reinforcement (grades, etc) for individuals can be based upon improvement, as opposed to comparative, scoring. Traditional, comparative scoring works to the detriment of teams with low-achieving members. Evaluation based upon improvement rewards the group for an individuals progress. Peer, comparative evaluations can have a negative effect on teams: low scoring members are considered "undesirable" and drags upon performance.

High achievers versus low achievers?

- We assume high achievers mentor or teach low achievers. In the process of teaching others, we can learn more about the topic. As we tutor, even simple questions from the tutee make us look at our subject matter freshly. As we explain, we gain a deeper understanding of the topic. Low achievers then tutor or teach high achievers!
- High achievers profit in cooperative learning in other ways: leadership skills, self-esteem gains, conflict resolution skills, and role-taking abilities which become part of the leaning process, and betterment of the student.

Material adapted from:

Institute for Research on Learning (IRL) http://www.irl.org/projects/projects.html, (9/16/98);
Barbara Glesner Fines, *The Basics of Planning and Convening a Study Group-- 1997,* http://www.law.umkc.edu/faculty/profiles/glesnerfines/bgf-ed3.htm (9/22/1998);
Diane Boerkircher and Teresa Muller, *Cooperative Learning*, http://www.cci.unl.edu/Crippen/CI946/CL.html#intro (9/22/98);
Spencer Kagan, *Cooperative Learning*, Kagan Cooperative Learning, 1994, http://www.kagancooplearn.com/10Questions.html (9/23/98)

Tutoring Guidelines

A tutor provides expertise, experience, and encouragement.
They do not provide "answers," but rather assist in problem solving, in getting answers.
The challenge is to focus on assignments within the context they are assigned.

Tutors should not be expected to diagnose learning disabilities.
Diagnosis should take place outside of the tutoring process
by a professional academic counsellor.
If a larger problem becomes apparent, referral is the best strategy.

Tutoring strategies:

Seek out training to be a more effective tutor.
What are you, as the tutor, expected to know:
subject matter, level (elementary - advanced), procedures, etc.

Clearly establish expectations for your learner.
What are the expectations of the learner?
of the teacher? and of those close to the learner
(classmates, department, school, family, etc.).

Keep and follow a consistent set of rules.
Write them down; post them; refer to them!
Rules are necessary, but must be mutually agreed upon with the learner.
They must be fair and enforced consistently.
Rules cut down on unnecessary struggles.

Have a clear idea of your own strengths and limitations,
and what skills or knowledge you can offer as a tutor.
One reward of tutoring is the opportunity to use and apply what you have learned.

Know the learner.
Discover his or her strengths and challenges in learning.
Under what circumstances does he or she learn best? poorly?
(Do not assume that everyone's learning styles or conditions are the same, or similar to yours).

Build a relationship and trust.

- **Be aware of the differences** between you and the learner.
  You are not trying to change the learner, but to accommodate and use their learning style(s) in order to complete the tasks.
  Since you are more experienced, it is your challenge to adjust, adapt, or find a way.

- **Be open and honest.**
  Sarcasm and condescension are not productive.
  We do not tutor to impress, but rather to help.
- **Do not be afraid to acknowledge**
  that the chemistry between you and the learner isn't right,
  and that another tutor might be more effective.
  The goal is to help, not endure.

Make sure the learner knows it is safe to not succeed at first.
Learning is a process that often involves unsuccessful attempts.
This is not failure since options are eliminated toward the correct solution.
Learning and problem solving requires passing through a period of sorting through facts and options toward success.

The tutoring session:

Listen closely to work out the real problem.
Check to see if the learner has prepared with some time and effort and attempted the assignments.

Assess the situation.
Think in terms of realistic objectives; develop a "contract" of

- Agreed upon learning outcomes.
- Expectations of communication
  (availability, one/several sessions;
  means of communication (Face-to-face, e-mail, phone, etc.).

Use questions to enhance problem solving.

Demonstrate or model similar processes.

Don't be afraid to reveal that you don't know something.
You can refer the learner to more sources, including the teacher.
You can take the opportunity to learn/problem-solve, and bring back answers, and demonstrate that you are in a learning process as well.

Give positive feedback, use encouraging vocabulary.
Find success, and reinforce effort, in even minor accomplishment.

Summarise and review.
Enable follow up.

Celebrate accomplishment!

Keep records for future reference.

Conflict Resolution

One way to peacefully resolve conflict is for each side

- To come together voluntarily.
- To work cooperatively on the issues.
- Under the guidance of a trained facilitator.

The following process should be under the guidance of a trained facilitator. Bring your conflicted parties together in a private location, and:

- Gather information: identify key issues without making accusations.
  Focus on what the issues are, not who did what.
  Do not accuse, find fault, call names.
- Each party states their position and how it has affected them.
  Others listen attentively and respectfully without interruption.
- Each party in turn repeats or describes as best they can the other's position *to their satisfaction.*
  (c.f. Franklin Covey's fifth habit "Seek first to understand, then to be understood*?quot;)*
- Parties try to view the issue from other points of view beside the two conflicting ones.
- Parties brain storm to find the middle ground, a point of balance, creative solutions, etc.
- Each side volunteers what he or she can do to resolve the conflict or solve the problem.
- A formal agreement is drawn with agreed-upon actions for both parties.
- A procedure is identified should disagreement arise.
- Progress is monitored.
- Progress rewarded or celebrated.

Conflict resolution should be a voluntary process that

- Reflects the school's values and is applied throughout the school.
- Modelled and followed by teachers, administrators, and staff.
- Will fail if perceived as a process for students only.

Each party in collaborative conflict resolution
should feel empowered to speak their mind, feel listened to, and feel they are a critical part of the solution. So also, each is obligated to respect and listen to others, try to understand their point of view; and actively work toward a mutual decision.

If the conflict cannot be resolved in this manner,
mediation by a third, neutral party (as in peer mediation); or
arbitration (enforced resolution by a neutral authority) are options.

Education is an excellent setting
to learn problem solving and conflict resolution strategies. Whether the conflict is a classroom real-life simulation exercise or an on-going emotional experience, learning

ways to resolve issues and collaboratively work through responses and solutions will teach you skills that can be applied in other settings. It can help you:

- Accept differences.
- Recognise mutual interests.
- Improve persuasion skills.
- Improve listening skills.
- Break the re-active cycle or routine.
- Learn to disagree without animosity.
- Build confidence in recognising win-win solutions.
- Recognise/admit to/process anger and other emotions.
- Solve problems!

Peer Mediation

Peer mediation is both a programme and a process
where students of the same age group facilitate resolving disputes between two people or small groups. This process has proven effective in schools around the United States, changing the way students understand and resolve conflict in their lives. Changes include improved self-esteem, listening and critical thinking skills, and school climate for learning, as well as reduced disciplinary actions and less fights. These skills are transferable outside of the classroom.

The process is voluntary for both sides;
peer mediators do not "make decisions" but rather work towards a win-win resolution for both sides in order to avoid further trouble. Administrators in charge of discipline incorporate conflict resolution into their strategies and processes.

Types of problems include:

Rumour and gossip

Relationship difficulties/harassment

Racial and cultural confrontations

Classroom or extracurricular disputes

Minor assaults and fighting,

Cheating and stealing,

Vandalism

More serious problems require professional referral
and are not appropriate for peer mediation. These include: sexual abuse, assault, suicide, drug use, weapon possession, and those that involve legal problems.

Costs include materials, a dedicated location/facility for mediation
and training, staff support and office space, rewards.

The following summarises:

- The process for beginning a school programme.
- Steps of a peer-mediated session.

Beginning a school programme.

> **A period of planning is critical:**
> Peer mediation has as its foundation student empowerment, and students are critical to all stages of development and implementation.

Students form a leadership team,
facilitated by an experienced, respected coordinator, and a few trusted teachers and /or professionals. The team can be appointed or self-developed. The team:

- **Researches the basics of peer mediation**,
  the system of conflict resolution and discipline in the school, administrative and peer support.
- **Develops and publishes a clear vision**
  of its conflict resolution programme.

  This vision includes an overview of publicity, training, practice, modelling, and evaluation.

  The goal is to educate various communities of the school on peer mediation, its expectations and limits toward building a commitment toward its implementation into a more comprehensive peace-based curriculum.

- **The team secures commitment and support**
  from the school's administration, including agreements from all major school groups to follow this practice (including teachers and administrators).
- **The team commits to long-term buy-in:**
  Preparation meetings, practice mediation skills, and continued research about violence, its causes and prevention.

The coordinator acts as liaison between major groups, including: the leadership team, student body, administrators, parent groups, and outside trainers/professionals. Main duties include:

- Develop a core group of adults within school community to carry out and model the mediation programme.
- Oversee the selection, training, motivation, debriefing of mediators
- Serve as a trained mediator for co-facilitation and programme start-up.
- Establish protocol for intake and referrals.
- Select and schedule mediators with caseload.
- Keep records and report regularly to all communities/stakeholders whether via newsletters, web sites.
- Keep current with literature and research.
- Work aggressively to overcome attitudinal and structural resistance with their schools, developing and maintaining support from strategic groups, including parents.

Peer Mediator selection:

- Mediators should reflect school's diversity including cultures, gender, behaviour, academic social, and race.
- Selection procedure and process should be publicised and include recommendations and self-referral.
- Commitments include continued skills development, willingness to co-facilitate sessions and mentor new trainers.
- Rejection or deferral should be sensitively explained so as not to alienate the student.

Initially a system of "experience" must be developed.
Peer mediators must be trained since they often lack maturity and experience, both in conflict management and negotiation skills.

Strategies include role-playing, problem-based and active- learning. If possible, workshops should be conducted away from school to minimise distraction.

Peer mediations sessions, core elements:
The goal is to move from mutual blame toward a solution acceptable to all parties.

Disputants fill out a pre-session questionnaire
establishing ground rules, committing to solve the problem, tell the truth, and listen respectfully and without interrupting.

Disputants meet with mediators
to see if chemistry is right and ensure there are no conflicts of interest.

Mediators

- **Meet with disputants and explain exceptions**
  to confidentiality at the beginning of the mediation and ask if they wish to continue.
- **Explain steps the mediators role:**
  using listening and communication skills to help fellow students resolve conflict and disagreements before they escalate and have no power to force decisions.
- **Solicit questions and clarifications**
  on the process before beginning.

The session, disputants:

Introduce them selves.

In turn, each tells their story to the mediator
focusing on issues, not on who did what, while the other concentrates on listening without interrupting.

Parties change roles:
each repeats the other's story to their satisfaction to demonstrate they understand the other's position
(not that they necessarily agree with it).

The session, co-mediators:

Summarise the facts and feelings of both sides
for verification and agreement on the issues;
leads a discussion of the issues and acknowledges the difficulty in dealing with its emotional baggage.

Ask both parties if any solutions have come to mind,
or begins a brainstorming session without judgment.
All suggestions noted and acknowledged.

Lead a discussion of the solutions
checking off only the solution(s) that both parties can agree to.

Disputants

- **Determine implications of solutions**
  in selecting the best possible outcome.
- **Select the best alternative.**

Co-mediators:

- **Verify the verbal agreement with all parties,**
  ensuring that no one is reluctant or afraid to speak out or dissent.
- **Write a memo of understanding/contract**
  in parties' own words.

Co-mediators and disputants:

- **Sign contract.**
- **Develop a process for follow up**
  Verify that all will be committed and monitor this process.

Co-mediators thank each person for their contribution to the process, and for letting the mediation service help them.

For an alternative more comprehensive conflict management programme: Conflict Management for Schools. P. Butler, 2002. http://www.geocities.com/out_of_the_box_2001/index.html

Preparing for Tests

General Test Preparation

To do well on tests you must first learn the material, and then review it before the test.
These are techniques to better understand your material:

Learning

- Take good notes in your class lectures and textbook see Note Taking in Lectures (pg 58) and Note Taking from Text Books (pg 102).
- Review your notes soon after class/lecture.
- Review notes briefly before the next class.
- Schedule some time at the end of the week for a longer review.

Reviewing

- **Take good notes** as your teacher tells you what will be on the test.
- **Organise your notes, texts, and assignments** according to what will be on the test.
- **Estimate the hours** you'll need to review materials.
- **Draw up a schedule** that blocks units of time and material.
- **Test yourself** on the material.
- **Finish your studying** the day before the exam.

Anticipating Test Content

- **Pay particular attention to any study guides**
  that the teacher hands out in class before the exam, or even at the beginning of the course! For example: key points, particular chapters or parts of chapters, handouts, etc.

- **Ask the teacher what to anticipate on the test**
  if he/she does not volunteer the information.

- **Pay particular attention--just prior to the exam--**
  to points the teacher brings up during class.

- **Generate a list of possible questions**
  you would ask if you were making the exam, then see if you can answer the questions.

- **Review previous tests**
  graded by the teacher.

- **Confer with other students**
  to predict what will be in the test.

- **Pay particular attention to clues**
  that indicate the teacher might test for a particular idea, as when a teacher:
  - Says something more than once.
  - Writes material on the board.
  - Pauses to review notes.
  - Asks questions of the class.
  - Says, "This will be on the test!"

Including information adapted from *On Becoming a Master Student* by David B. Ellis and *How to Study in College* by Walter Pauk.

Review Tools for Tests

- **Create study checklists.**
  Identify all of the material that you will be tested on-- list notes, formulas, ideas, and text assignments you are accountable for. This checklist will enable you to break your studying into organised, manageable chunks, which should allow for a comprehensive review plan with minimal anxiety.

- **Create summary notes and "maps".**
  Briefly map out (see Mapping Information, pg 13) the important ideas of the course and the relationships of these ideas. Summary notes should display lists and hierarchies of ideas.
  Creativity and a visual framework will help you recall these ideas.

- **Record your notes**
  and significant portions of text on audiotapes, so you can review material with a walk-man.
  Having a tape of important information will enable you to study while walking or relaxing in a non-academic environment.

- **Create flashcards**
  for definitions, formulas, or lists that you need to have memorised--put topics on one side of the card, answers on the other. Flashcards will enable you to test your ability to not only recognise important information, but also your ability to retrieve information from scratch.

Adapted from *On Becoming a Master Student* by David B. Ellis and *How to Study in College* by Walter Pauk.

Test Anxiety

Before the test:

- **Be prepared!**
  Learn your material thoroughly.
- **A programme of exercise is said to sharpen the mind.**
- **Get a good night's sleep the night before the exam.**
- **Approach the exam with confidence:**
  View the exam as an opportunity to show how much you've studied and to receive a reward for the studying you've done.
- **Don't go to the exam with an empty stomach.**
  Fresh fruits and vegetables are often recommended to reduce stress. Stressful foods can include processed foods, artificial sweeteners, carbonated soft drinks, chocolate, eggs, fried foods, junk foods, pork, red meat, sugar, white flour products, chips and similar snack foods, foods containing preservatives or heavy spices.
- **Take a small snack, or some other nourishment**
  to help take your mind off of your anxiety. Avoid high sugar content (sweets/lollies), which may aggravate your condition.
- **Allow yourself plenty of time**,
  especially to do things you need to do before the test and still get there a little early.
- **Relax just before the exam.**
- **Don't try to do a last minute review.**

During the test:

- **Read the directions carefully.**
- **Budget your test taking time.**
- **Change positions to help you relax.**
- **If you go blank, skip the question and go on.**
- **If you're taking an essay test**
  and you go blank on the whole test, pick a question and start writing. It may trigger the answer in your mind.
- **Don't panic**
  when students start handing in their papers. There's no reward for being the first to finish.

Check out local centres and resources in your school for assistance!

If you are aware that you have a problem with test anxiety,
be sure your teacher or instructor knows before any testing begins (and not the hour before!). There may be other options to evaluate your knowledge or performance within the subject matter.

Organising for Tests

- **Begin reviewing early.**
  This will give your brain time to get comfortable with the information.
- **Conduct short daily review sessions.**
  You can ease into more intense review session prior to major exams.
- **Read text assignments before lectures.**
  This will help you identify concepts that the teacher considers important and that are already somewhat familiar.
- **Review notes immediately after lectures.**
  This will help you identify information that you do not understand while the lecture is still fresh in your memory--and other students' memories as well. When you review immediately, you'll have time to clarify information with other students.
- **Review with a group.**
  This will enable you to cover important material that you may overlook on your own.
- **Conduct a major review early enough** to allow for a visit to the teacher during his/her office hours if necessary.
- **Break up the study tasks into manageable chunks,** especially during major reviews prior to exams.
  Studying three hours in the morning and three in the evening will be more effective than studying at a six-hour stretch. *Studying while you are mentally fatigued is usually a waste of time.*
- **Study the most difficult material when you are alert.**

Adapted from On Becoming a Master Student by David B. Ellis and How to Study in College by Walter Pauk.

Cramming

Cramming is useful in emergencies;
it is not good for long-term learning.

See Emergency Preparation (pg 145) for an alternative, structured approach to cramming.

Strategies for cramming include:

- Preview material to be covered.
- Be selective: skim chapters for main points.
- Concentrate on reviewing and learning main points.
- Don't read information you won't have time to review.

Emergency Test Preparation

A structured approach to cramming

- Preview material to be covered.
- Be selective: skim chapters for main points.
- Concentrate on the main points.

Begin with 5 sheets of paper:

1. **Identify 5 key concepts** or topics that will be covered on the test.
   Enter one at the top of each page.
   Use only key words or short phrases.
2. In your own words, **write an explanation, definition, answer**, etc
   of several lines or so for the key concept.
   Do NOT use the text or your notes.
3. **Compare your response with** (2),
   with the course source information (text and lecture notes).
4. **Edit or re-write your understanding** of each topic
   considering this course information.
5. **Sequence and number each page of your topics**
   1 - 5 in order of importance; 1 = most important.
6. **Follow the above process** for two additional concepts
   if you have time.
7. **Place them in the 1 - 5 sequence** and change numbering to 1 - 7
8. Follow the above process for one or two more concepts
   for **a total of nine**.
   Follow your comfort level; add topics only as necessary
9. **Try not to exceed nine concepts;**
   focus on the most important
10. **Review the day of the test, but try to relax just before**
    see Ten Tips For Terrific Test Taking (pg 147)

Derived from Miller, George A., *The Magical Number Seven, Plus or Minus Two: Some Limits on our Capacity for Processing Information*, (1956) Harvard University First published in Psychological Review, 63, pp. 81-97 as seen in Green, Christopher D. Green Classics in the History of Psychology, York University, Toronto, Ontario

Taking Tests

Ten Tips for Terrific Test Taking

When you take a test,
you are demonstrating your ability to understand course material, or perform certain tasks.

> NB: If you have any doubts about the fairness of tests,
> or of the ability of tests to measure your performance,
> please see your academic counselling service.

The test forms the basis of evaluation or judgement
for your course of study.

There are many *environmental* conditions,
including your own attitudes and conditions,
which influence how you perform during tests.

These suggestions may help:

- **Come prepared; arrive early for tests.**
  Bring all the materials you will need such as pencils and pens, a calculator, a dictionary, and a watch.
  This will help you focus on the task at hand.
- **Stay relaxed and confident.**
  Remind yourself that you are well prepared and are going to do well.
  Don't let yourself become *anxious*; if you feel anxious before or during a test, take several slow, deep breaths to relax.
  Don't talk to other students before a test; anxiety is contagious.
- **Be comfortable but alert.**
  Choose a good spot to take the test.
  Make sure you have enough room to work.
  Maintain an upright posture in your seat.
- **Preview the test** (if it is not timed).
  Spend 10% of your test time reading through the test carefully.
  Mark key terms and decide how to budget your time.
  As you read the questions, jot down brief notes indicating ideas you can use later in your answers.
  Plan to do the easy questions first and the most difficult questions last.
- **Answer the test questions in a strategic order.**
  Begin by answering the easy questions you know, then those with the highest point value.
  The last questions you answer should
  - Be the most difficult.
  - Take the greatest amount of writing.
  - Have the least point value.
- **When taking a multiple-choice test, know when to guess.**
  First eliminate answers you know are wrong.

Always guess when there is no penalty for guessing or you can eliminate options.
Don't guess if you have no basis for your choice and if you are penalised for guessing.
Since your first choice is usually correct, don't change your answers unless you are sure of the correction.

- **When taking essay tests, think before you write.**
  Create a brief outline for your essay by jotting down a few words to indicate ideas you want to discuss.
  Number these items in your list to indicate the order in which you will discuss them.
- **When writing the essay test, get right to the point.**
  State your main point in the first sentence.
  Use your first paragraph to provide an overview of your essay.
  Use the rest of your essay to discuss these points in more detail.
  Back up your points with specific information, examples, or quotations from your readings and notes.
- **Reserve 10% of your test time for review.**
  Review your test.
  Resist the urge to leave as soon as you have completed all the items.
  Make sure you have answered all the questions.
  Proofread your writing for spelling, grammar, and punctuation.
  Check your maths answers for careless mistakes (e.g. misplaced decimals).
  Match your actual answers for maths problems against quick estimates.
- **Analyse your test results.**
  Each test can further prepare you for the next test.
  Use your tests to review when studying for final exams.
- **Decide on and adopt which study strategies worked best for you.**
  Identify those that didn't work well and replace them.

True/False Tests

- **Most true/false tests contain more true answers than false answers.**
  When in doubt, guess true. You have more than 50% chance of being right.
- **Pay close attention to qualifiers, negatives, and long strings of statements.**
- **Qualifiers are words that restrict or open up general statements.**
  Words like "no, never, none, always, every, entirely, only" restrict possibilities and usually imply false statements. They imply a statement must be true 100% of the time. Qualifiers like "sometimes, often, frequently, ordinarily, generally" open up the possibilities of making accurate statements and usually indicate true answers. They make more modest claims that are more likely to reflect reality.
- **Negatives are confusing.**
  If the question contains negatives, like "no, not, cannot," circle the negative and read the sentence that remains. Decide whether that sentence is true or false. If it is true, the opposite or negative is usually false.
- **Every part of a true sentence must be true.**
  If any part of the sentence is false, the whole sentence is false despite many other true statements. Therefore read long sentences carefully and pay attention to each group of words set off by punctuation. Sentences with long strings of words are most likely-- but not always--false statements.

Adapted from Walter Pauk's *How to Study In College*.

Multi Choice Tests

- **Read the directions carefully.**
- **Know whether you must mark the one best correct answer or all correct answers.**
- **Know if you are penalised for guessing.**
  Find out if an incorrect answer will cost you more points than a blank answer.
- **Read the stem of the question**
  (the question itself as opposed to its options) all the way through,
  then read each possible answer all the way through.
- **Use these options themselves**
  to provide you with hints about things you need to know.
- **If you are uncertain of the correct answer,**
  cross out the options you know are definitely wrong, then mark the question so that you can reconsider it at the end of the exam.
- **Circle all negative words**
  and "100% words" within the question stem and options. 100% words are those that don't allow for exceptions, like "all".
- **"All of the above" answers are often correct.**
  If you know two of three of options are correct, "all of the above" is a strong possibility.
- **If you're not sure about a number answer,**
  toss out the high and low and consider the middle range numbers.
- **If you have no idea of the answer.**
  - Check for "look alike" options to find what you consider the best answer among them.
  - Check for the most inclusive option--the option that contains the most information.

Adapted from Walter Pauk's *How to Study In College*.

Short Answer Tests

A teacher's primary purpose
in giving a short-answer test is to cover the material.
Go over your notes and the assigned reading:

- **Prepare for the test**
  by studying off of summary sheets that are packed with information within condensed space. Try to categorise the material.

- **Use grammatical clues**
  within a statement as hints for the correct answer.

- **If you can think of several answers**
  for a blank or short answer question, let the teacher know.
  The teacher may give you a clue to the correct answer he/she's looking for.

- **A guess made with common sense**
  could get you more test points than if you leave an answer blank.
  Don't be a smart aleck if you guess.

- **Write your short answers in simple**, telegraphic sentences.
  Packing as much information as you can is more important than literary style.

Adapted from Walter Pauk's *How to Study In College*

Essay Exam

Before writing out the exam:

Set up a time schedule
to answer each question and to review/edit all questions.

- If six questions are to be answered in sixty minutes, allow yourself only seven minutes for each.
- If questions are "weighted", prioritise that into your time allocation for each question.
- When the time is up for one question, stop writing, leave space, and begin the next question. The incomplete answers can be completed during the review time.
- Six incomplete answers will usually receive more credit than three, complete ones.

Read through the questions once and note if you have any choice in answering questions.

- Pay attention to how the question is phrased, or to the "directives", or words such as "compare", "contrast", "criticise", etc. See their definitions in "Essay Terms" (pg 154).
- Answers will come to mind immediately for some questions.

  Write down their key words, listings, etc, as they are fresh in your mind. Otherwise these ideas may be blocked (or be unavailable) when the time comes to write the later questions. This will reduce "clutching" or panic (anxiety, actually fear which disrupts thoughts).

Before attempting to answer a question, put it in your own words.

- Now compare your version with the original.
  Do they mean the same thing? If they don't, you've misread the question.
  You'll be surprised how often they don't agree.

Make a brief outline for each question.

- Teachers are influenced by compactness, completeness and clarity of an organised answer.
- Writing in the hope that the right answer will somehow turn up is time-consuming and usually futile.
- To know a little and to present that little well is, by and large, superior to knowing much and presenting it poorly--when judged by the grade received.

Writing & answering:

Begin with a strong first sentence
that states the main idea of your essay.
Continue this first paragraph by presenting key points.

Develop your argument.

- **Begin each paragraph**
  with a key point from the introduction.
- **Develop each point**
  in a complete paragraph.
- **Use transitions,**
  or enumerate, to connect your points.
- **Hold to your time**
  allocation and organization.
- **Avoid very definite statements**
  when possible; a qualified statement connotes a philosophic attitude, the mark of an educated person.
- **Qualify answers when in doubt**.
  It is better to say "toward the end of the 19th century" than to say "in 1894" when you can't remember, whether it's 1884 or 1894. In many cases, the approximate time is all that is wanted; unfortunately 1894, though approximate, may be incorrect, and will usually be marked accordingly.

Summarise in your last paragraph.
Restate your central idea and indicate why it is important.

Review:

Complete questions left incomplete,
but allow time to review all questions.

Review, edit, correct
misspellings, incomplete words and sentences, miswritten dates and numbers.

Not enough time?

Outline your answers.

Essay Exam Terms/Directives

These words are "directives" and ask you to answer, or present information, in a particular way. Review these, and most of all note that there are different ways of answering a question or writing a paper!

Compare:
Examine qualities, or characteristics, to discover resemblances. "Compare" is usually stated as "compare with": you are to emphasise similarities, although differences may be mentioned.

Contrast:
Stress dissimilarities, differences, or unlikeness of things, qualities, events, or problems.

Criticise:
Express your judgment or correctness or merit. Discuss the limitations and good points or contributions of the plan or work in question.

Define:
Definitions call for concise, clear, authoritative meanings. Details are not required but limitations of the definition should be briefly cited. You must keep in mind the class to which a thing belongs and whatever differentiates the particular object from all others in the class.

Describe:
In a descriptive answer you should recount, characterise, sketch or relate in narrative form.

Diagram:
For a question, which specifies a diagram, you should present a drawing, chart, plan, or graphic representation in your answer. Generally you are expected to label the diagram and in some cases add a brief explanation or description.

Discuss:
The term discuss, which appears often in essay questions, directs you to examine, analyse carefully, and present considerations, pro's, and con's, regarding, the problems or items involved. This type of question calls for a complete and entailed answer.

Enumerate:
The word enumerate specifies a list or outline form of reply. In such questions you should recount, one by one, in concise form, the points required.

Evaluate:
In an evaluation question you are expected to present a careful

appraisal of the problem stressing both advantages and limitations. Evaluation implies authoritative and, to a lesser degree, personal appraisal of both contributions and limitations.

Explain:
In explanatory answers it is imperative that you clarify and interpret the material you present. In such an answer it is best to state the "how or why," reconcile any differences in opinion or experimental results, and, where possible, state causes. The aim is to make plain the conditions, which give rise to whatever you are examining.

Illustrate:
A question which, asks you to illustrate, usually requires you to explain or clarify your answer to the problem by presenting a figure, picture, diagram, or concrete example.

Interpret:
An interpretation question is similar to one requiring explanation. You are expected to translate, exemplify, solve, or comment upon the subject and usually to give your judgment or reaction to the problem.

Justify:
When you are instructed to justify your answer you must prove or show grounds for decisions. In such an answer, evidence should be presented in convincing form.

List:
Listing is similar to enumeration. You are expected in such questions to present an itemised series or tabulation. Such answers should always be given in concise form.

Outline:
An outline answer is organised description. You should give main points and essential supplementary materials, omitting minor details, and present the information in a systematic arrangement or classification.

Prove:
A question, which requires proof, is one, which demands confirmation or verification. In such discussions you should establish something with certainty by evaluating and citing experimental evidence or by logical reasoning.

Relate:
In a question, which asks you to show the relationship or to relate, your answer should emphasise connections and associations in descriptive form.

Review:
A review specifies a critical examination. You should analyse and comment briefly in organised sequence upon the major points of the problem.

State:
In questions, which direct you to specify, give, state, or present, you are called upon to express the high points in brief, clear narrative form. Details, and usually illustrations or examples, may be omitted.

Summarise:
When you are asked to summarise or present a summarisation, you should give in condensed form the main points or facts. All details, illustrations and elaboration are to be omitted.

Trace:
When a question asks you to trace a course of events, you are to give a description of progress, historical sequence, or development from the point of origin. Such narratives may call for probing or for deduction.

Modified and adapted from: **Communication Skills Development Center**, Division of Student Affair, University of South Carolina

Oral Exams

The oral exam is an opportunity for you to demonstrate your knowledge, your presentation/speaking skills, as well as your ability to communicate. They can also be good practice for job interviews!

The exam can be formal, or informal, but you should consider all exams formal exchanges in order to make a good impression. For both types, you must listen carefully to the question, and answer directly.

> **Formal exams** follow a list of questions in a prepared format. The criteria for evaluation is, usually set in a right/wrong format, and can be competitive. For this type of exam, if you wish to add "related" or qualified information, ask permission first as a courtesy.
>
> **Informal exams** are more open, your responses are usually longer, and evaluations can be more subjective. Answers are often less exact (right/wrong), and value is added for problem solving analysis and method, as well as interpersonal communication and presentation.

There are three components to a successful oral exam:

Preparation

> **Ask your teacher** what will be on the exam.
> **Study.** If you do not study, you will not do well.
> **See** "**General Test Preparation**" (pg 140)
> **See** "**Anticipating Test Content**" (pg 141)
>
> **Write out questions you expect to be asked**, then
>
> > Discuss answering techniques with people in the field or who have had the test.
> > Practice answering with classmates.
> > Practice in a similar setting, in front of a mirror, to evaluate your "manner".
>
> **Verify the date,** time and location; confirm these with your teacher.
>
> **If you use computing**, projection, or media systems, practice with the equipment the day before, and verify an hour or so before the test if possible.

The Exam

> **Look and act professional!** Create a good impression.
> Dress well and appropriately, turn off cell phones and pagers.

Arrive at the location early to collect yourself and check out the situation, but wait until your scheduled time to keep the appointment. This is a time for relaxed focus, not cramming or review.

The exam begins the minute you walk in:
Introduce yourself immediately.
Give the teacher all of your attention; look interested and smile!
Keep good posture and eye contact.
If there are distractions (noise outside, etc,) you may mention your distraction and/or nervousness.

Stay focused through the interview.
Be an intelligent listener as well as talker.

Do not ramble if you do not know an answer.
State directly that you do not know the answer but ask if you could outline how you would find the answer, solve the problem, or the method you would employ.

Maintain your self-confidence and composure if you feel the interview is not going well. The interviewer may be testing you.

Answer questions with more than "yes" or "no".
Stress the positive and not the negative.
Use two or three key points or examples to demonstrate your knowledge.

Watch for signs that the test is over
(i.e., the interviewer looks at the clock, moves the chair back, or completes a set of questions).

Ask if there is anything you could answer that would add to your evaluation.

Thank the teacher

Follow-up

Summarise your performance; where you did well or poorly.
Keep a written record.

Note how you could do better for the next time.

Note if there was a significant "event" during the interview.

If you have questions or comments on either the material or your performance, do not hesitate to speak with the teacher. Do not challenge the teacher, but seek to understand your performance.

If you have concerns about an inappropriate evaluation after raising concerns with your teacher, discuss them with that department's, or your schools, academic counselling centre or a higher authority.

Project Skills

Organising Study Projects

- **Begin early**
  It is never too early to start. By starting early you have more time to finish the project, and you guarantee yourself adequate time to do a good job.

- **Determine the time commitment.** Find out:
  - How long the presentation or paper should be.
  - How hard the material is to research.
  - How much time you have to complete the project.

- **Break the project down into manageable sections**.
  This table of tasks includes a column "done by" date to help you organise yourself and the project.

What	How	When:
Summarise objectives	Objectives should be SMART: Specific Measurable Attainable Relevant Time related from Blanchard, Zigarmi, and Zigarmi *Leadership and the One Minute Manager*	
Determine process to achieve objectives	• Project planning tools (Gantt, Critical Path, PERT). • Project production tools (word processing, demonstration software (PowerPoint), etc. • Stages of development. • Critical sequencing (timeline.)	
Verify with teacher		as often as necessary

Research	• Textbook research. • Library research. • Field research. • Other:	
Analyse research/findings	• Plan for gaps • Request assistance. • Mid-stream check-in.	
Outline "product"	• Thesis statement. • Individual topics.	
Write/Compile document/presentation	• Opening paragraph. • Body. • Closing arguments/statement.	
Document & create bibliography		
Test		
Review and evaluate	• Product. • Process.	
Summarise/digest		
Rehearse (presentation)		
Present final product		
Celebrate		

Researching Case Studies

What: Case studies *

- Are written summaries or syntheses of real-life cases based upon data and research.
- Require you to isolate and think through the key issues involved against both theory and the larger comparative environment.
- Identify appropriate strategies for the resolution of the 'case'.
- Weigh the pros and cons of the remedial options/strategies.
- Recommend and present a rationale for the best resolution.

How: The process to develop a case study:

- Define the objective of the case study.
- Identify the important players within the organization, the "stakeholders".
- Identify other target groups of the organization, whether clients or suppliers.
- State the official mission of the organization studied.
- State the historical mission of the organization.
- State the understood mission of the stakeholders in the organization.
- Scale the importance of stakeholders, whether in decision-making or effect of consequences.
- Outline the formal decision-making process.
- Note informal decision-making processes.
- Identify the process of production or service delivery.
- Identify support mechanisms.
- Identify competitors.
- What is the organisational context of the profession or of competitors
- State the major problem.
- Subsequent problems and implications.
- Role of management.
- Role of production/service providers.
- Identify strategic issues.
- Identify decisions needed to be made.
- Identify risk factors.
- Identify historical precedents.
- Define remedial options.
- Compare options as regards pros and cons, theory, risk factors.
- Make recommendation and justify.
- Write an executive summary focusing on key elements.

See also Group Learning (pg 128)

***** definition adapted from *Alternative Modes of Teaching and Learning*, Case Studies, the University of Western Australia, Perth, Australia.

Researching on the Internet

What can you research on the Internet?
The Internet is more than a series of wordy web pages.
You can search the Internet with "search engines," web sites that have listings, or search:

- Portals or web centres that organise information and links.
- Web sites devoted to particular topics, including text, graphics, movies, music files.
- Databases such as journals, newspapers or professional documents.
- Government documents, forms, laws, policies, etc.
- Services and information by non-profit organizations and by for-profit businesses.
- Directories of names and personal information.
- Personal web pages or vanity pages.
- Communications through e-mail.
- Discussion groups.

What limits my search? Some information is:

- In the "public domain" and can be freely accessed and used, such as U.S. government documents.
- Unrestricted for use by disclaimers within the web site.
- Copyright protected, with restricted use determined by national and international laws.
- Not copyright protected since the copyright has expired.
- Conditionally protected with "copyright disclaimers" located on the web page/site.
- Limited in access by first registering, subscribing, or requiring personal information for use or access.
- Restricted by passwords.
- Intentionally excluded from search engines.

How do I search the Internet?

- **Narrow your topic and its description; pull out key words and categories.**
- **Begin with known, recommended, expert, or reviewed web sites**.
- **Refer to professional portals**
  that may have directories or collections by topic.
- **Use a search engine that contains a directory of topics?**
- **Use a search engine: enter your key words.**
  Find the best combination of key words to locate information you need; enter these in the search engine.
- **Review the number of options returned.**
  If there are too many web sites, add more keywords.
  If there are too few options, narrow/delete some keywords, or substitute other key words.
- **Review the first pages returned:**
  If these are not helpful, review your key words for a better description.

- **Use advanced search options in search engines:**
  Search options include
  - Key word combinations, including boolean strings.
  - Locations where key words are found.
    For example: in the title, 1st paragraphs, coded metadata.
  - Languages to search in.
  - Sites containing media files (images, videos, MP3/music, ActiveX, JAVA, etc.).
  - Dates web sites were created or updated.
- **Research using several search engines.**
  Each search engine has a different database of web sites it searches.
  Some "Meta-Search" engines actually search other search engines!
  If one search engine returns few web sites, another may return many!
- **Evaluate the content of the web sites you've found.**
- **Track your search:**
  List resources you checked; the date your checked them.
  Identify the resource, especially its location and the date you found it.
- **Monitor and evaluate your progress.**
- **Get help if needed.**

Evaluating Website Content

I. The Problem

The Internet is a relatively new and untested information and communication medium. As such, we need to evaluate, expand, and adapt existing criteria for evaluating content, as well as develop new techniques.

The Internet is a ubiquitous medium: aside from questions of affordability, it is very pervasive in both authorship and audience. A web address is now an international information and persuasion medium

The Internet can very well be an unregulated and un-regulatable medium. As such, it is the visitor to a website who must have both tools and responsibility to discern quality websites.

II.. Examples of the problem

Have you been to New Hartford, Minnesota? (Probably only virtually...)

What do you think of the distinguished academic study "Feline Reactions to Bearded Men" by Catherine Maloney, Fairfield University, Fairfield, Connecticut, Sarah J. Lichtblau, University of Illinois, Champaign, Illinois Nadya Karpook, University of Florida, Gainesville, Florida Carolyn Chou, University of Pennsylvania, Philadelphia, Pennsylvania, Anthony Arena-DeRosa, Harvard University, Cambridge, Massachusetts?

Will you be persuaded by http://www.kosovo.com/, Amnesty International, the Yugoslavian government's official page on Albanian terrorism, or the U.S. Department of State's briefing on Kosovo.

III. Eight basic types of website purposes:

1. Personal with biographic data, often called "vanity pages".
2. Promotional to sell a product.
3. "Current" to provide extremely up-to-date information, as for newspapers' sites.
4. Informational to share information on a particular topic or hobby.
5. Persuasive as propaganda to convert you to particular point of view.
6. Instructional to teach a unit or course of study.
7. Registrational to register for courses, information, and/or products, accumulate a database of, and simplify communication with, registrants.
8. Entertainment!

**IV. Contexts of website evaluation: ***header *body *footer *navigation

V. Five evaluative guidelines from the School of Journalism & Library Science:

Authority Who is responsible for the page?
What are their qualifications and associations, and can you verify them?

Check the footer
for name of the web page author, his/her credentials and title, organisational affiliation. Is the information verifiable?

Currency Are dates clear when the website was first created and edited?

Check the footer
for when the website was created, and when last edited.

Check the content
for news items, indications that the site is actively maintained, acknowledgements/responses to visitors.

Coverage What is the focus of the site? Are there clear headings to illustrate an outline of the content? Is the navigation within the website clear?

Check the header
for a clear title and web site description

Check the content
for headings and keywords.

Check the navigation
to reflect content outline within the web site.

Objectivity Are biases clearly stated? Are affiliations clear?

Check the content
For statement of purpose.
To determine the type of web site and potential audience.
For outside links for information external to the website.
For graphics and cues for affiliations.

Check the header/footer and URL/domain (.gov .com .edu) to determine organisational source of website and how this reflects on content type.

Accuracy Are sources of information and factual data listed, and available for crosschecking.

Check the content
for accuracy of spelling, grammar, facts, and consistency within website.

Check content for a bibliographic
variety of websites (external links), of electronic media (electronic databases of references, established (print & on-line) journals, of electronic indexes (ERIC), and of books for comparative/evaluative purposes.

VI. Bibliography (Author, web site, date last visited) related to evaluation:

(University of California at Los Angeles/UCLA) Esther Grassian's **Thinking Critically about World Wide Web Resources** http://www.library.ucla.edu/libraries/college/instruct/web/critical.htm " Questions" are divided into topics as Content & Evaluation, Source & Date, Structure, and "Other". (10 April, 2002)

(University of California at Los Angeles/UCLA) Esther Grassian's **Thinking Critically about Discipline-Based World Wide Web Resources** http://www.library.ucla.edu/libraries/college/instruct/web/discp.htm, is adapted from *Thinking Critically about World Wide Web Resources***.** (10 April, 2002)

(Utah State University) John H. Curry's **Evaluation of web-based instruction** http://english.usu.edu/jcurry/wbi.html#evaluation. A compilation of web pages by subject areas: theory, evaluation, design. (10 April, 2002)

(Johns Hopkins University) Elizabeth E. Kirk **Evaluating Information found on the Internet** http://milton.mse.jhu.edu:8001/research/education/net.html (10 April, 2002)

(Western Illinois University) Bruce Leland **Evaluating Web Sites: A Guide for Writers** http://www.wiu.edu/users/mfbhl/evaluate.htm (10 April, 2002)

(Babson College) Hope Tillman **Evaluating Quality on the Net** http://www.hopetillman.com/findqual.html (10 April, 2002)

(Saint Louis University**)** Craig Branham **Evaluating Web pages for relevance** http://english.ttu.edu/kairos/2.2/news/youcanuse/craig/page01.html Well developed website with sections on Anatomy of a page, Page types, Web search strategies, and Glossary. (10 April, 2002)

Presenting Projects

Basic elements of classroom presentations are:

- **Basic goals of your presentation.**
  Develop your presentation's topic to a few main ideas.
- **Audience characteristics and knowledge base.**
  Cover mutual ground as a starting point.
  Compare and adapt the presentation's goals with the interests of the audience.
- **Thesis statement.**
  State where you are going and what you will prove.
- **Argument.**
  Convince them with facts and logic.
- **Review and summary** when complete.
  Summarise what you've told them.
  Check for comprehension.
- **Questions and discussion.**

Practice by rehearsing the presentation, recording it, or reciting it to a few friends.

Techniques of delivery:

- Put your audience at ease with a relevant anecdote or joke,
  or get their attention with a dramatic gesture or event...
- Use personal pronouns in your delivery.
- Make eye contact with the audience.
- Present your report with a conversational voice though vary it for emphasis.
- Use transitions to signal the audience you're moving to a new idea.
- Direct questions to your audience to get them more involved.
- Conclude by summing up your main ideas, points, or arguments.
- Leave time for questions, and invite feedback on:
  - The content (un-addressed, related ideas).
  - The conclusions.
  - Your manner of presentation.
- Leave your contact information (business card) for further questions.

Using visual aids or media:

- Call early and make sure hardware is compatible with your software;
  and software versions of your documents are compatible with versions of their software.
- Have several versions of computerised files (on your hard drive, disk, web site, and overhead and/or paper(!) just in case.
- Come early and make sure everything works and that any media (audio, visual, computer) can be seen, heard, understood by all.
- Keep all visual materials simple in large text for visibility.
- Have supportive materials for each idea.
- Do not distribute handouts, even outlines, before your speech (or the audience will focus on the reading material instead of listening to you).

Public Speaking

Know the room.
Be familiar with the place in which you will speak.
Arrive early, walk around the speaking area and practice using the microphone and any visual aids.

Know the audience.
Greet some of the audience as they arrive.
It's easier to speak to a group of friends than to a group of strangers.

Know your material.
Practice your speech and revise it if necessary.
If you're not familiar with your material or are uncomfortable with it, your nervousness will increase.

Relax.
Ease tension by doing exercises.

Visualise yourself giving your speech.
Imagine yourself speaking, your voice loud, clear, and assured.
When you visualise yourself as successful, you will be successful.

Realise that people want you to succeed.
They don't want you to fail.
Audiences want you to be interesting, stimulating, informative, and entertaining.

Don't apologise.
If you mention your nervousness or apologise for any problems you think you have with your speech, you may be calling the audience's attention to something they hadn't noticed. Keep silent.

Concentrate on the message -- not the medium.
Focus your attention away from your own anxieties, and outwardly toward your message and your audience.
Your nervousness will dissipate.

Turn nervousness into positive energy.
Harness your nervous energy and transform it into vitality and enthusiasm.

Gain experience.
Experience builds confidence, which is the key to effective speaking.
A Toastmasters club can provide the experience you need.

Mnemonic Systems (memory aids)

Introduction

These tools help you to improve your memory. They help you both to remember facts accurately and to remember the structure of information.

Mnemonics (pronounced “ne-mon-ics”) is the art of assisting the memory by using a system of artificial aids. I have chosen to refer to these memory aids as mnemonic systems rather than mnemonic techniques or methods.
Mnemonics were first devised by the Greeks for memory training 2500 years ago (Simonides the Younger devised the first known system in 477 BC), it has waxed and waned in popularity since it re-emerged with the coming of the European ‘renaissance’. Although many changes have been made over the years and new systems developed, the basic components remain the same, these are:

VISUALISE: You need to imagine. You need to close your eyes and ‘see’ in your minds eye whatever you need to remember.
A rule of thumb is that the more ‘vivid’ and exaggerated you picture the item the easier it is to remember, example: A large bright red apple with a worm coming out of it is far more likely to be remembered than a small insignificant apple.

There has been much written on the individual students ‘learning styles’ over the years: some are more dominant in kinaesthetic learning, others more auditory, however the vast majority of us (80%) are visual learners. We have found that students who are not predominantly ‘visual learners’ still tend to visualise as well as use their dominant style. We suggest for these students that when they need to learn and retain information that they visualise it, and pair it with their dominant style e.g. a door: see it and hear it slam or creak (auditory) or feel the cold handle or smooth paintwork (kinaesthetic

ASSOCIATION: When you are visualising ‘concrete’ objects such as an apple or a car or a book, these are very easy to picture in your mind. However more ‘abstract’ things may be a little more difficult to picture, e.g. what does ‘nourishment’ look like to you? Or what does ‘belief’ look like? It is when remembering things such as these that we need to ‘associate’ each with something that we can picture in our mind, you may associate ‘nourishment’ with an image of thin malnourished children being fed; you may associate ‘belief’ with the image of a bible or a bay leaf etc, each of these is a prompt to remember, if it does not do this then your association is not strong enough, find a stronger association.

SEQUENCE: Most of the things we need to remember are already in a set pattern or sequence, if they’re not it may require us to put them into a sequence to aid recall. In order to retain that sequence we may need to associate it with the preceding item and the next to be learnt item, this can be achieved through:
Items set out at specific places on a previously learnt journey or in specific locations e.g. in a room.
Placing things on top of each other

Crashing things together
Merging images together
Wrapping them around each other
Rotating them around each other or having them dancing together
Linking them using the same colour, smell, shape, or feeling

In it’s basic form mnemonic systems are simply ‘memory aids’ that assist you in learning formulas, tables, passages from books and all sorts of visual and reading material.

The tools are divided into two parts: tools to use to remember specific information, and secondly how to apply these tools in specific situations, learning a foreign language, exam information etc.

The Link System

The Link System is one of the easiest systems available. It's main use is for remembering lists of items e.g. shopping list, - tables, - daily appointments, - learning a new language, - when giving a speech or presentation etc.
The Link system is sometimes also known as the 'Chain system,' it consists of two steps. First form a visual image of the item to be learned. Second, associate the image for each item with the image for the next item. Thus, you form a visual association between the first two items, then between the second and third items, then between the third and fourth items, and so on.

Example: To remember a list of words:
Rose - Banana - Green car - Pen - Chair - Television -
Mirror - Horse - Red socks - Bird - House - Picture - Boat -
Apples - Shoe - Perform - Culture.
(Note the last two items in this list are more abstract,
therefore they will be more difficult to retain, so you will need
to make them meaningful by associating them with
something you can visualise).

- Visualise a red long stemmed rose.
- Visualise a ripe banana with the rose stem pushed through it.
- Visualise a green car (VW) packed and overflowing with bananas.
- Visualise a giant pen strapped to the roof of a car.
- Visualise a rocking chair rocking over a plastic pen (crunching sound).
- Visualise a TV with the leg of a chair smashed through the screen.
- Visualise a TV whose top, sides and back are mirrors.
- Visualise a horse reflected in a mirror.
- Visualise a horse wearing red socks.
- Visualise a flying bird (Stork) with a red sock in its beak.
- Visualise a giant bird flapping around in your house.
- Visualise a picture (famous) hanging in your house.
- Visualise a small rowboat carrying a huge picture across a lake.
- Visualise a small rowboat in a sea of green apples.
- Visualise your favourite shoes packed with apples.
- Visualise a huge shoe kicking a ballet dancer in the backside as she bows after a performance.
- Visualise a ballet dancer covering herself in yoghurt (culture).

Another example. When learning a new language:
Spanish
Tienda (shop) visualise a shopkeeper drinking tea throwing tea over a hen the hen is eating dough.

Positive: Easy to learn and apply. Anyone can use it. Moderately effective when compared with other mnemonic systems.

Negative: Not as effective as some of the other systems due mainly to the difficulty in making the ‘sequence’ strong enough. One forgotten link can affect all those that come after it.
I personally rarely use this system on it’s own.
I use it to remember intermediary facts, data between key points.

Story System

The Story System is quite similar to the Link System in that it relies on one step prompting the next step in the sequence. Its main difference is in that you weave all that is needed to be remembered into a sequential story.

Example: To remember a list of words:
Rose - Banana - Green car - Pen - Chair - Television -
Mirror - Horse - Red socks - Bird - House - Picture - Boat -
Apples - Shoe - Performance - Culture.
(Note the last two items in this list are more abstract
therefore they will be more difficult to retain, so you will need
to make them meaningful by associating them with
something you can visualise).

You visualise yourself walking along a road on a hot day when it starts raining Roses. You run for shelter under a Banana tree. A Green Car pulls up beside you and you climb in. The car is being driven by a Pen salesman, who stops at a customer's house, you are invited in and sit on a large soft Chair. On the Television a news flash shows that the people with you are with are wanted for stealing Mirrors. You escape out of the backdoor and are confronted by a Horse. My name is Red Socks the horse said, you notice that he is wearing red socks. I jumped onto his back, out popped a pair of wings and we flew over the House. We landed on a large Picture of a Boat. The boats cargo was a consignment of Apples, which I hid under. As the sailors walked past me I couldn't help noticing that they were wearing ballet Shoes and smelt of 'Paris' *Perfume* (Performance). Before I could move they surrounded me with a wall of *yoghurt* (Culture) pots.

Another example is often used by medical students to remember the names of the cranial nerves:
At the oil factory (Olfactory nerve) the optician (optic) looked for the occupant (Occulomotor) of the truck (Trochlear). He was searching because three gems (trigeminal) had been abduted (Abducens(by a man who was hiding his face (Facial) and ears (Auditory). A glossy photograph (Glossopharyngeal) had been taken of him, but it was too vague (Vadus) to use. He appeared to be spineless (spine accessory) and hypocritical (Hypoglossal).

Positive: Reasonably easy to use and apply. Anyone can use it. Moderately effective when compared with other systems.
Negative: Can be time consuming inventing a story. Not as effective as other systems when trying to remember a list of 20 plus. Not very useful if you need to recall the list randomly or reverse it.
I personally find this system too long winded to bother with, although there are many people who find it very useful.

The Peg System (number)

The Peg System is similar to the Loci System in that a sequence of prompts occur. In the case of The Loci System it is familiar sequential locations. The Peg System uses any other natural sequence, the two that obviously spring to mind are of course the alphabet and number. The problem with both of these is that they are abstract rather than concrete (difficult to picture). To make them meaningful we can pair them up with concrete nouns that have a close association:

Example: 0=Egg, 1=Bun, 2=Shoe, 3=Tree, 4=Door, 5=Hive, 6=Sticks, 7=Oven, 8=Gate, Nine=Wine.

Once the sequence is learnt you simply hang the items to be remembered on the pegs.

Example:

Things to do today: Fill car with petrol, - take dog to vet, - pay phone account, - meet friend for lunch, - drop off children at party, - fix lawn mower.

Visualise a big Mac (bun=one) having petrol pumped into it.
Visualise my dog with a red shoe (shoe=two) in its mouth.
Visualise my phone connected to a willow tree (tree=three).
Visualise Brian (a friend) eating McDonalds front door (door=four).
Visualise your children playing in a huge yellow bee hive (hive=five).
Visualise yourself mowing through a large pile of bricks (bricks=six).

Always visualise the pegs (in sequence) and each of the prompts you've hung on them will spring to mind.

To enable you to go beyond the ten pegs, try using the Peg Matrix

Peg System Matrix

	Egg **0**	**Bun** **1**	**Shoe** **2**	**Tree** **3**	**Door** **4**	**Hive** **5**	**Bricks** **6**	**Oven** **7**	**Gate** **8**	**Wine** **9**
	0	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
Frozen **10-19**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**
Thaw **20-29**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**
Fire **30-39**	**30**	**31**	**32**	**33**	**34**	**35**	**36**	**37**	**38**	**39**
Oil **40-49**	**40**	**41**	**42**	**43**	**44**	**45**	**46**	**47**	**48**	**49**
Eat **50-59**	**50**	**51**	**52**	**53**	**54**	**55**	**56**	**57**	**58**	**59**

Broken **60-69**	**60**	**61**	**62**	**63**	**64**	**65**	**66**	**67**	**68**	**69**
Flashing Lights **70-79**	**70**	**71**	**72**	**73**	**74**	**75**	**76**	**77**	**78**	**79**
Smells **80-89**	**80**	**81**	**82**	**83**	**84**	**85**	**86**	**87**	**88**	**89**
For Sale **90-99**	**90**	**91**	**92**	**93**	**94**	**95**	**96**	**97**	**98**	**99**

One of the problems with using the Peg System is that you are limited by how many numbers you can retain (each number is associated with an object you can visualise). By using this matrix it becomes fairly easy to remember up to 99.
You need to memorise in 9s (in addition to your previously learned 0 to 9).
To remember the following numbers: 16, 32, 44, and 69.

16: visualise a pile of bricks with a good dusting of snow (frozen) on top.
32: visualise your favourite shoes on fire.
44: visualise your bedroom door oozing thick black oil.
69: visualise a pile of broken wine bottles.

Positive: The peg technique is particularly valuable when you wish to remember a large amount of information or a great number of facts data etc. It's greatest strength is in that you can recall information instantly at any point in the sequence, rather than having to start at the beginning as in the other systems.
Negative: The biggest problem is that it is harder to learn than other systems (having to remembering both the peg and the thing to be learned). It is also progressively more difficult to remember beyond ten items (if you're using peg numbers).
I personally find this system invaluable, once learnt it will allow you to retain and recall incredibly large amounts of information.

Peg System (alphabet)

The Alphabet system is a peg memory technique similar to, but more sophisticated than the previous number system. It is a good method for remembering longer lists of items in a specific order, in such a way that you can tell if items are missing.

It works by associating images representing letters of the alphabet with images you create for the things to be remembered.

When you are creating images for the letters of the alphabet, create images phonetically, so that the sound of the first syllable of the word is the name of the letter. For example, you might represent the letter 'k' with the word 'cake'
Tony Buzan in his book 'Use Your Perfect Memory' suggests using a system for creating vivid images that you can reconstruct if you forget them. He suggests taking the phonetic letter sound as the first consonant, and then, for the rest of the consonants in the word, using the first letters in alphabetical order that make a memorable word. For example for the letter 'S' (root 'Es') we would first see if any strong images presented themselves when we tried to create a word starting with 'EsA', 'EsB', 'EsC', 'EsD', 'EsE', etc.). This approach has the advantage of producing an image that you can reconstruct if you forget it. You might, however, judge that this is an unnecessary complication of a relatively simple system. In any case it is best to select the strongest image that comes to mind and stick with it.

One image scheme:
A - Ace of spades
B - Bee
C - Sea
D - Diesel engine
E - Eel
F - Effluent
G - Jeans
H - H-Bomb, itch
I - Eye
J - Jade
K - Cake
L - Elephant
M - Empty
N - Entrance
O - Oboe
P - Pea
Q - Queue
R - Ark
S - Eskimo
T - Teapot
U - Unicycle
V - Vehicle
W - WC
X - X-Ray
Y - Wire
Z - Zulu

If you find that these images do not attract you or stick in your mind, then change them for something more meaningful to you.

Once you have firmly visualised these images and have linked them to their root letters, you can associate them with information to be remembered.

Example:
Example of remembering a list of modern thinkers:
A - Ace - **Freud** - a crisp ACE being pulled out of a FRying pan (FRiED)
B - Bee - **Chomsky** - a BEE stinging a CHiMp and flying off into the SKY
C - Sea - **Genette** - a GENerator being lifted in a NET out of the SEA
D - Diesel - **Derrida** - a DaRing RIDer surfing on top of a DIESEL train
E - Eagle - **Foucault** - Bruce Lee fighting off an attacking EAGLE with kung FU
F - Effluent- **Joyce** - environmentalists JOYfully finding a plant by an EFFLUENT pipe
G - Jeans - **Nietzche** - a holey pair of JEANS with a kNEe showing through
H - H-Bomb - **Kafka** - a grey civil service CAFe being blown up by an H-Bomb etc.

Positive
For remembering long lists, can soon see if items are missing.
Negative
Rather complex and takes time and effort to learn. Not one of my favourites.

Adapted from Use Your Perfect Memory. Tony Buzan

Loci System

The Loci (location) system consists of two steps: Firstly it is to memorise a series of mental images of familiar locations in some natural or logical order. Secondly associate a visual image of each item you wish to remember with a particular location in the sequence. By visually placing each item in the order they are to be remembered at each location, all you now need to do is take an imaginary walk past the locations and you will see your items or objects that need to be remembered.

Example:
Firstly choose a familiar sequence of locations (I tend to use doors). In this example I have used myself getting up in the morning, going to work, checking the mail, and visiting a local conference facility 24 doors in all. My bedroom door, - lounge door, - kitchen door,- bathroom door, - dining room door, - French doors, - front door, - garage door, - car door, - main building door, - conference room door, - my office door, - tearoom door, - storage cupboard door, - toilet door, - Post office door, - PO box door, - main door, - lecture room door, - library door, - staff tea room door, - kitchen door, - resource room door, - exit door.

Secondly associate a visual image of each item to be remembered with a particular location in the sequence. By visually placing each item in the order that they need to be remembered (one at each door). All you need to do now is take an imaginary walk past your locations, you will see each of the items or objects at each of the locations.
Items to be remembered. New Zealand Prime Ministers:
Seddon, - Ward, - McKenzie, - Massey, - Coates, - Ward, - Forbes, - Savage, - Fraser, - Holland, - Holyoake, Nash, - Holyoake- Marshall, - Kirk, - Rowling, - Muldoon, - Lange, - Palmer,- Moore, - Bolger, - Shipley,- Clark.

LOCATION	LEARN	REMEMBER BY:
Bedroom door	Seddon	Sedan parked in door.
Lounge door	Ward	Nurse in doorway.
Kitchen door	McKenzie	Weight lifter pushing door
Bathroom door	Massey	Tractor jammed in doorway
Dining room door	Coates	Fur coat hanging on door
French doors	Ward	Doctor breaking the glass in door
Front door	Forbes	Model T Ford towing door
Garage door	Savage	Warrior painted on door
Car door	Fraser	Pkt Frazer cakes on car seat
Main building door	Holland	Huge Dutch clog embedded in door
Conference room door	Holyoake	Cross made of acorns on door
Office door	Nash	Office filled with Nashi pears
Tearoom door	Holyoake	Huge oak leaf with holes in it
Store room door	Marshall	Store full of Sheriffs badges
Toilet door	Kirk	Captain Kirk on seat.
Post Office door	Rowling	Huge ball rolling to the door
P.O. Box door	Muldoon	Dimpled spotty face grinning
Main glass doors	Lange	Lanky boy pulling faces
Lecture room door	Palmer	Palm reader & crystal ball
Library doors	Moore	Boat moored in doorway

Staff tea room door	Bolger	Broken bottle of Bollingers
Resource room door	Shipley	Ship jammed in doorway
Exit door	Clark	19 century court clerk crying

Positive: The main advantage this system has over others is that it is as easy to remember things in reverse as it is in a forward sequence. If you do happen to forget one item you will know where it was in the sequence and forgetting one item will not interfere with recall of the others. It can also easily incorporate other systems e.g. use the Link System at each location.
Negative: Like the Link and Story systems, the Loci System is limited if you need to directly retrieve an item at a particular position in the list. For example, to find the eleventh item, you need to start counting your locations on an imaginary walk until you reach the eleventh location. However you can help alleviate this by remembering every fifth location
I personally use the Loci System and adaptations of it more frequently than any other mnemonic system.

The Major System

The Major Memory System is one of the most powerful memory systems available. The system works by converting number sequences into nouns, nouns into images, and linking images into sequences. These sequences can be very complex and detailed.

The building blocks of the system are the association of the numbers below with the following consonant sounds:
0 - s, z, soft-c - remember as 'z is first letter of zero'
1 - d, t, th - remember as letters with 1 downstroke
2 - n - remember as having 2 downstrokes
3 - m - has three downstrokes
4 - r - imagine a 4 and an R glued together back-to-back
5 - L - imagine the 5 propped up against a book end (L)
6 - j, sh, soft-ch, dg, soft-g - g is 6 rotated 180 degrees.
7 - k, hard-ch, hard-c, hard-g, ng - imagine K as two 7s
rotated and glued together
8 - f, v - imagine the bottom loop of the 8 as an eFfluent
pipe discharging waste (letter image of F in
alphabet system)
9 - p, b - b as 9 rotated 180 degrees.

These associations need to be learned thoroughly before going further with the technique.

Starting to use the Major System
The system operates on a number of levels, depending on the amount of time you are prepared to devote to learning the system.

The first level, which involves coding single digit numbers into small words, functions almost as a poor relation of the number/rhyme system. It is at higher levels that you can unleash the real power of the system. You should, however, learn to use this first level before moving on.

The trick with converting numbers into words is to use only the consonants that code information within the word, while using vowels to pad the consonants out with meaning. If you do have to use other consonants to make up a word, use only those that do not code for numbers - i.e. h, q, w, x, and y.

At the first level we code each number into a short noun. This is made up of the consonant coding for the number, and vowels that turn the consonant into a word. On a sheet of paper, write the numbers 0 to 9, and apply these rules to create your own memory words. Some examples are shown below:
0 - saw
1 - toe
2 - neigh
3 - ma
4 - ray
5 - law

6 - jaw
7 - key
8 - fee
9 - pie
You can use these words in association much like the other peg technique memory words.

Moving to the second level

Similar rules apply to creating a standard word from two numbers. It is best not to try to use a single number word as a root, as this can confuse the image.

Write down the numbers 01 to 99, and apply the rules to create memory words for yourself.

A few examples are shown below:
09 - z, p - zap
17 - t, ch - tech
23 - n, m - name
36 - m, sh - mesh
41 - r,s - rose
52 - l, n - line
64 - ch, r - chair
75 - k, l - keel
89 - f, p - fop
98 - b, f - beef

Taking the Major System Further

Just using double number words may be enough to make this a sufficiently powerful mnemonic for you. Alternatively you may decide to use triple number words, using the same construction rules as double number words.

Examples are:
182 - d, v, n - Devon
304 - m, s, r - miser
400 - r, c, s - races
651 - j, l, d - jellied
801 - f, z, d - fazed

Even though you can construct words from first principles each time, at this level of complexity it may be worth writing them down to make them easier to remember. You can then run through them many times to strengthen the link in your mind between the numbers and the associated words. This will help you to remember the appropriate word faster.

Using Words to Remember Long Numbers

Once you have come up with words and images to link to your numbers, you can start to apply the technique to remember, for example, long numbers. A good way of doing this is to associate Major System words with stops on a journey (see 7.1.5).

Example:
The number Pi is 3.14159265359 (to 11 decimal places). Using the major system and the Loci system together, I can remember this as:
Passing my Ma (3) by the front door of my house
Seeing Michelangelo's David (1,4,1) sleeping under the rose bush in the garden
Someone has tied a loop (5,9) of yellow ribbon onto the steering wheel of my car
I see a poster with a photo of a steaming pile of sausages and mashed potato, with the title 'glorious nosh' (2,7) at the end of the road
A lama (5,3) is grazing on grass outside the garage forecourt
Another loop (5,9) of yellow ribbon has been tied around the railway bridge. This is getting strange!

Positives
The Major Memory System is one of the most powerful memory systems available. The technique often forms the basis of some of the extraordinary, almost magical, memory feats performed by stage magicians and memory performers.
Negatives.
It takes a lot of time to master.

Applying Mnemonic Systems (memory aids)

Learning Another Language

Learning another language is really a matter of word association - associating what seems initially a meaningless collection of syllables with a word in a language that we understand.
This association is traditionally carried out by repetition - saying the word in ones own language and the language to be learnt repeatedly. This way of learning a new language is for most of us tedious and to a large degree unnecessary.
The two obvious questions are **what** or which words do we learn first and the second is **how** do we learn them.
There are a number of systems you can use to establish what you should learn first, unfortunately they are often rather boring and don't lend themselves to speedy application.
I suggest you try using the following 100-word list. This list of 100 words is made up of 50% of all words that we use when in conversation.

a, an	after	again	all	almost
also	always	and	because	before
big	but	(I) can	(I) come	either / or
(I) find	first	for	friend	from
(I) go	good	goodbye	happy	(I) have
he	hello	here	how	I
(I) am	if	in	(I) know	last
(I) like	little	(I) love	(I) make	many
one	more	most	much	my
new	no	not	now	of
often	on	one	only	or
other	our	out	over	people
place	please	same	(I) see	she
so	some	sometimes	still	such
(I) tell	thank you	that	the	their
them	then	there is	they	thing
(I) think	this	time	to	under
up	us	(I) use	very	we
what	when	where	which	who
why	with	yes	you	your

The next is to make another list of your own of at least one hundred words that you feel you need to know (most useful).
Your local town can also be used to help make and prioritise what should be on this list. The basic principle here is that our core vocabulary of language relates to everyday things: things that are typically found in a small town, village or city. The student needs to choose a town that he or she is very familiar with, and should use objects and events that occur within that town.

Nouns in the town
Nouns should be associated with the most relevant locations: ‘book’ with books on a shelf in the public library. The word for ‘bread’ with the bread trays in the baker’s shop. 'Animals' with your local farm etc.

Adjectives in the park
Adjectives should be associated with a park or garden in your town: words such as smelly, green, bright, cold, big, short etc can be easily related to objects and people in the park.

Verbs in the sports centre
Verbs can most easily be associated with a sports centre or playing field;
people throwing, lifting, swimming, eating, driving, dressing etc.

Genders in the town

In languages where gender is important divide the town into two main zones where the gender is only masculine and feminine, or three where there is a neutral gender. This gender division can be made by busy roads, a river etc. To fix the gender of a noun, simply associate its image with a place in the correct part of town.

After ascertaining **what** should be learned i.e. the 100 most commonly used word list and then the town for daily use words (as you can see the use of visualising the town to recall words is an adaptation of the Loci system). The next step is **how** will you learn and retain these words; this can be achieved by making an association between the object and the word to be learned. This can be fairly difficult, mainly because many foreign words seem totally meaningless; we have little to associate them with. I find that using the Link System overcomes this. Although initially this involves a fairly rigorous input from the student it soon pays off. The way to make seemingly meaningless unfamiliar words meaningful is to associate them with objects and events that are meaningful to you.

Example:
Spanish.
Bread: I visualise the local bakery. I see a loaf of bread, not on a tray, but in a large stainless steel pan. I associate BREAD with PAN (Spanish for bread).
Time (what’s the time?):I visualise being under the clock at our local railway station. I see a queue of people pointing up to the clock which has now turned into a horoscope. I associate WHAT IS THE TIME? with
QUE HORA ES? (pronounced KE ORA ES).

If we don’t make these words meaningful, the chances of recalling them weeks after learning them will be greatly reduced.
I find it is preferable to learn a few words at a time. When proficient add a few more, keep building this way, ensuring that you use your newly acquired words in practical application.

List of 100 most commonly used words: Your Perfect Memory. Tony Buzan

Mental Diary 2009

The day every date falls on in the year 2009:
When we look at what needs to be learnt our initial reaction is 365 pieces of information. You certainly wont learn that in a couple of hours and because numbers are rather abstract it is difficult to picture them.

Our first question is **what** do we need to learn? We need to know how many days there are in each of the 12 months. If you don't already know these, maybe the traditional way of remembering the number of days of each month is not for you. I use the following: "Fat aunty June sells narcotics"

Fat: February (28 days).
Aunty: April (30 days).
June: June (30 days).
Sells: September (30 days).
Narcotics: November (30 days).

The remaining months all contain 31 days.

Another more visual way of remembering this is:
Hold your hands out in front of you in fists, with palms down and hands together. The knuckle of the left little finger represents January, the valley between it and the ring finger represents February, the knuckle of the ring finger represents March, and so on until you reach the knuckle of the right ring finger, which represents December. All the knuckle months have 31 days, and the valley months are the short months.

Next we need to remember just 12 numbers, each number will represent when the first Sunday of each month falls (in the year 2009):

4, 1, 1, 5, 3, 7, 5, 2, 6, 4, 1, 6.

January 4.	July 5.
February 1.	August 2.
March 1.	September 6.
April 5.	October 4.
May 3.	November 1.
June 7.	December 6.

All you need to do now is be able to add and subtract up to 7. For example if you wanted to know what day the following dates fall:

April 16.
June 11.
October 10.
December 25.

APRIL 16
April 5th is the first Sunday. Add 7 =12 + 4= Thursday.
JUNE 11
June 7th is the first Sunday. Add 4 = Thursday.
OCTOBER 10
October 4th is the first Sunday. Add 6 = Saturday.
DECEMBER 25
December 6th is the first Sunday. Add 7+7+5 (19) = 25 = Friday.

As you can see it's not an awful lot to remember. However because number, months and days are all rather abstract, they are hard to visualise and therefore difficult to remember.

The initial **how** to learn this would involve memorising the date when each Sunday fell for each month i.e. 4,1,1,5,3,7,5,2,6,4,1,6. Unfortunately it would always involve starting at the beginning e.g. the first Sunday in August would mean you would know that August is the eighth month therefore the eighth number is 5, but to recall this would mean starting with January and recalling each month in sequence until you reached the eighth month. The disadvantage in this is that it is slow and there is an increase in the likelihood of forgetting one number, which in turn may well disrupt all those that come after it.
The way to solve this is to use the Peg System, this will involve associating all those sequenced abstract items with concrete easy to visualise items:

Step 1.
visualise:
1 represented by a large cream bun.
2 represented by a dainty shoe.
3 represented by a spreading oak tree.
4 represented by an old wooden door.
5 represented by a buzzing bee hive.
6 represented by a pile of red house bricks.
7 represented by a white kitchen oven.

Step 2.
visualise:
January represented by a bottle of Janola (a toilet cleaner).
February represented by 'Patsy' (TV's Absolutely Fabulous).
March represented by marching soldiers.
April represented by a huge ape jumping up and down.
May represented by a colourful Maypole.
June represented by an orthodox Jew (with hat and beard).
July represented by the crown jewels.
August represented by a Roman emperor (Augustus).
September represented by a sword (sceptre).
October represented by a large smiling octopus.
November represented by a nun (novice).
Christmas represented by Father Christmas.

Step 3.
For the first Sunday of the month
visualise:
January 4 represented by a door with a Janola bottle nailed to it.
February 1 represented by Patsy eating a large cream bun.
March 1 represented by soldiers marching through a giant bun.
April 5 represented by a large black ape with a beehive attached to his head.
May 3 represented by a maypole made from a large oak tree.
June 7 represented by an orthodox Jew stirring a pot on an oven.

July 5 represented by a large diamond (jewel) sitting on top of a live beehive
August 2 represented by a Roman emperor/soldier wearing your favourite shoes.
September 6 represented by a sword driven through a red house brick.
October 4 represented by a smiling octopus knocking at your front door.
November 1 represented by a nun sitting on a giant bun.
December 6 represented by Father Christmas carrying a sack full of red house bricks.

Example:
What day does August 14th fall on?
The first Sunday in August is 2nd represented by a pair of your favourite shoes being worn by a Roman Emperor.
Add 7 to the 2 = Sunday the ninth. Add the remaining 5 days (Mon 1, Tue 2, Wed 3, Thurs 4, Fri 5.) until you reach 14th. Therefore August 14th falls on a Friday.

Speeches and Presentations without Notes

Studies over the last few years have shown that one of the most stressful events in many peoples life is the fear of any type of 'public speaking', many of us simply turn to 'jelly' at the thought of doing it. Think back to weddings where the best man had to be intoxicated before he would stand up, or students who were white with fear when asked to make a speech to the whole class. Even old campaigners often prance around with their comfort blanket of notes 'just in case'. They all share a fear of failure to varying degrees. It is not usually the content that is the problem, it is more the ability to recall it when it's needed and to make it 'flow'. This takes us to the how we should learn it. But before we tackle the how we need to visit the what we should learn first. get an overview to start with - what are you trying to get across? Next what are the 'key points' these are the chunks that make up the whole e.g. chapters in a book - at a funeral service the significant parts of a persons life e.g. birth, school days, academic and career achievements, relationship as a husband, father, brother, beliefs and values etc. After gathering your key points you need to put them into a sequence of your choosing. Each key point will function in two ways firstly it will trigger the next key point in the sequence and secondly it will trigger the details that spill out from each key point e.g. in the above example (funeral) Birth 1920, Chertsey in England, 4 brothers 2 sisters the second eldest etc.
The number of key points obviously depends on the length of the material you are presenting, but it also depends on what you feel comfortable with, where one person uses five key points another person may use fifteen for the same material.
The how to learn and recall this information can be achieved by putting the key points (and some of the detail if you wish) into a story

The Story System.
Example:
15 minute talk to class.
Subject: "What I Did On My Holiday"
(Holiday in New Zealand)

Key Points

Primary points	Secondary points
Auckland	Zoo Sky tower Sailing
Raglan	Surfing Fishing The blues
Wellington	Tramping (hiking) Sea canoeing
Nelson	Diving

	Fishing
	Jet boating
Queenstown	Bungy jumping
	White water rafting

Weave the key points into a story. The presenter will mentally walk through the story to prompt her/his presentation.

I landed at the airport where people fly in and out on giant hawks (Auckland).
Walking to the airport car park I was chased by a herd of elephants (zoo).
We drove to the city pursued by the elephants. We managed to lose them by climbing the Sky Tower
We made our escape from the Sky Tower by para gliding from the top. We sailed (sailing) the thermal currents and drifted down country.
Eventually we landed on a huge rag (Raglan).
We noticed that the rag was flapping up and down in the breeze, underneath there was a long chrome surf board (surfing).
We were pulled out to sea on the surf board by a shoal of fish (fishing).
We swam back to shore and were greeted by Eric Clapton and B.B. King playing blues on acoustic guitars.
They pointed to the boots (Wellington), we put them on and then went walking (hiking) deep into the bush.
We came across a small stream with a 2 seater yellow canoe sitting moored in the middle. We travelled down stream until we were swept out to sea in our canoe (sea canoe).
We paddled onward and were confronted by a huge old pirate ship, as we passed by Admiral Nelson greeted us.
Half of his crew were fishing off the side of the ship. The others were diving from the top of the mast into the clear blue sea.
The Queen (Queenstown) was lowered down from the side of the ship in a red jet boat we gratefully clambered in, the Queen told us to hold on, put her foot down and off we went.
The boat sped towards the shore and up a wide river mouth, all of a sudden we went over the top of a waterfall, just when we thought we were about to die, the boat stopped just before hitting the water, and violently jerked back up, we were on a bungy rope.

When creating these stories make sure they suit you. You are not creating the story for anyone else. You must be able to close your eyes and visualise each image along the way, when you reach more abstract words that you may not be able to readily visualise, associate them with something you can e.g. Auckland (hawk), Raglan (rag). You will find that remembering the details between key points comes fairly easily e.g. you may have visited the revolving restaurant at the top of the Sky Tower.
Some people find the most difficult part of the exercise is the developing of the story. It becomes easier with practice.

Remembering Names

Remembering people's names needs a slightly different approach from all the others explained so far in this section. The techniques used, though, are quite simple:

1. Face association
Examine a person's face discretely when you are introduced. Try to find an unusual feature, whether ears, hairline, forehead, eyebrows, eyes, nose, mouth, chin, complexion, etc

Create an association between that characteristic, the face, and the name in your mind. The association may be to link the person with someone else you know with the same name. Alternatively it may be to associate a rhyme or image of the name with the person's face or defining feature.

2. Repetition
When you are introduced, ask for the person to repeat their name. Use the name yourself as often as possible (without overdoing it!). If it is unusual, ask how it is spelled or where it is comes from, and if appropriate, exchange cards. Keep in mind that the more often you hear and see the name, the more likely it is to sink in.

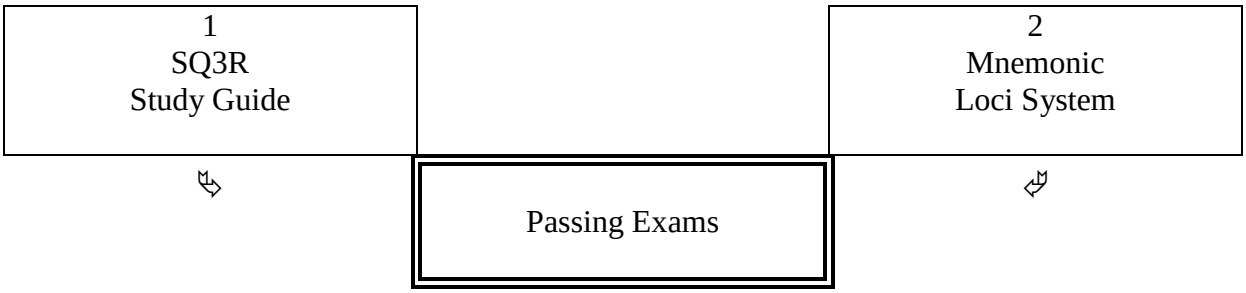
Also, after you have left that person's company, review the name in your mind several times. If you are particularly keen you might decide to write it down and make notes.

Summary
The methods suggested for remembering names are fairly simple and obvious, but are useful. Association either with images of a name or with other people can really help. Repetition and review help to confirm your memory.

An important thing to stress is practice, patience, and progressive improvement.

Combining The Loci System with SQ3R

When studying for exams, many students are over whelmed by the amount of material that they believe they need to retain. The combination of a study guide and a mnemonic system will certainly make passing exams easier.
The **what** needs to be learned will be addressed by using the 'study guide'.
The **how** it should be learned will be addressed in part by the 'study guide' but primarily by using the mnemonic system.



What Is SQ3R
It is a study system that many other study systems have used as their base. It is probably the simplest and least complicated of any of the 'study systems.' It consists of 5 steps: Survey, Question, Read, Recite, Review. It is a general-purpose system that combines several specific learning strategies. It is used with large bodies of material e.g. textbook chapters, and can be used in a wide range of tasks and content areas.

Survey:
To survey a book, read the preface, table of contents, and chapter summaries. To study a chapter, study the outline and skim the chapter, especially the headings, pictures, and graphs.
Survey consists of getting a good overview of what the book or chapter is about and should not take more than a few minutes. Many books have a summary at the end of each chapter. Others may give you an overview in the first paragraph of each chapter. The overview is like looking at a map before you take a trip, or like looking at the picture before doing a jigsaw puzzle. I always think of it like being asked to describe a town from the air. If you're not high enough you will be able to give amazing details about a garage roof or how much dandruff Joe Blow has. If you flew too high you may have trouble figuring which is the town you're supposed to be describing. Flying at the right height (can see the whole town) you will be able to describe how much industry, the number of schools, types of recreation facilities, number of hospitals, even maybe its affluence etc.
This describing a town from the air is no different from me asking you to tell me what a certain book is about. If you're too close you will probably turn to a page and read it, and be none the wiser. If you're too far away it's like describing it from the bookshelf, again you'd be none the wiser. At the right height, you will be skimming chapters, reading summaries after each chapter, preface etc, for an overview. Many tests and exams have been passed by students doing no more than this, however it is not recommended to just 'survey' the material.

Getting a good overview will also help you to understand what you are going to read next i.e. the book or chapter in question.
The overview is the structure or bones that you will hang your questions on, it is much easier working out questions once you have an understanding / 'overview' of the chapter, book. or other material that you are studying.

Question:
After your 'survey' you should have an overview of the book or chapter. This overview should enable you to ask questions.
I find it easier to use WHO, WHEN, WHERE, WHAT, WHY and HOW questions. If we use the example of the town again, some of the questions from the overview maybe ***Why*** *was the town built on the present site.* ***Why*** *is the population so small.* ***What*** *is the population.* ***What*** *is the main industry.* ***What and When*** *significant events occurred in the towns past.* ***Where*** *is the town.* ***When*** *was the town founded.* ***Who*** *were the town founders.* ***How*** *does the town promote itself. etc.*
Some books / chapters may already have questions inserted in them. It can be very helpful if you work with another student, especially for prompting more questions and answers.

Read:
Read the chapter without taking notes. Answer the questions you have asked and any more that may arise, read everything. Sometimes graphs, tables and charts convey more information than text does.
It is usually preferable to progress one chapter at a time rather than trying to complete the whole book.
Note that this is the third step in SQ3R; for many students it is the only method of study. They read, read and re-read, hoping that something will 'sink in.' my advice is don't go down this road.
Once you do take notes i.e. answering your questions. Make sure that you translate the material into your own words so that you fully understand it.

Recite:
Reciting means recalling your answers in your own words and repeating them without having to look at the material. It is essential that you recite by saying it out loud, this is far more beneficial than saying it to yourself. Again it can be helpful if you have a 'study partner.'
It is at this stage that you need to be equipped with at least one mnemonic system (memory aid). This will enable you to retain and recall the needed information. I will however finish going through the SQ3R before addressing the memory aid.
Approximately half of your entire study time should be spent reciting

Review:
The fact is that if you do not use the recited material occasionally you are likely to start forgetting it unless you review it. This is no 'big deal' and can be done within a day or two of 'reciting' and then every week or two there after. Also by reviewing material and re-reading chapters you can expand on what you already have.
When reviewing, the 'memory aid' that will follow this section will also greatly assist you.
Reviewing material just before an exam is not like cramming for an exam. Cramming is the learning of 'new' material just before an exam, where as reviewing is the going

over of material that you have previously studied. Regular well-spaced review is recommended.

The Loci System should be used at the **Reciting stage**, after you have put the material into your own words; it is this material that you need to remember.
There are a number of mnemonic systems that you can use, but I recommend the Loci System.

The Loci system has two basic steps:
The first step is to use a set sequence of locations that you already have in your head. If you can come up with between 12 and 20 sequenced locations you are doing well. What you choose as your location 'landmarks' is up to you, I use 'doorways' I find they are easy to locate when you close your eyes and take a 'mental walk.' Try picking a set sequence of locations that suit you. If you like 'golf' you may choose the 18 tees around your local golf course. If you are a student you may use doors or rooms at your local college or school.
example: 1 main entrance. 2 receptionist door. 3 Principals office door. 4 art room door. 5 Mrs Millars classroom door. etc.
Once you have your locations, and you have practiced going through it a couple of times. Now go through it, but at each 'location' visualise it, i.e.; what colour is it?; if you use 'doors' is the door open? What's in the room? etc. This will lessen the chance of you mixing up locations.

The second step is to put the things that you need to remember, into the 'locations.' If its concrete things that you need to remember it's relatively easy, simply mentally put one in each of the locations, make sure that you 'see' each item in the location e.g. if it's a 'car,' what colour is it? what make is it? etc.
Try the following exercise, put each of the following in a sequence of locations; visualise each one in its location: rose - car - banana - pen - chair - television - mirror - horse - red socks - bird - kitchen - picture - boat -apple -shoes - bath - sauce pan - newspaper - computer. Now recall them by taking a mental walk to each location and recall each item left there.
If you have to remember more abstract things and more than one thing at a time; firstly use just the 'key words'; secondly make the key words meaningful (associating them with things that you can visualise), and then place them in your locations. By mentally visiting each location, you can see what is in that particular location, these will then prompt you to recall what you need to remember.
Earlier this year I was working with a group of 'health professionals' who needed to remember their organisations statement on 'patient rights.' Not an easy task considering that there were 15 sections. The first one was:

> "All patients have the right to be treated with respect, including their beliefs, culture, values and privacy."

The key words here are: 'respect;' 'beliefs;' 'culture;' 'values;' 'privacy.' As you can see all of these key words are abstract rather than concrete. So the first task is to make them meaningful by associating them with things we can visualise, example:

> respect. - see Nelson Mandela standing in your location.
> beliefs - he is holding a bible in his right hand.
> culture - he is holding a pot of yoghurt in his left hand.
> privacy - he standing behind a waist high 'Privet' hedge.

By visualising an image like the one above, it's easy to recall the first of the 15 sections. The second section of the statement is put into the second 'location.

SQ3R

Survey: scan the chapter / book, read introduction, summaries, headings etc to get an overview.

⇩

Question: form questions from your overview: who; what; where; when and how.

⇩

Read: Read chapter by chapter, answer the questions you have asked.

⇩

Recite: Put answers into your own words, memorise and recite by saying aloud.

⇩

Review: Once you have recited the material, go back over it every few weeks to retain it. Also by reviewing it and re-reading chapters you can expand on what you already have.

Loci System

⇦ **Location:** visualise a sequence of locations. In each of these locations visualise your answers. Then take a 'mental walk' to your locations and recall your answers

LATERAL THINKING

Lateral thinking recognizes that our brains are pattern recognition systems, and that they do not function like computers. It takes years of training before we learn to do simple arithmetic - something that computers do very easily. On the other hand, we can instantly recognize patterns such as faces, language, and handwriting. The only computers that begin to be able to do these things do it by modelling the way that human brain cells work . Even then, computers will need to become more powerful before they approach our ability to handle patterns.

The benefit of good pattern recognition is that we can recognize objects and situations very quickly. Imagine how much time would be wasted if you had to do a full analysis every time you came across a cylindrical canister of effervescent fluid. Most people would just open their can of fizzy drink. Without pattern recognition we would starve or be eaten. We could not cross the road safely.

Unfortunately, we get stuck in our patterns. We tend to think within them. Solutions we develop are based on previous solutions to similar problems. Normally it does not occur to us to use solutions belonging to other patterns.

We use lateral thinking techniques to break out of this patterned way of thinking.

Lateral thinking techniques help us to come up with startling, brilliant and original solutions to problems and opportunities.

Brainstorming

Brainstorming is an excellent way of developing many creative solutions to a problem. It works by focusing on a problem, and then coming up with very many radical solutions to it. Ideas should deliberately be as broad and odd as possible, and should be developed as fast as possible. Brainstorming is a lateral thinking process. It is designed to help you break out of your thinking patterns into new ways of looking at things.

During brainstorming sessions there should be no criticism of ideas. You are trying to open possibilities and break down wrong assumptions about the limits of the problem. Judgments and analysis at this stage will stunt idea generation.

Ideas should only be evaluated once the brainstorming session has finished - you can then explore solutions further using conventional approaches.

Individual Brainstorming

When you brainstorm on your own you will tend to produce a wider range of ideas than with group brainstorming - you do not have to worry about other people's egos or opinions, and can therefore be more freely creative. You may not, however, develop ideas as effectively as you do not have the experience of a group to help you.

Group Brainstorming

Group brainstorming can be very effective as it uses the experience and creativity of all members of the group. When individual members reach their limit on an idea, another member's creativity and experience can take the idea to the next stage. Therefore, group brainstorming tends to develop ideas in more depth than individual brainstorming.

Brainstorming in a group can be risky for individuals. Valuable but strange suggestions may appear stupid at first sight. Because of such, you need to chair sessions tightly so that uncreative people do not crush these ideas and leave group members feeling humiliated.

To run a group brainstorming session effectively, do the following:
Define the problem you want solved clearly, and lay out any criteria to be met.
Keep the session focused on the problem
Ensure that no one criticizes or evaluates ideas during the session. Criticism introduces an element of risk for group members when putting forward an idea. This stifles creativity and cripples the free running nature of a good brainstorming session.
Encourage an enthusiastic, uncritical attitude among members of the group. Try to get everyone to contribute and develop ideas, including the quietest members of the group
Let people have fun brainstorming. Encourage them to come up with as many ideas as possible, from solidly practical ones to wildly impractical ones. Welcome creativity.
Ensure that no train of thought is followed for too long
Encourage people to develop other people's ideas, or to use other ideas to create new ones
Appoint one person to note down ideas that come out of the session.

Key points:
Brainstorming is a way of generating radical ideas. During the brainstorming process there is no criticism of ideas, as free rein is given to people's creativity. Criticism and judgment cramp creativity.

Individual brainstorming is best for generating many ideas, but tends to be less effective at developing them. Group brainstorming tends to develop fewer ideas, but takes each idea further. Group brainstorming needs formal rules for it to work smoothly.

The Great Leap Forward

Use this tool if Brain Storming fails to give you the multiple options that you need. This tool can also be used along side Brain Storming or instead of Brain Storming. It should also be noted that this tool is far more powerful than Brain Storming. It can be used by an individual or by a group.

It's always far easier to stick to the familiar, to use past experiences, to work the way we always have. Unfortunately we often come up with the same old ways of doing things, even if these had limited success or in some cases have led to total failure. Maybe it's because we can't see any alternative options or solutions beyond our past experiences.

To use this tool requires the use of a different type of thinking pattern. It requires that we "think outside of the box." It requires that we think and work in what at first seems to be an illogical (no connections, doesn't seem to make sense) way of generating new options and solutions. Only later can you see the logic, when you have generated options that you would not ordinarily have come up with.

You can use this tool in one or more of the following four ways:
* Random Word Selection.(the easiest)
* A Concept.
* Reversal.
* The Crazy.

* Random Word Selection:
Use any word, object or picture, pick at random, do not choose, use a dart with a magazine or newspaper, or close your eyes spin around a couple of times and then open your eyes, use the first thing you see.
Whatever the word is, just sit and relax, open your mind and start making associations with the word.

Example:
Goal: To pay for a round the world trip.
I close my eyes spin around, open my eyes, the first thing I see is a Lavender bush.

LAVENDER:--nice fragrance--clean--natural--clean green image--trendy greens--in demand--NZ essential oils--Natural essential oil producers in NZ want to sell and market their product overseas--sample case with files of oils I market to perfumeries, health shops overseas--catalogue and sample case--act as travelling agent for a wide range of natural NZ products, paid on commission, while I travel.

* A Concept:
Choose a concept that relates to your goal. What is a concept? you may ask. I look at a concept as being like a net, that will cover the goal you have, there is usually a number of so called concepts that will cover the subject, goal you choose to look at, there is no right or wrong, it all comes down to perceptions.
You use it in the same way that you use Random Word Selection.

Example:
Goal: To pay for a round the world trip.
The concept could be: Fund raising or Survival or An Adventure.
In this case I will use "Adventure"
ADVENTURE:--Visit a mysterious location--write article about the place--bury a time capsule in exotic location (local business put names in, at $50 per name)--Sealed bottles, released in Gulf stream, $50 per bottle--Arrange and guide a group of yuppie types, on a trip where you throw a dart at the map and make that your next port of call, you repeat the process at each destination (until they run out of money).

* Reversal
Within this method you reverse anything you can within the parameters of your goal. It is more the ideas generated from the reversal, rather than the reversal itself. The first step in this process is to identify one or more parts that lend themselves to be reversed, next reverse them. You now use it the same way you do with Random Word Selection.

Example:
Goal: To pay for a round the world trip.
Reversals could be: "The world pays me for the trip" or "The world goes on a trip and I stay at home".

Lets use the second example
The world goes on the trip:. Arm chair thrills and spills--strange locations and interesting experiences-- the majority want raw edges--number 8 fencing wire--Kiwis fly--locate Kiwis living in strange locations--video, keeping raw edge--strike up deal with TVNZ, sponsor series.

* Crazy
Within this method just use the most illogical or crazy thing you can think of that is relating to your goal.
Once you have chosen your crazy word or idea. You again make associations the same way you would for the Random Word method

Example:
Goal: To pay for a round the world trip.
I'll send a virus around the world: Spreading--let people know I'm coming--develop a network of friends and family, places to stay--multiply—word of mouth—for $5 per head I'll inspire others with stories of my escapades.

SCAMPER your way to creative thinking

The SCAMPER technique was developed by Bob Eberle. SCAMPER is an acronym for idea-spurring verbs to improve objects or generate ideas. The letters represent the words "substitute," "combine," "adapt," "modify," "magnify," "minify," "put to other uses," "eliminate," "rearrange," and "reverse." Questions associated with these verbs, as well as examples of objects that illustrate them, are listed below.

Substitute: What can you use instead of the ingredients, materials, objects, places, or methods now used? Vegetarian hot dogs and disposable nappies are examples of products which illustrate substitution.

Combine: Which parts or ideas can you blend together? Televisions with built-in VCRs and musical greeting cards are examples of combinations.

Adapt: What else is like this, what can be copied or imitated? Air fresheners that resemble shells and children's beds that look like race-cars illustrate adapting.

Modify: Can you change an attribute such as colour, sound, taste, odour, form, or shape or perhaps add a new twist? Parabolic skis and scented crayons illustrate modifying.

Magnify: Can it be stronger, larger, higher, exaggerated, or more frequent? Extra-strength medicines as well as over-sized sports equipment and televisions are examples of products that have been magnified.

Minify: Can it be smaller, lighter, less frequent or divided? Wrist-band televisions and 12-hour pain relievers are examples of minifying objects.

Put to Other Uses: Can it be used in a way other than how it was intended to be used? Old tires used for fences, swings, and bird feeders, and the development of snowboards illustrate "put to other uses."

Eliminate: What can you take away or remove? Sodium-free and fat-free foods and cordless telephones are examples of eliminating something.

Rearrange: Can you interchange parts or change the pattern, layout, sequence, or schedule? The new surround sound (360-degree) stereo speakers and vertical paper staplers are examples of rearranging.

Reverse: Can you turn parts backwards, inside out, upside down, or around? Reversible clothing is a classic example of reversing something.

After making children aware of these verbs and how they have been applied to existing objects and products, encourage them to use the SCAMPER verbs to identify new solutions to their problem. For example, a young child looking for a solution for keeping squirrels out of a bird feeder thought of eliminating the pole entirely by

attaching the bird feeder to balloons filled with helium, which would enable the feeder to float approximately four feet off the ground.

Provocation

How to use tool:
Provocation is an important lateral thinking technique. Just like “The great Leap Forward”, it works by moving your thinking out of the established patterns that you use to solve problems.

As explained earlier, we think by recognizing patterns and reacting to them. These reactions come from our past experiences and logical extensions to those experiences. Often we do not think outside these patterns. While we may know the answer as part of a different type of problem, the structure of our brains makes it difficult for us to link this in.

Provocation is one of the tools we use to make links between these patterns.

We use it by making deliberately stupid statements (Provocations), in which something we take for granted about the situation is not true. Statements need to be stupid to shock our minds out of existing ways of thinking. Once we have made a provocative statement, we then suspend judgment and use that statement to generate ideas. Provocations give us original starting points for creative thinking.

As an example, we could make a statement that 'Houses should not have roofs'. Normally this would not be a good idea! However this leads one to think of houses with opening roofs, or houses with glass roofs. These would allow you to lie in bed and look up at the stars.

Once you have made the Provocation, you can use it in a number of different ways, by examining:
The consequences of the statement
What the benefits would be
What special circumstances would make it a sensible solution
The principles needed to support it and make it work
How it would work moment-to-moment
What would happen if a sequence of events was changed etc.
You can use this list as a checklist.

Edward de Bono has developed and popularise use of Provocation by using the word 'Po'. 'Po' stands for 'Provocative operation'. As well as laying out how to use Provocation effectively, he suggests that when we make a Provocative statement in public the we label it as such with 'Po' (e.g. 'Po: the earth is flat'). This does rely on all members of your class knowing about Provocation!

As with other lateral thinking techniques, Provocation does not always produce good or relevant ideas. Often, though, it does. Ideas generated using Provocation are likely to be fresh and original.

Example:
The owner of a video-hire shop is looking at new ideas for business to compete with the Internet. She starts with the provocation 'Customers should not pay to borrow videos'.

She then examines the provocation:
Consequences: The shop would get no rental revenue and therefore would need alternative sources of cash. It would be cheaper to borrow the video from the shop than to download the film or order it from a catalogue.
Benefits: Many more people would come to borrow videos. More people would pass through the shop. The shop would spoil the market for other video shops in the area.
Circumstances: The shop would need other revenue. Perhaps the owner could sell advertising in the shop, or sell popcorn, sweets, bottles of wine or pizzas to people borrowing films. This would make her shop a one-stop 'Night at home' shop. Perhaps it would only lend videos to people who had absorbed a 30-second commercial, or completed a market research questionnaire.
After using the Provocation, the owner of the video shop decides to run an experiment for several months. She will allow customers to borrow the top ten videos free (but naturally will fine them for late returns). She puts the videos at the back of the shop. In front of them she places displays of bottles of wine, soft drinks, popcorn and sweets so that customers have to walk past them to get to the videos. Next to the film return counter she sells merchandise from the top ten films being hired.

If the approach is a success she will open a pizza stand inside the shop.

Key points:
Provocation is an important lateral thinking technique that helps to generate original starting points for creative thinking.

To use provocation, make a deliberately stupid comment relating to the problem you are thinking about. Then suspend judgment, and use the statement as the starting point for generating ideas.

This tool was created by Edward de Bono in his book Teach Yourself To Think

Decision Making Techniques

The techniques in this chapter help you to make the best decisions possible with the information you have available. With these tools you will be able to map out the likely consequences of decisions, work out the importance of individual factors, and choose the best course of action to take.

Paired Comparison Analysis

- Working Out the Relative Importance of Different Options

Paired Comparison Analysis helps you to work out the importance of a number of options relative to each other. It is particularly useful where you do not have objective data to base this on.

This makes it easy to choose the most important problem to solve, or select the solution that will give you the greatest advantage. Paired Comparison Analysis helps you to set priorities where there are conflicting demands on your resources.

To use the technique, first of all list your options. Then draw up a grid with each option as both a row and a column header.

Use this grid to compare each option with each other option, one-by-one. For each comparison, decide which of the two options is most important, and then assign a score to show how much more important it is.

You can then consolidate these comparisons so that each option is given a percentage importance.

Follow these steps to use the technique:
List the options you will compare. Assign a letter to each option.
Set up a table with these options as row and column headings.
Block out cells on the table where you will be comparing an option with itself - there will never be a difference in these cells! These will normally be on the diagonal running from the top left to the bottom right.
Also block out cells on the table where you will be duplicating a comparison. Normally these will be the cells below the diagonal.
Within the remaining cells compare the option in the row with the one in the column. For each cell, decide which of the two options is more important. Write down the letter of the more important option in the cell, and score the difference in importance from 0 (no difference) to 3 (major difference).
Finally, consolidate the results by adding up the total of all the values for each of the options. You may want to convert these values into a percentage of the total score.

Example:
As a simple example, an 18 year old student wants to leave home and move to one of four main cities.
Sydney
Melbourne
Brisbane
Perth
Firstly she draws up the Paired Comparison Analysis table in Figure 1:

Figure 1: Example Paired Comparison Analysis Table (not filled in):

	Sydney (A)	Melbourne (B)	Brisbane (C)	Perth(D)
Sydney (A)	Blocked Out (Step 3)			
Melbourne (B)	Blocked Out (Step 4)	Blocked Out (Step 3)		
Brisbane (C)	Blocked Out (Step 4)	Blocked Out (Step 4)	Blocked Out (Step 3)	
Perth (D)	Blocked Out (Step 4)	Blocked Out (Step 4)	Blocked Out (Step 4)	Blocked Out (Step 3)

Then she compares options, writes down the letter of the most important option, and scores their difference in importance. An example of how she might do this is shown in figure 2:

Figure 2: Example Paired Comparison Analysis Table (filled in):

	Sydney (A)	Melbourne (B)	Brisbane (C)	Perth(D)
Sydney (A)		A,1	C,3	D,1
Melbourne (B)			C,1	D,2
Brisbane (C)				C,1
Perth (D)				

Finally she adds up the A, B, C and D values, and converts each into a percentage of the total. This gives these totals:
A = 1 (11.1%)
B = 0 (0%)
C = 5 (55.6%)
D = 3. (33.3%)
Preference for living in Brisbane(C) followed by Perth (A).
Factors may also include things like: rent, job options, climate, social life, etc if they do it may be wise to use the Grid Analysis.

Key points:
Paired Comparison Analysis is a good way of weighing up the relative importance of different courses of action. It is useful where priorities are not clear, or are competing in importance.

The tool provides a framework for comparing each course of action against all others, and helps to show the difference in importance between factors.

Grid Analysis

Making a Choice Where Many Factors Must be Balanced

Grid Analysis is a useful technique to use for making a decision. It is most effective where you have a number of good alternatives and many factors to take into account.

The first step is to list your options and then the factors that are important for making the decision. Lay these out in a table, with options as the row labels, and factors as the column headings.

Next work out the relative importance of the factors in your decision. Show these as numbers. We will use these to weight your preferences by the importance of the factor. These values may be obvious. If they are not, then use a technique such as Paired Comparison Analysis to estimate them.

The next step is to work your way across your table, scoring each option for each of the important factors in your decision. Score each option from 0 (poor) to 3 (very good). Note that you do not have to have a different score for each option - if none of them are good for a particular factor in your decision, then all options should score 0.

Now multiply each of your scores by the values for your relative importance. This will give them the correct overall weight in your decision.

Finally add up these weighted scores for your options. The option that scores the highest wins!

Example:
A windsurfing enthusiast is about to replace his car. He needs one that not only carries a board and sails, but also that will be good for business travel. He has always loved open-topped sports cars. No car he can find is good for all three things.

His options are:
A four wheel drive, hard topped vehicle
A comfortable 'family car'
An estate car
A sports car
Criteria that he wants to consider are:
Cost
Ability to carry a sail board at normal driving speed
Ability to store sails and equipment securely
Comfort over long distances
Fun!
Nice look and build quality to car
Firstly he draws up the table shown in Figure 1, and scores each option by how well it satisfies each factor:

Figure 1: Example Grid Analysis Showing Unweighted Assessment of How Each Type of Car Satisfies Each Factor

Factors:	Cost	Board	Storage	Comfort	Fun	Look	Total
Weights:							
Sports Car	1	0	0	1	3	3	
4 Wheel Drive	0	3	2	2	1	1	
Family Car	2	2	1	3	0	0	
Estate Car	2	3	3	3	0	1	

Next he decides the relative weights for each of the factors. He multiplies these by the scores already entered, and totals them. This is shown in Figure 2:

Figure 2: Example Grid Analysis Showing Weighted Assessment of How Each Type of Car Satisfies Each Factor

Factors:	Cost	Board	Storage	Comfort	Fun	Look	Total
Weights:	4	5	1	2	3	4	
Sports Car	4	0	0	2	9	12	27
4 Wheel Drive	0	15	2	4	3	4	28
Family Car	8	10	1	6	0	0	25
Estate Car	8	15	3	6	0	4	36

This gives an interesting result: Despite its lack of fun, an estate car may be the best choice.

If the wind-surfer still feels unhappy with the decision, maybe he has underestimated the importance of one of the factors. Perhaps he should weight 'fun' by 7!

Key points:
Grid Analysis helps you to decide between several options, while taking many different factors into account.

To use the tool, lay out your options as rows on a table. Set up the columns to show your factors. Allocate weights to show the importance of each of these factors.

Score each choice for each factor using numbers from 0 (poor) to 3 (very good). Multiply each score by the weight of the factor, to show its contribution to the overall selection.

Finally add up the total scores for each option. Select the highest scoring option

PMI

PMI stands for 'Plus/Minus/Implications'. This tool is also known as ‘Plus/Minus/Interesting’
It is a valuable improvement to the 'weighing pros and cons' technique used for centuries.

PMI is an important Decision Making tool: the mind tools used so far in this section have focused on selecting a course of action from a range of options. Before you move straight to action on this course of action, it is important to check that it is going to improve the situation (it may actually be best to do nothing!) PMI is a useful tool for doing this.

To use PMI, draw up a table headed up with: 'Plus', 'Minus', and 'Implications'. In the column underneath 'Plus', write down all the positive results of taking the action. Underneath 'Minus' write down all the negative effects. In the 'Implications' column write down the implications and possible outcomes of taking the action, whether positive or negative.

By this stage it may already be obvious whether or not you should implement the decision. If it is not, consider each of the points you have written down and assign a positive or negative score to it appropriately. The scores you assign may be quite subjective.

Once you have done this, add up the score. A strongly positive score shows that an action should be taken, a strongly negative score that it should be avoided.

Example:
A young professional is deciding where to live. Her question is 'Should she move to the big city?'

She draws up the PMI table below:

Plus	Minus	Implications
More going on (+5)	Have to sell house (-6)	Easier to find new job? (+1)
Easier to see friends (+5)	More pollution (-3)	Meet more people? (+2)
Easier to get places (+3)	Less space (-3)	More difficult to get own work done? (-4)
	No countryside (-2)	
	More difficult to get to work? (-4)	
+13	-18	-1

She scores the table as 13 (Plus) - 18 (Minus) - 1 (Interesting) = - 6

For her, the comforts of a settled rural existence outweigh the call of the 'bright lights'

- it would be much better for her to live outside the city, but close enough to travel in if necessary.

Key points:
PMI is a good way of weighing the pros, cons and implications of a decision. When you have selected a course of action, PMI is a good technique to use to check that it is worth taking.

To use the technique, draw up a table with three columns headed Plus, Minus and Implications. Within the table write down all the positive points of following the course of action, all the negatives, and all the interesting implications and possible outcomes.

If the decision is still not obvious, you can then score the table to show the importance of individual items. The total score should show whether it is worth implementing the decision.

This tool was created by Edward de Bono in his book Teach Yourself To Think

Six Thinking Hats

'Six Thinking Hats' is an important and powerful technique. It is used to look at decisions from a number of important perspectives. This forces you to move outside your habitual thinking style, and helps you to get a more rounded view of a situation.

Parallel Thinking:
An Alternative to Argument
Instead of arguing 6 thinking hats allows you to think in parallel with each other where each thinker puts forward his or her thoughts in parallel with the thoughts of others, not attacking the thoughts of others.

The Six Thinking Hats method is a practical way of carrying out Parallel Thinking. This method is of fundamental importance because it provides us, for the first time, with a practical method of constructive thinking. We now have a more constructive alternative to argument or drifting discussion.
It is important to understand this very fundamental nature of the Six Hats method in order to appreciate the importance of the method. The Six Hats system is not just another gimmick. This system provides an alternative to that most basic of thinking procedures: the argument.

In traditional adversarial thinking, A and B are in conflict. Each side seeks to criticize the other point of view. The Six Hats method allows Parallel Thinking. Both A and B wear each hat together as they explore all sides of an issue. Adversarial confrontation is replaced by a cooperative exploration of the subject.

Unbundling Thinking
When we think in the normal way, we try to do too much at once. We may be looking at the information, forming ideas, and judging someone else's ideas all at the same time.

The Six Hats method allows us to unbundle thinking. Instead of trying to do everything at once, we separate out the different aspects of thinking. This way we can pay full attention to each aspect in turn. Think of full-colour printing, where the basic colour separations are made and then each basic colour is printed separately onto the same sheet to give full-colour printing. In the same way, we separate the modes of thinking and then apply each mode to the same subject in order to end up with full-colour thinking on the subject.

Many successful people think from a very rational, positive viewpoint. This is part of the reason that they are successful. Often, though, they may fail to look at a problem from an emotional, intuitive, creative or negative viewpoint. This can mean that they underestimate resistance to plans, fail to make creative leaps and do not make essential contingency plans.
Similarly, pessimists may be excessively defensive. Emotional people may fail to look at decisions calmly and rationally.

If you look at a problem with the 'Six Thinking Hats' technique, then you will solve it using all approaches. Your decisions and plans will mix ambition, skill in execution, public sensitivity, creativity and good contingency planning.

How to Use the Tool:
You can use Six Thinking Hats in class/meetings or on your own. In meetings it has the benefit of blocking the confrontations that happen when people with different thinking styles discuss the same problem.

Each 'Thinking Hat' is a different style of thinking. These are explained below:

White Hat:
With this thinking hat you focus on the data available. Look at the information you have, and see what you can learn from it. Look for gaps in your knowledge, and either try to fill them or take account of them.
This is where you analyse past trends, and try to extrapolate from historical data.

Red Hat:
'Wearing' the red hat, you look at problems using intuition, gut reaction, and emotion. Also try to think how other people will react emotionally. Try to understand the responses of people who do not fully know your reasoning.

Black Hat:
Using black hat thinking, look at all the bad points of the decision. Look at it cautiously and defensively. Try to see why it might not work. This is important because it highlights the weak points in a plan. It allows you to eliminate them, alter them, or prepare contingency plans to counter them.
Black Hat thinking helps to make your plans 'tougher' and more resilient. It can also help you to spot fatal flaws and risks before you embark on a course of action. Black Hat thinking is one of the real benefits of this technique, as many successful people get so used to thinking positively that often they cannot see problems in advance. This leaves them under-prepared for difficulties.

Yellow Hat:
The yellow hat helps you to think positively. It is the optimistic viewpoint that helps you to see all the benefits of the decision and the value in it. Yellow Hat thinking helps you to keep going when everything looks gloomy and difficult.

Green Hat:
The Green Hat stands for creativity. This is where you can develop creative solutions to a problem. It is a freewheeling way of thinking, in which there is little criticism of ideas. Tools for Lateral Thinking on page to can help you here.

Blue Hat:
The Blue Hat stands for process control. This is the hat worn by people chairing meetings. When running into difficulties because ideas are running dry, they may direct activity into Green Hat thinking. When contingency plans are needed, they will ask for Black Hat thinking, etc.
A variant of this technique is to look at problems from the point of view of different groups (e.g. teacher, principal, parents students, etc.) or different customers.

Example:
In the world of business
The directors of a property company are looking at whether they should construct a new office building. The economy is doing well, and the amount of vacant office space is reducing sharply. As part of their decision they decide to use the 6 Thinking Hats technique during a planning meeting.

Looking at the problem with the White Hat, they analyse the data they have. They examine the trend in vacant office space, which shows a sharp reduction. They anticipate that by the time the office block would be completed, that there will be a severe shortage of office space. Current government projections show steady economic growth for at least the construction period.

With Red Hat thinking, some of the directors think the proposed building looks quite ugly. While it would be highly cost-effective, they worry that people would not like to work in it.

When they think with the Black Hat, they worry that government projections may be wrong. The economy may be about to enter a 'cyclical downturn', in which case the office building may be empty for a long time. If the building is not attractive, then companies will choose to work in another better-looking building at the same rent.

With the Yellow Hat, however, if the economy holds up and their projections are correct, the company stands to make a great deal of money. If they are lucky, maybe they could sell the building before the next downturn, or rent to tenants on long-term leases that will last through any recession.

With Green Hat thinking they consider whether they should change the design to make the building more pleasant. Perhaps they could build prestige offices that people would want to rent in any economic climate. Alternatively, maybe they should invest the money in the short term to buy up property at a low cost when a recession comes.

The Blue Hat has been used by the meeting's Chair to move between the different thinking styles. He or she may have needed to keep other members of the team from switching styles, or from criticizing other peoples' points.

Key points:
Six Thinking Hats is a good technique for looking at the effects of a decision from a number of different points of view.

It allows necessary emotion and skepticism to be brought into what would otherwise be purely rational decisions. It opens up the opportunity for creativity within Decision Making. The technique also helps, for example, persistently pessimistic people to be positive and creative.

Plans developed using the '6 Thinking Hats' technique will be sounder and more resilient than would otherwise be the case and spot good reasons not to follow a course of action before you have committed to it.

This tool was created by Edward de Bono in his book Six Thinking Hat

Self-Hypnosis

1. What are you trying to achieve or change? Write as goals.

2. Write out post hypnotic suggestions.

3. Write and record a script/plan to achieve and leave a state of self hypnosis. Also include goals and post-hypnotic suggestions.

4. Select time and place for session.

5. Conduct session – at this stage practice reaching a state of self-hypnosis – only add goals when you are proficient at reaching a self-hypnotic trance.

6. Conduct session – insert post hypnotic suggestions and goals e.g. *I will become completely relaxed and calm (goal) – This will be achieved through me slowly releasing a clenched fist, the looser the grip the more relaxed I will feel. (post-hypnotic suggestion).*

7. Apply trigger to activate post hypnotic suggestion(s) and achieve goal(s) in applied setting.

8. Refine method on how to achieve a self-hypnotic state.

9. Add and refine goals and post-hypnotic suggestions.

Self-hypnosis is not dangerous, you wont find yourself doing anything that you don't want to do. It is a very useful tool in the area of successful study, but like all good things it takes practice, perseverance and patience.

Click here to see Hypnotic Spiral

Please note: If you suffer from epilepsy I do not recommend staring at the hypnotic spiral.

If you can't access spiral – go online to Google search "hypnotic spiral" (ensure it's a safe site. We are not responsible for you accessing unsafe sites) and download or bookmark for future use.

Self Hypnosis

Although we may not realise it, we all carry around within us the necessary resources for personal success. Self-hypnosis can be a very effective tool for utilising those resources to make changes in our lives.

Self-hypnosis is a practical and effective technique for relaxing deeply. It can be used with or without suggestions, depending on what you want to achieve.

Children and adults of all ages can use self-hypnosis. In fact, children have a remarkable openness to self-hypnosis. Not only do they often slip in and out of trance-states several times in a day, but they have very active imaginations, which allows them to assimilate self-hypnotic suggestions easily. Research shows that children are most open to hypnotic suggestions from preschool ages to adolescence, after which they become more rational, sceptical and less imaginative. However, performing self-hypnosis with children requires special considerations and special techniques. Before you attempt to teach self-hypnosis to your child or use hypnotic suggestions with them, you should first be familiar with using hypnosis yourself. Also, bear in mind when dealing with children, that you should never substitute self-hypnosis for professional or medical attention, but should always use it as a form of additional help.

Self-hypnosis can assist students with self-management of aberrant behaviour, exam anxiety, focus concentration, stress management, problem solving, weight loss, substance abuse etc.

Self Hypnosis to assist with Study and Exam Anxiety

Self-hypnosis can be used to re-programme the mind to establish successful learning habits, enhance self-esteem, and improve both concentration and memory.

Self-hypnosis can improve concentration by changing bad habits. Lack of self-esteem can create fear, diminished motivation and reinforce poor study habits, for example by using self-hypnosis to enhance self esteem a student can improve performance in both studying and when sitting exams.

Stress and anxiety are common and are often bought about by one or more triggers or events, the result often being poor performance and negative feelings, which in turn can increase and impact on other aspects of your life. It is essential to identify what you want to change/achieve. The problem maybe something like *"when I sit in an exam room my mind goes blank"*.
You may already be aware of the cause and effect i.e. sitting down in the exam room (trigger), feeling anxious and highly stressed (the condition), mind goes blank (result).
In this case you know that it's the feeling of being in a highly stressed state that causes your mind to go blank. You may decide that:

- You want to do something about getting rid of the trigger. It could take the form of inserting a post-hypnotic suggestion/cue e.g. *"directly I sit down, calm and success sit with me"*.
- If you do find yourself getting into a highly stressed state, one strategy may be, that when the stress levels get too high *I will pinch my thumb and tip of forefinger together tightly, take 3 slow deep breaths and slowly exhale, at the same time gradually releasing the pressure between thumb and forefinger until they are apart telling yourself that the stress is disappearing with each exhaled breath and gradual release of grip.*

Both of these are post-hypnotic suggestions.

Please ensure that you read the entire programme before undertaking self-hypnosis.

Self Hypnosis

Contents

Self Hypnosis

What is Hypnosis?

Hypnosis often conjures up images of a showman and a few willing to participate subjects who after a few words and wave of the hands are willing led into a semi-sleep state. The hypnotized subject is then powerless to do anything other than follow the showman's every command and wish.
However hypnosis bears little resemblance to this. It contradicts this view on two main points; the subject is not a powerless slave to the showman. They also have free will and will not do anything they do not to do.

Science has yet to fully explain how hypnosis actually happens. We see what a person does under hypnosis, but it isn't clear why he or she does it. This puzzle is really a small piece in a much bigger puzzle: how the human mind works. It's unlikely that scientists will arrive at a definitive explanation of the mind in the foreseeable future, so it's a good bet hypnosis will remain something of a mystery as well.

Psychiatrists do understand the general characteristics of hypnosis, and they have some model of how it works. It is a **trance** state characterized by **extreme suggestibility**, **relaxation** and **heightened imagination**. It's not really like sleep, because the subject is alert the whole time. It is most often compared to **daydreaming**, or the feeling of "losing yourself" in a book or movie. You are fully conscious, but you tune out most of the stimuli around you. You focus intently on the subject at hand, to the near exclusion of any other thought.

Many of the activities, like driving, reading, watching a movie etc are categorized by some researches as hypnosis. Milton Erickson, the premier hypnotism expert of the 20th century, contended that people hypnotize themselves on a daily basis. But most psychiatrists focus on the trance state brought on by intentional relaxation and focusing exercises. This deep hypnosis is often compared to the relaxed mental state between wakefulness and sleep.

Under hypnosis, in this special mental state, people feel **uninhibited** and **relaxed**. Presumably, this is because they **tune out** the worries and doubts that normally keep their actions in check. You might experience the same feeling while watching a movie: As you get engrossed in the plot, worries about your job, family, etc. fade away, until all you're thinking about is what's up on the screen.

Under hypnosis people are in a state of high suggestibility. A hypnotist may suggest or command a person to act in an irrational manner and they may well conform. Fear of embarrassment disappears, however safety and morality remain throughout the experience, a hypnotist cannot make a person do anything they don’t want to.

It is widely believed that under hypnosis a person conscious mind is subdued and the subconscious takes a dominant role. The conscious mind is the main inhibitive component in your makeup -- it's in charge of putting on the brakes -- while the subconscious mind is the seat of **imagination and impulse**. When your subconscious mind is in control, you feel much freer and may be more creative. Your conscious mind doesn't have to filter through everything.
Hypnotized people do such bizarre things so willingly, this theory holds, because the conscious mind is not filtering and relaying the information they take in. It seems like the hypnotist's suggestions are coming directly from the subconscious, rather than from another person. You react **automatically** to these impulses and suggestions, just as you would to your own thoughts. Of course, your subconscious mind does have a conscience, a survival instinct and its own ideas, so there are a lot of things it won't agree to.
The subconscious regulates your **bodily sensations**, such as taste, touch and sight, as well as your **emotional feelings**. When the access door is open, and the hypnotist can speak to your subconscious directly, he or she can trigger all these feelings, so you experience the taste of a chocolate milkshake, the satisfaction of contentment and any number of other feelings.
Additionally, the subconscious is the storehouse for all your **memories**. While under hypnosis, subjects may be able to access past events that they have completely forgotten. Psychiatrists may use hypnotism to bring up these memories so that a related personal problem can finally be resolved. Since the subject's mind is in such a suggestible state, it is also possible to create **false memories**, well documented over the last decade or so.

Researchers have also studied patterns in the brain's cerebral context that occur during hypnosis. In these studies, hypnotic subjects showed reduced activity in the left hemisphere of the cerebral cortex, while activity in the right hemisphere often increased. Neurologists believe that the left hemisphere of the cortex is the logical control center of the brain; it operates on deduction, reasoning and convention. The right hemisphere, in contrast, controls imagination and creativity. A **decrease in left-hemisphere activity** fits with the hypothesis that hypnosis subdues the conscious mind's inhibitory influence. Conversely, an **increase in right-brain activity** supports the idea that the creative, impulsive subconscious mind takes the reigns. This is by no means conclusive evidence, but it does lend credence to the idea that hypnotism opens up the subconscious mind.

What Is Self Hypnosis?

Many people have experienced a trance-like state many times in everyday life - although they may not have called it hypnosis. For example, if you've ever drifted off into a daydream, become totally engrossed in a book or project, or become absorbed in your thoughts while driving and missed a turning. The main difference between these sorts of trance and self-hypnosis are specific motivation and suggestions towards a goal. Self-hypnosis is deliberate and with a purpose.

Again we may have experienced a self hypnotic trance in the past without realising it, for example when I was a child growing up in England I had to take frequent trips to the dreaded dental surgery, usually for fillings. I disliked the pain from that slow old drill, I also disliked – probably even more – the needle for the local anesthetic. I learnt that by stareing straight ahead and concentrating on a branch of a tree just outside the window, I would stare and watch for the most subtle movements of the branch in the wind, each swaying movement would stimulate me into internalising it as a stroking, soothing sensation – after a few minutes, I would progressivly feel more and more relaxed and the pain would lessen considerably, I remained aware of the dentist and what he was saying, I had no idea at the time nor for many years after that I was using self hypnosis.

Self hypnosis is a state of mind in which:
You are very relaxed.
You are paying complete attention to suggestions you wish to absorb.
You accept suggestions at face vale – don’t critisise.

Self Hypnosis – How can it help?

Self hypnosis has many uses in:
Conquering exam nerves – building concentration – combating bullying – manageing anger – building self motivation – public speaking - stress management – improving sports performance – helping eliminate substance abuse – losing weight – improving relationships – improving interview performance – pain relief – conquering fears and phobias and many many more.

Self Hypnosis – goal setting

Write down what you want to change or achieve as a goal(s).
Your goal(s) should be specific, realistic, achievable, written in your own words and kept short.
Initially there are two goals: the first is to achieve a self hypnotic trance (through progressive relaxation). The second is your main goal (what you wish to achieve through self hypnosis).

Self Hypnosis – the plan/script

It is a good idea to develop a script before you start, this can be in written form or you can make your own tape (recording as a tape allows you to not be distracted by having to read through your session whilst at the same time conducting it).
The script should contain your goal(s) and a progressive path from pre self-hypnosis – self-hypnosis – post self-hypnosis. The main emphasis is on the getting into and out of a self induced hypnotic state.

Example:
Progressive relaxation technique.
Make yourself comfortable by sitting in a favourite chair..... And rest your hands on in your lap.../ Gently allow your eyelids to close... And begin to allow yourself to relax... Letting all your concerns and worries drain away... And at this moment in time... No worries, nothing matters... As you turn off your thoughts... And just allow this time for yourself...

you can now unwind completely... And as you begin to feel more and more relaxed... Letting go of any worries or problems... That may have been of concern lately... Don't fight any unwanted negative thoughts... As they will soon drift out of your mind again... Just as easily as they drifted in... Now take a couple of deep breaths ... Slowly filling your lungs with fresh air... And as you exhale ... You will relax more and more... With every breath exhaled...
And as you gently slow your breathing down... You begin to feel more and more relaxed... More and more comfortable... You will feel your whole body sinking into the couch/chair... And you will notice how relaxed your whole body has become... From your head down to your toes... Your eyelids have become very heavy... (and may even flutter ... As you let go of any tension in your body...) And all the muscles in your jaw have become relaxed... As your jaw slowly drops down... And your tongue rest gently on the bottom of your mouth... And you are beginning to drift down deeper and deeper... Feeling more and more relaxed with every word I speak... And as this wave of relaxation spreads down your neck and shoulders... And all the way down your arms to your fingertips... You may feel a tingling sensation in your fingertips... As your arms grow heavy... And you become aware of a growing restful and peaceful feeling inside... A feeling of calmness and contentment... As you feel every muscle in your chest and middle... Become limp and relaxed... And all the muscles in your back are relaxing... Almost like a mental massage... And all the way down your spine... The muscles loosen and relax... And as you drift down deeper and deeper relaxed... You let this wave of relaxation spread all the way down your legs... So that your legs become as heavy... And every muscle in your legs becomes soft and relaxed... So that you are completely relaxed from the top of your head... To the tips of your toes...
*And as the real outside world... Fades more into the background... As you begin your journey into your own inner world... To that unique and special place in you... That only you know about and can go to... You continue to let go... Of any negative thoughts or feelings... And any sounds and distractions around you... Or in the distance... Will fade into the background... The only sound that will matter to you... Will be the sound of my voice... Which will continue to take you deeper and deeper... Into a wonderful state of relaxation... And you may soon find that your mind begins to wander... And it doesn't matter where you drift... Where you go... My voice will be with you at all times... So that you will continue... To respond to me on an subconscious level... And in a few moments time... You will hear me say the word... Nowwww... And when you hear me say the word... Nowwww... All the unnecessary tension and stress is drifting out of your body... And your body... Will continue to

sink down... Becoming more and more limp ... More and more relaxed... And comfortable too... Just feel yourself sinking down into the chair... Your head sinking down into the pillow... Becoming even more comfortable... Feeling completely at peace... And calm and contented... As you continue to drift down... Really enjoying this wonderful feeling of complete relaxation... And there may be times when... You will not be aware of your body... You wont be aware of your body at all... As you continue to go deeper and deeper relaxed... Deeper and deeper relaxed...

INSERT YOUR GOAL and post hypnotic SUGGESTIONS HERE (only after you become proficient at reaching self hypnosis).……..…..

When I count to five... you will be wide awake...feeling good...One...your beginning to come back...Two... feel the energy start flowing through your body...Three.., moving your fingers and toes... (repeat)... more and more awake...feel the energy running through your body more now...Four... breathe in wakeful energy... that's right... breathe in wakeful energy... clearing your head... balancing your energies... feeling wonderful in every way...Five.., open your eyes... fully coming back... fully back... wide awake... that's right...wide awake.

It's important to practice the script a few times. Read very, very slowly. Pretend that you are tired as you read this exercise and you will react in a relaxed, sleepy, manner. Now read the following words into a recording device. . (You may want to print out this page for future reference) Whenever you see these ..., (periods in row) that is your signal to pause and let your body relax for a few moments before continuing on.

Another example is:

Eye Fixation technique

Get comfortably seated, reclined, or lying down. Stare at an object, such as a candle or a dim light. A candle works well, because the flickering produces eye fatigue (although you may use any object if your eyes are sensitive to light) another alternative is the hypnotic spiral. Take two or three very deep breaths before you begin. Now stare at your chosen object, and imagine your eyelids are getting heavier and heavier with each breath you take. Say to yourself...

*As I try to keep my eyes focused on the candle [light, or other object]**,** my eyelids become heavier, droopy and drowsy... The harder I try to keep my eyes open, the more they want to close... As I breathe deeply and slowly, my entire body just wants to relax and let go... relax and let go... until my eyes just want to close all by themselves...*

Repeat this until you find your eyes getting so tired that they have to close. *Once your eyes finally close, continue with the deepening described in the Progressive Relaxation script and exit the same way.

There are literally thousands of scripts you can use; the main point is that you feel completely comfortable with the chosen technique.

Please feel free to write and tape your own script.

Creating Your Own Symbols and Imagery

A symbol is anything that represents something else. Your suggestions are much more meaningful when you use a symbol that is personally meaningful to you. These are usually gleaned from your past experiences and memories.
Symbols are used to tie words, images and feelings to your goal(s) and the achievement of them. Some examples of symbols may be; the smell of coffee makes you feel warm calm and satisfied – The wind whistling through telegraph wires may symbolize the winds of change you can bring to your life.
The more specific your symbols are for you the more powerful they will be.

Imagery can best be defined as the ability to use one's memory and imagination to perceive or mentally create or recreate ideas, pictures, or feelings through any or all of the five senses.
Imagery is personal to you, for example in your past you may have seen a hot air balloon slowly going higher and higher or slowly coming down, it may have evoked calm, relaxing and even comfortable feeling in you, just thinking about it ascending may calm you, or the higher it goes the more relaxed you feel. Or you might imagine achieving your goal(s) – seeing it, hearing it e.g. after a public speaking engagement: imagine seeing and hearing the people applause, imagine the warm glow of succeeding and completion.
Imagery relating to your goal can be divided into two – process and results:
Process: visualize feeling the process or actions for achieving your goal. Many sports people use it e.g. a downhill skier will often mentally ski the whole course seeing and feeling every bump and turn and picture how he/she will glide over it.

Results: visualize feeling the effects of the accomplished goal e.g. public speaking, hearing the applause, people coming up to you and saying how much they liked your talk.

So imagery can be used for both how you will achieve your goal and the result of achieving your goal. It is also used on the path (script) to achieve the trance like state of self-hypnosis.

Counting

Counting is important for many of us when using self-hypnosis, from the time you may wish to do it, how long for etc. It is also very useful when entering into self-hypnosis (record in your script) e.g. If you were using the slowly rising hot air balloon i.e. as it rises higher and higher you become more and more relaxed. You might want to use something like:

1. As the balloon rises, the basket slowly lifts off the ground… my arms start to feel lighter and relaxed.
2. As the balloon rises, the basket gently clears the lone pine tree… my fingers and toes uncurl and feel so very relaxed.
3. The balloon drifts still higher alongside the majestic soaring, gliding hawks… all the weight from my arms and legs slowly disappears.
4. The balloon rises up and up and we enter the soft cool white wispy cloud… my whole body feels relaxed soft as the cloud, and my eyes are heavy and closing.
5. The balloon is now hovering above the marsh mellow cloud, the setting sun is warm and comfortable… my eyes close and I reach a state of total relaxation, not a care in the world.

How many stages you use is up to you.
Just as number can equate to various stages of progressive relaxation, it can also be used in reverse to bring yourself out of a hypnotic state.
With practice it can become easier to reach a self-hypnotic trance by simply repeating the numbers that are associated with the progressive stages of relaxation.

Self-Hypnosis - the process

Firstly set your goal and script/plan. You may wish to tape your script. It saves trying to remember it all.

The initial goal must be to reach a state of self-hypnosis. Once this is achieved you can add your main goal/post hypnotic suggestion.

You need to become totally familiar with your script.

Choose a time and set 15 – 30 minutes aside for your session.

Choose a place that is comfortable and where you will not be disturbed. Ensure you have a comfortable chair, and disruptive influences are kept to a minimum. You don't have to be seated; you can lie down if you wish. Some people prefer to have soft relaxing music in the background.

Relax by taking slow deep breaths, in through the nose and out through the mouth. I find it easier to block one nostril and slowly breath in filling your lungs, hold for 2 or 3 seconds, now, slowly exhale out of your mouth until your lungs are empty. Repeat 3 to 5 times for each nostril.

Try and empty your mind of any unwanted thoughts i.e. worries, analysing why, making judgments etc. Just let your mind drift and become clearer and calmer.

Once relaxed and calm use your hypnotic script to evoke the getting yourself into a hypnotic trance (see section on script techniques).
This is the technique that I use:
It is best at this stage to visually fixate on an object – a spot on the wall – leaf on a tree – the hypnotic spiral or whatever.
Keep staring at it, let your mind drift and gently wander, keep your breathing slow, deep and relaxed.
Tell yourself how relaxed you feel staring at the spot. All the time you're concentrating on the spot all extraneous thoughts melt away. Tell yourself how relaxed you're feeling. Let your eyes feel heavier and heavier as you stare and relax.
Start using imagery to take towards your hypnotic trance as in the hot air balloon example or climbing down steps to a waterfall or slowly drifting along a river. Count yourself down – each progressive number representing a deepening state of relaxation.

The changes from a waking state to a hypnotic state can be subtle. Some of the indicators may be being aware that some of your post hypnotic suggestions for relaxation have occurred or are starting to take effect i.e. feeling lighter, heavier, warm sensation, numbness etc.

To exit your session and become fully awake, just count back from where you came from. Suggest prior to this that you will be fresh, alert and full of vigor when you wake.

Post-Hypnotic Suggestions

Only after you become proficient at getting yourself into a hypnotic trance (practice makes perfect) should you start to add your goal/suggestions. Each of these suggestions you give yourself while in a trance is to elicit an action/response outside of hypnosis. These post-hypnotic cues, suggestions or triggers should take the form of something that has meaning for you as an individual, an example could be the use of a symbol; that you squeeze your thumb and fore finger together tightly representing when you feel highly stressed when public speaking – the slow gradual release of your grip parallels the increasing calmness and control you feel. You know you won't freeze up when feeling calm and in control.
It is essential that you develop and use post-hypnotic suggestions; it is these that allow you to meet your goals in everyday life. It's no good saying to a group of people "give me 10 minutes, I just need to hypnotise myself, then I'll be alright to carry on". These post-hypnotic suggestions or triggers allow you to met your goals quickly and inconspicuously. Just as these post-hypnotic suggestions allow you to meet your goal(s), they can also be developed and used as a trigger to quickly enter a hypnotic state. At the end of a self-hypnosis session, give yourself a post hypnotic suggestion, for example, whenever I want to enter a hypnotic state, I will concentrate on a spot on the wall or object and slowly count to 10, by the time I get to 5 my body will feel lighter and relaxed and by 10 my eyes will be closed and I will feel totally relaxed.

You have probably noticed that many of us are already experiencing 'post hypnotic' like cues that make us behave in certain ways without being aware of it, for example you may have been walking past the same house and find that you are talking to your partner or friend about the same thing you did the last time you walked past it. Or maybe you feel sick

each time you smell wood smoke, or each time you hear a certain piece of music you feel happy and tranquil. Each of these examples has a post hypnotic cue or trigger – the negative response to wood smoke may have been bought about by experiencing a situation from your past when maybe you were badly frightened or burnt yourself by a wood fire, the mere trigger of the smell brings on the same panic and feeling sick as it did years before.
Only you know what cues or suggestions suit you. The more specific and meaningful you make them the more effective they will be, examples maybe the act of sitting on a school chair and saying to yourself "concentration and calm will sit with me", maybe associated with becoming calm, distractions melt away, concentration and high responsiveness kick in (great for students, especially at exam time).

Please don't feel overwhelmed by this programme – just remember that "day dreaming", " getting totally absorbed when gaming" or "when reading a good book", can all be forms of trance like states. Just staring at the hypnotic spiral will often make you feel very relaxed, so gradually building up your self hypnosis techniques and skills, being patient and persistent will get you there.