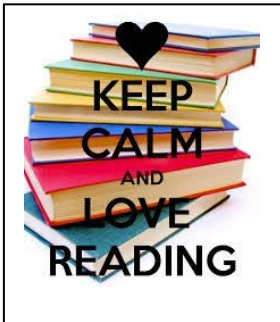


## Communicating science toolkit: Critical reading skills

Sometimes people think that reading is a passive activity, but it is far from that, so what happens in our brains when we read?



Studies have shown that a word's first and last letters are the most important in determining its shape and understanding it... *wchih menas i'ts slitl pbslisoe to udesnatrd a prsahe wetirtn lkie thsi...!!*

Have a look at some interesting facts about reading at this [link](#)

(\*Which means it's still possible to understand a phrase written like this!!)

As a student, you should expect to increase your knowledge and develop your skills in the subject you have chosen to study. Although classes and/or lectures may provide a starting point for this, reading allows you to extend your knowledge and really develop your thinking skills. So it's a key study skill.

### READING

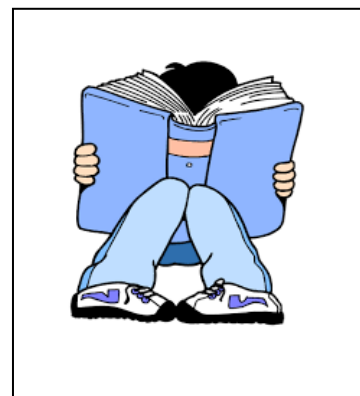
- **Skimming:** Looking over a text to get the gist (main idea) of what it's about by looking for key words, headings, tables and illustrations.
- **Scanning:** Looking quickly through the text to find a specific piece of information.

You might get a (long) reading list from your teacher which includes journal articles, the Internet, books... Being selective is important.

### Active reading:

To be an effective reader requires active reading skills, so what are these?

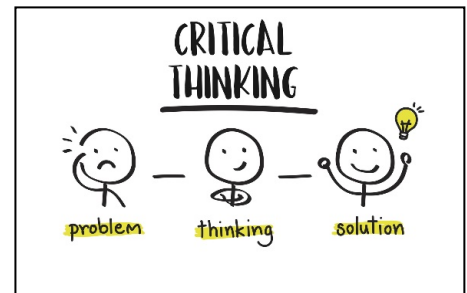
- Being clear about your purpose in reading. Why are you reading a particular text? What are you hoping to find?
- Questioning as you go along. Thinking about the reasons for something, or the consequences.
- Linking new information you read with things you already know.
- Thinking critically about what is being presented. Just what are you expected to believe? Is there sufficient evidence? Is another interpretation possible?



## Critical thinking

What is it? It usually involves.....

- **analysing** - breaking things down
- **synthesising** - bringing parts together in a coherent way
- **evaluating** - making judgements, based on sound evidence



## Critical thinkers usually...

- pay attention to detail.
- consider different points of view.
- evaluate their own position.
- develop an accurate understanding of an issue.
- identify trends and predict outcomes.
- consider broader implications and long-term consequences.

## A critical thinker will:



- critically analyse the task.
- identify the author's purpose and position.
- consider whether the evidence presented is sufficient.
- identify any flaws (weaknesses) in the author's reasoning.
- determine whether the author's position is persuasive.
- support an argument with evidence.

## Critical reading video

- 📺 Watch the video at this [link](#):

## How can we read more efficiently?

- Underline or highlight key words and phrases, but... BE SELECTIVE!
- Take notes in the margin and summarise certain points, ask questions, use page markers or post it notes



- Look for things in the text that give clues about the message, e.g. 'The most important things to remember is..' 'Summing up the main points..' 'On the one hand...On the other hand', 'Last but not least..'
- Read the text and then next day try to remember and take note of the main points or tell classmate about it.

### Note making and referencing

Be careful when studying or taking notes. Always make a note of the references/sources, if not done correctly this may lead to plagiarism – 'a form of academic stealing'. It is when you present someone else's ideas as if they were your own.

(SEE LINK FOR INFORMATION ON [PLAGIARISM](#) HOW TO DETECT AND AVOID IT)

### Academic Reading Skills

- Journal articles report on a study, or piece of research, that has been carried out. They can be quite hard to read at first, as they usually contain a lot of very specific detail and highly specialised vocabulary.
- Journal articles all follow a similar structure, which roughly answers these questions:
  - ✓ What's the **purpose** of the study?
  - ✓ How was it **done/carried out**?
  - ✓ What was **found**?
  - ✓ What does that **mean**?

### The structure of academic/research articles

Below are the different parts/sections of a scientific article. On the right, a description of each section and on the left, content descriptions:

Name of section	Definition/what that part does or describes
A. Title & Author Information	1. the subject of the article & the author(s) name(s) (also perhaps the name of the university or research institute she or he belongs to)
B. Abstract	2. summarizes the research study and results of the study article
C. Key words	3. mentions three or four key words that indicate what the research focuses on
D. Introduction	4. general introduction + states the hypothesis or aims of the research
E. Review of literature or theoretical background	5. summarizes previous research or what has already been written on the subject
F. Methodology	6. describes what kind(s) of research methods were used in the project and how the study or survey was constructed and implemented
G. Findings/Results	7. presents and summarizes the data collected and calculates totals or trends
H. Discussion/Conclusions	8. discusses results and applications or implications of the findings/results (these two are often separate sections). In the conclusions, results may briefly be synthesised.
I. Further Study	9. suggests areas where more complete data or findings are needed and related areas for future research
J. Works Cited/References	10. lists the sources cited by the author(s) of the article

- ✓ It can be a good idea to use a research sheet to take a note of the content of academic and scientific articles.



- ✓ See RESEARCH SHEET
- ✓ Some tips on taking notes of articles and books.

#### Note taking

- You can write main points in the book itself, on 'post its' attached to pages of the book, or in diagram form (usually on separate papers). Write your own reactions in a different color to separate the author's points from your own.
- Some diagram formats include 'maps', charts, flowcharts or 'chains', and outlines. These can also be color-coded. Examples include:
  - A 'map' could record several examples of one concept. (Put the concept in the center of the diagram and draw lines from this concept to record the examples.)
  - A chart could compare concepts, noting similarities and differences.
  - A flowchart or 'chain' could illustrate a process such as cell division.
  - An outline (visual or verbal) could list main categories and subcategories of a concept.
- You might also want to write a few sentences to summarize the main ideas you want to remember from each reading segment (essay, chapter or section of a chapter).
- Remember that your goal is to keep a record of what you have read and can refer to later on. Sometimes a quick sentence or two or even a few words are enough for a page of reading.

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[www.seattleu.edu/SAS/LearningAssistance](http://www.seattleu.edu/SAS/LearningAssistance)