



Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin



Student Learning Development

Effective study skills: Reading & Notemaking

Student Learning Development,

Trinity College Dublin

<http://student-learning.tcd.ie>



Learning Objectives

- Learn active, deep processing strategies
- Explore the different purposes for study tasks
- Learn about active reading and note-making
- Practise using learning strategies



Active studying means

1. Working with the material to try to build understanding
2. Find a way process the information in a deep and meaningful way
3. Make your study more alive



How?

Have a framework

- Think about the purpose of the study task
- Consider the best way to approach it
- Reflect and review

PSR

- **P**urpose – why?
- **S**trategy – how?
- **R**eview – check!





Good Reading is like Interrogation –
what is the purpose, why are you
reading? What are you looking for?

Get Thinking - Reading

1. Ask questions
2. What is the point of view of author?
3. Evaluate evidence
4. Form opinions



Get reading – actively!

Purpose

- Strategies to suit:
 - Surveying/Skimmming
 - Scanning
 - In-depth/close
 - SQ3R (Survey, question, read, recite, review)
 - Note making
 - Understanding or memorising?

} Reading
Strategies



Exercise

- 'A' students look for the gist of the piece
- 'B' students read for understanding
- 'C' students find what 'emotional exhaustion' means.

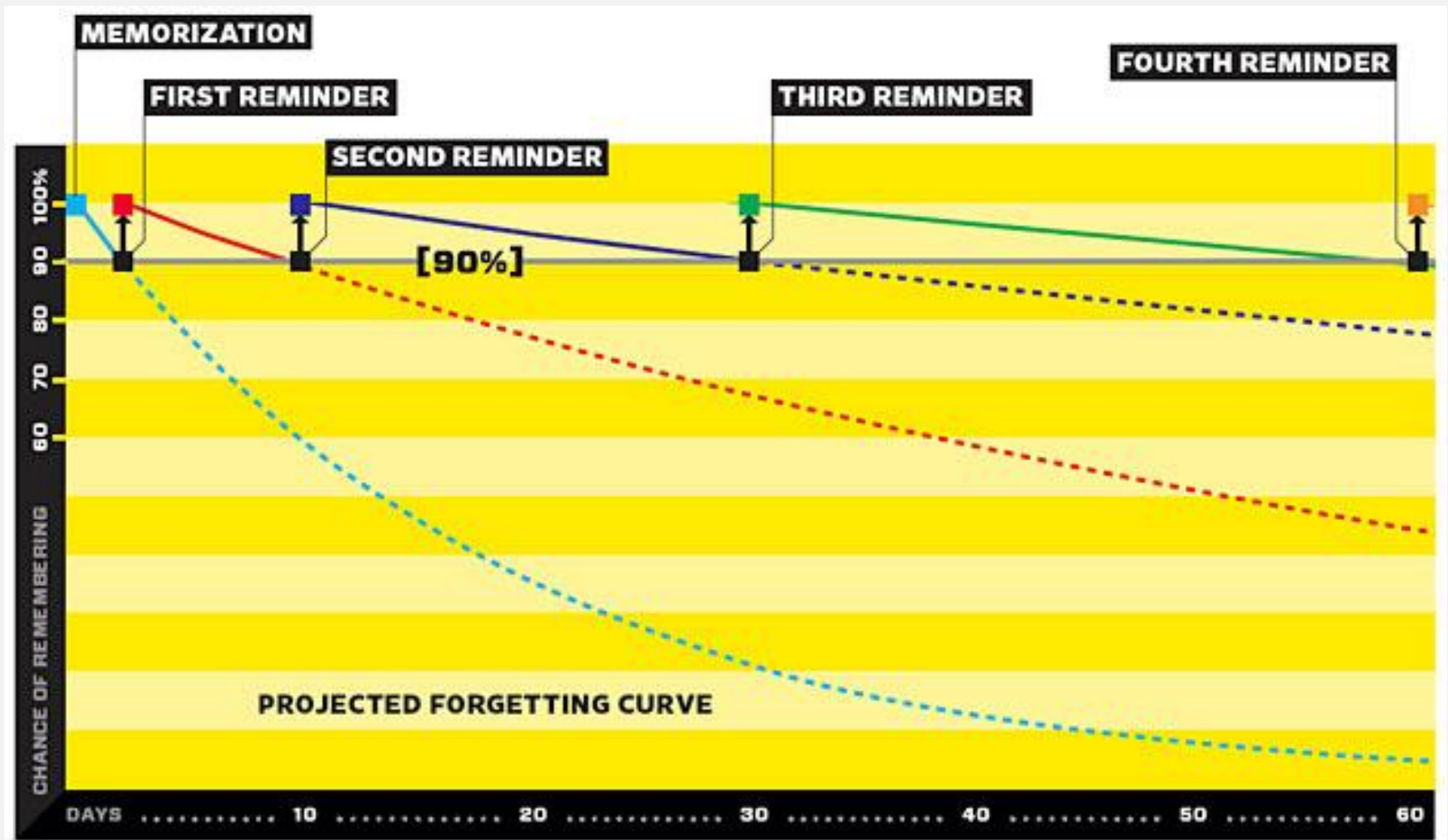


Memorising

- Rhymes/songs adapted
- Associations –
- Acronyms- SMART
- Imagery – your body's muscles
- Categorising – smaller groupings
- Creative sentences – two old angels skipped over heaven carrying a harp



Ebbinghaus Forgetting Curve



Schedule Time for Reviews

2

Reading List:

- Judd, C., Smith, E. and Kidder, L. 1991 *
 Research Methods in Social Relations. 6th ed. London.
 300.Jud (1 copy)
- Moser, C. A. and Kalton, G. 1971
 Survey Methods in Social Investigation. London.
 300.723 Mos (10 copies)
- Oppenheim, A. N. 1966, 1973
 Questionnaire Design and Attitude Measurement. London.*
 011.422 Opp (3 copies)
- Hoinville, G. Jowell, R. and associates. 1978
 Survey Research Practice. London.
 300.723 Hoi (1 copy)
- Rose, G. 1982
 Deciphering Sociological Research. London.
 301.072 Ros (4 copies)
- Kurtz, N. R. 1983
 Introduction to social statistics. London etc.*
 300.72 Kur (4 copies)
- Blalock, H. M. 1960
 Social Statistics. London.*
 301.072 Bla (2 copies)
- ESRI Reports : Read at least one of these research reports based on a social survey.

Reading List

- You can't cover 100% of the course, and the content is more difficult, requires time to understand.
- Have to be smart about what to cover



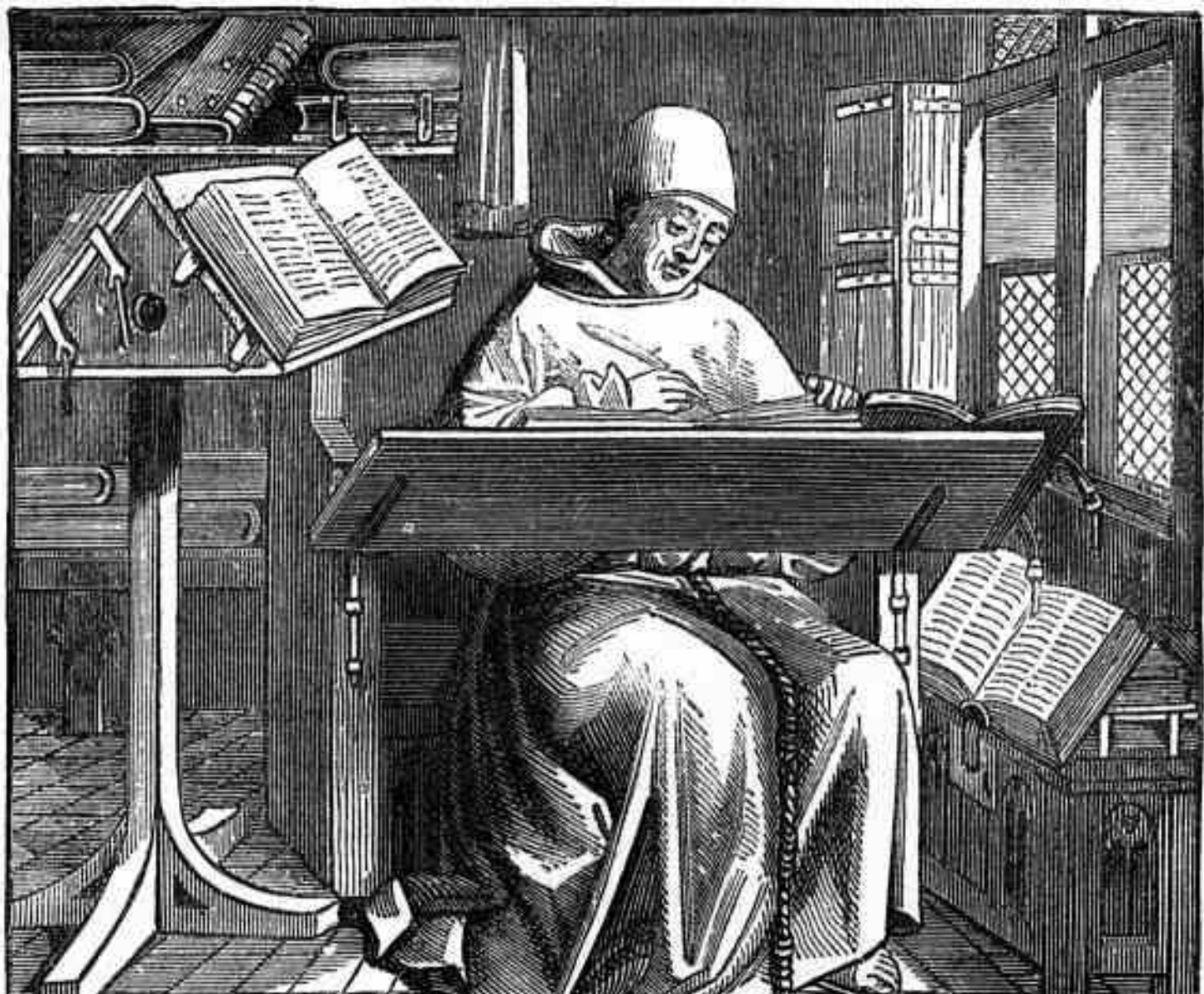
Being Selective

- Ask lectures/tutors what is most relevant
- Be alert for hints and clues
- Ask fellow students
- Ask students in years ahead
- Share reading
- Preview or skim before in-depth reading



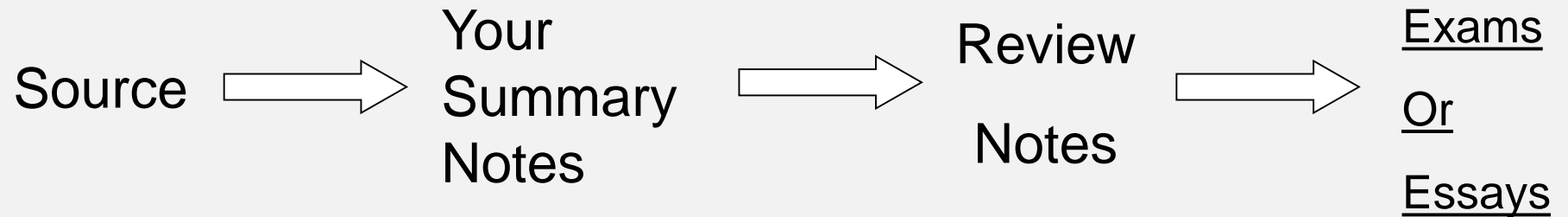


Taking Notes



Copying – doesn't activate your brain

Notes



What to take notes on in Lectures

- Big Picture
- Main Points
- Premises or Hypothesis
- Sources, arguments
- Theories or concepts
- What is the lecturer emphasising
- Don't need to take down every word

Date/number pages/lecturer's name/module



Notes from text

- Read text to understand
- Put text away
- Write summary/main points of text
- Ensure formulae/dates etc are exact
- Check notes against text
- Write reference of the text you're using



Types of Notes

1. Prose or summary
2. Outline or skeleton
3. Mind or concept maps
4. Cornell or 2 Column

How do you take notes?



Be careful with \tan^{-1}

Summary

Because \tan^{-1} returns values between $-\frac{\pi}{2}$ and $\frac{\pi}{2}$, the formula $\arg(x+iy) = \tan^{-1}(y/x)$ only works if $x > 0$. This can cause problems in e.g. Qs 2vi and 10 of Complex Methods sheet 1.

2vi Where is $u = \tan^{-1}\left(\frac{2xy}{x^2-y^2}\right)$ harmonic and find an analytic function whose real part is u .

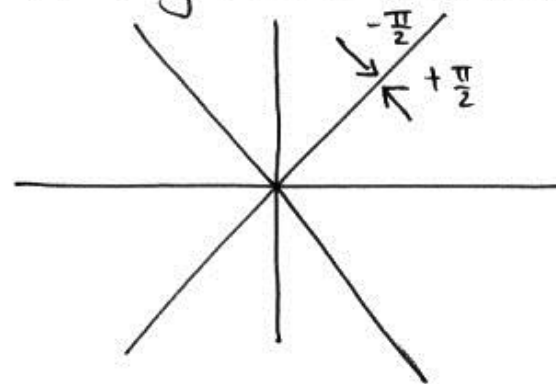
First we determine where it is definitely not harmonic. Consider the lines $y = \pm x$.

As (x,y) approaches the line $y=x$ from below ($x,y > 0$) (see picture), we have

$$\frac{2xy}{x^2-y^2} \rightarrow \infty, \text{ so } u \rightarrow +\frac{\pi}{2}.$$

If we approach from above, $u \rightarrow -\frac{\pi}{2}$, so u is discontinuous. Similarly in the other quadrants.

So we assume $x^2 \neq y^2$. If $x = r \cos \theta$, $y = r \sin \theta$ then $u = \tan^{-1} \tan 2\theta$, which equals 2θ provided $-\frac{\pi}{4} < \theta < \frac{\pi}{4}$. In this case, we can

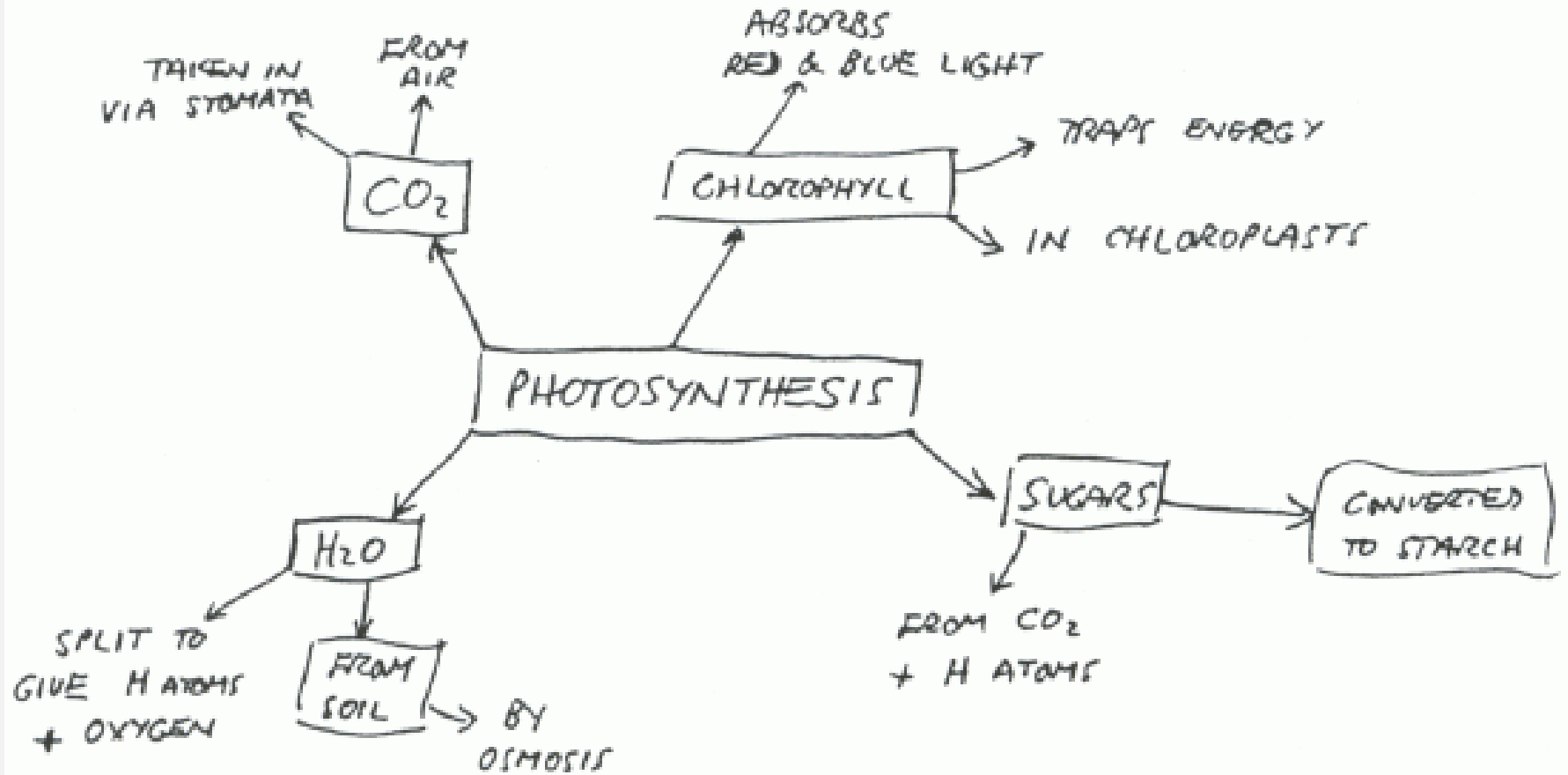


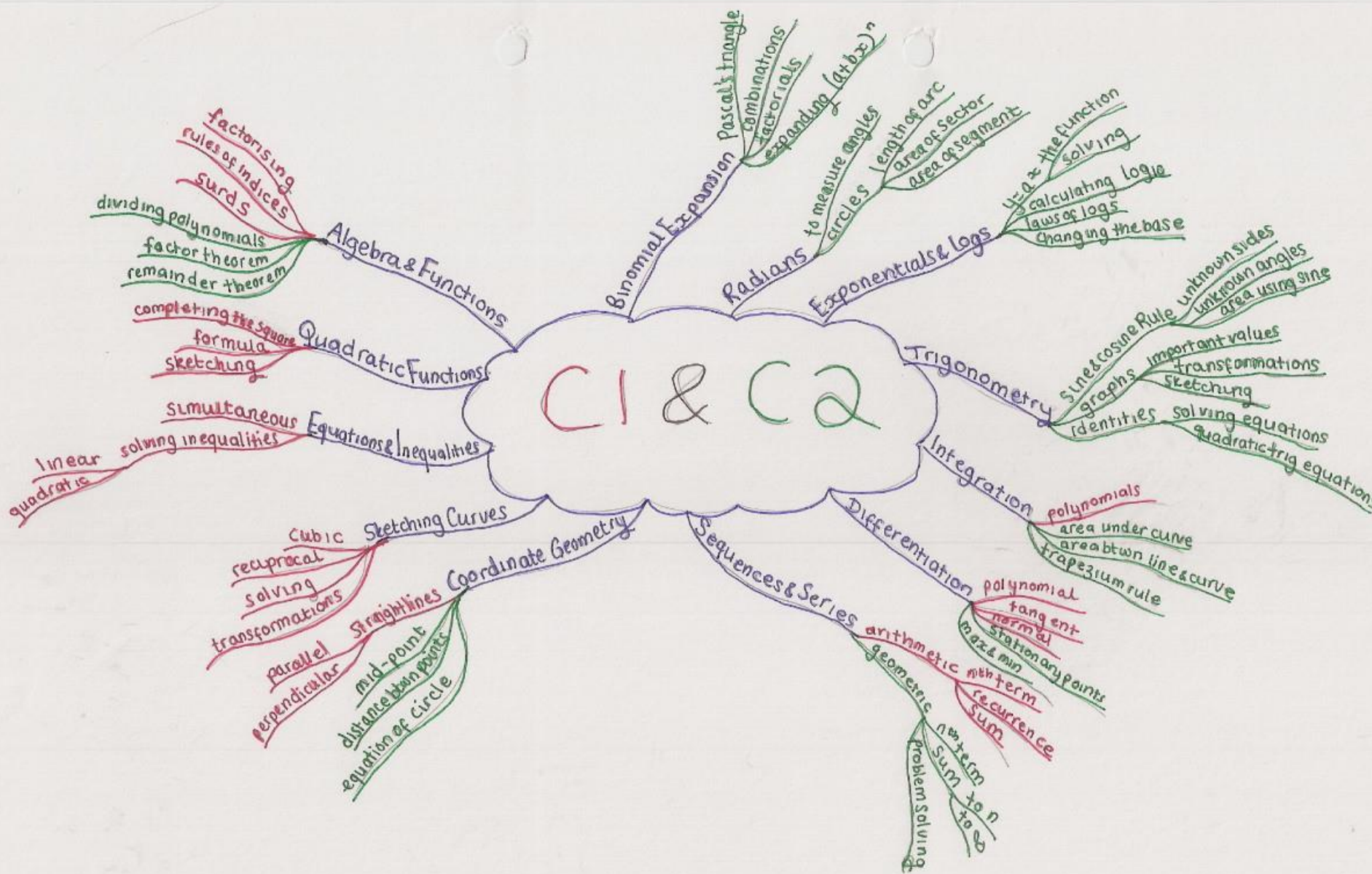
Outline

The Art of Reading Actively

- A. Active = purposeful, critical, questioning.
- B. Look for Main Ideas
 - 1. Survey (SQ3R) for general ones (Ch 5)
 - 2. Read paragraphs for more specific ones
 - a) Each para usually has one main idea.
 - b) Usually in topic sentence (1st or last?)
- C. Look for Important Details
 - 1. e.g. proof, example, support for main idea
 - 2. Usually at least one per main idea
 - 3. Which do I consider important?
- D. In hunt for main idea and important details:
 - 1. Watch for signposts
 - a) Visual (layout, etc)
 - b) Verbal (cue words)
 - 2. Study diagrams, etc.
 - 3. Don't ignore difficulties
- E. Evaluate the text
 - 1. Be sceptical (Expect the author to prove)
 - 2. Compare with my own experience
 - 3. What do I get from it?
 - 4. Discuss with other students
- F. Make Notes:
 - 1. If I need them (for my purposes)
 - 2. At Recall stage (of SQ3R)
 - 3. Compare with other students'.
- G. Concentrate:
 - 1. By seeking understanding (not memorisation)
 - 2. and see Chapter 4 hints.
- H. Vary reading speed:
 - 1. according to purpose
 - 2. but not at expense of understanding.

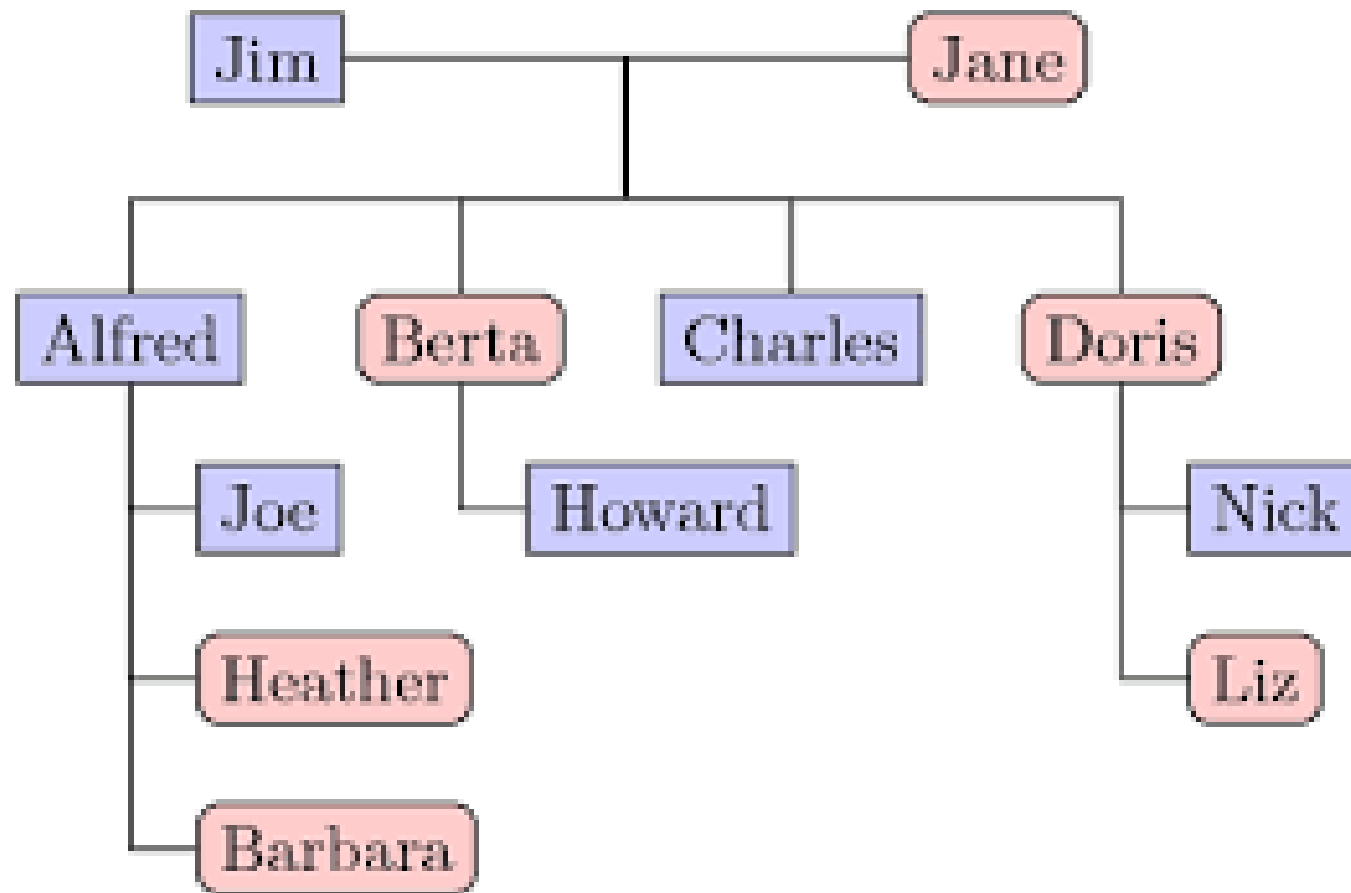
Concept Maps



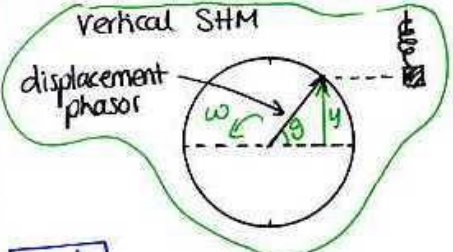


Mind Maps

Hierarchy Maps



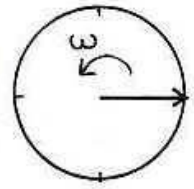
<http://www.texample.net/tikz/examples/feature/trees/>



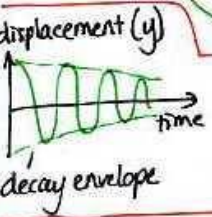
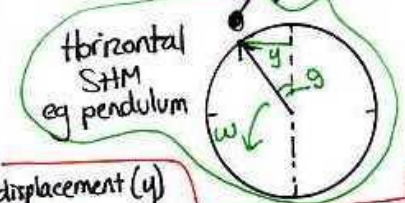
$$f = \frac{1}{T}$$

$$\omega = 2\pi f$$

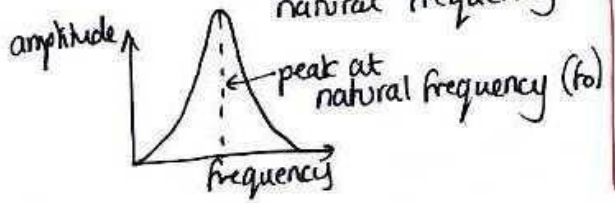
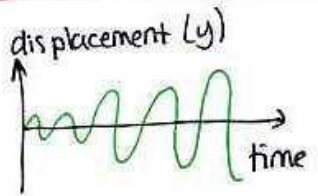
$$\omega = \frac{\Delta\theta}{\Delta t}$$



ω = angular frequency

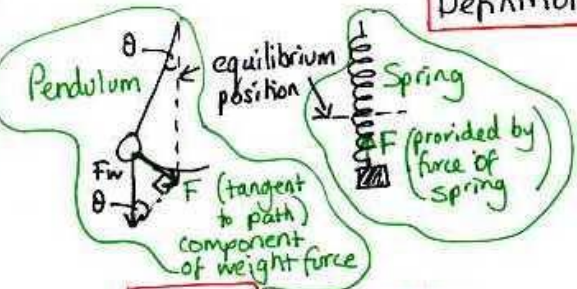


Damping
Due to energy being converted to heat, because of friction & air resistance.



Energy is added by applying a force. Gives large amplitude if it is in time with natural frequency

Resonance



Vectors
For F, v, a, y opposite direction to y for pendulums and springs

Definitions

Motion repeats
force is proportional to displacement, and in the opposite direction (as $F=ma$ this is also true for acceleration)

$$a = -\omega^2 y$$

and as $F=ma$ also $F = -\omega^2 y \times m$

NOT SHM if the force is not changing
eg only force acting is gravity

These can be proved by using the reference circle.

Equations

Starting at the equilibrium position, y increasing

$$y = A \sin \omega t \quad v = A \omega \cos \omega t \quad a = -A \omega^2 \sin \omega t$$

Starting at maximum displacement

$$y = A \cos \omega t \quad v = -A \omega \sin \omega t \quad a = -A \omega^2 \cos \omega t$$

Period = time for one oscillation
(left to right and back again OR up, down and back up)

$$T = 2\pi \sqrt{\frac{L}{g}}$$

pendulum

$$T = 2\pi \sqrt{\frac{m}{k}}$$

spring

Know what affects the period of each eg. pendulum T not affected by mass

SHM

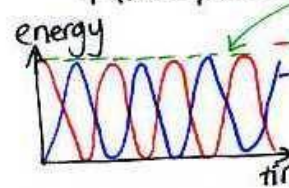
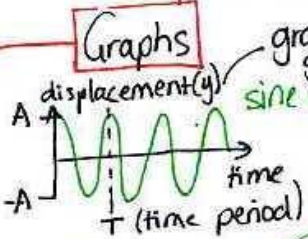
Maximums
from equations max when $\cos \omega t$ or $\sin \omega t = 1$

$$y = A$$

$$v = A \omega$$

$$a = A \omega^2$$

Graphs



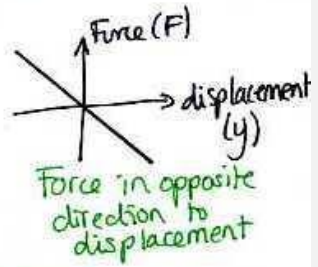
$$E_p = \frac{1}{2} k y^2 \quad E_k (\text{LIN}) = \frac{1}{2} m v^2$$

$$\Delta E_p = m g \Delta h$$

Total energy is constant
 $E_t = E_k + E_p$

gravitational potential for a pendulum
elastic potential for a spring

Total energy = max kinetic energy = max potential energy



The Cornell Note-taking System

<p>2 1/2"</p> <p>Cue Column</p> <p>Write Keywords or Questions here</p>	<p>6"</p> <p>Notetaking Column</p> <p>Write brief notes here as you are reading a book <u>OR</u> during a lecture</p>
<p>2"</p> <p>Summary</p> <p>Write a short summary of the page here</p>	

The Cornell Note-taking System

<p>2 1/2"</p> <p>Cue Column</p> <p>Solids</p> <p>Liquids</p> <p>?</p>	<p>6"</p> <p>Notetaking Column</p> <p>Types of Matter</p> <ol style="list-style-type: none"><li>1. Solids<ul style="list-style-type: none"><li>-have a definite shape<li>-have a defiinte volume<li>2. Liquids<ul style="list-style-type: none"><li>-Do not have a shape<li>- Have a volume
<p>2"</p> <p>Summary</p> <p>Write a short summary of the page here</p>	

Thank you for your time



Please give us your feedback on this workshop.

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<http://www.surveymonkey.com/r/sldor1>



SLD Blackboard module

ASSL - Academic Skills for Successful Learning

▼ ASSL-A-Y-201718
(ACADEMIC SKILLS FOR
SUCCESSFUL
LEARNING)

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Self-Management Skills

Writing Skills

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Exam Skills

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MODULE MANAGEMENT

Academic Skills Home



Student Learning Development



Student Learning Development

offers advice, resources, individual consultations, workshops and much more to help you improve your academic performance and reach your potential.

It can be a challenging experience coming to a university. The skills you need are different to those you used in second level education and may be different to skills you used in other universities, your work or home life. This module has been designed by the Student Learning Development Team to provide you with a range of resources to help you with your studies. Take time to go through each of the sections in this module; the time you spend now in developing these vital skills will help you to be a more successful student in the future. These skills will also help you as you move from university into the post-university phase of your life. Browse the topics below or in the left-hand menu and if you can't find what you need, please contact us at student.learning@tcd.ie.

EFFECTIVE STUDY SKILLS	SELF-MANAGEMENT SKILLS	WRITING SKILLS
Resources on:	Resources on:	Resources on:
<ol style="list-style-type: none">1. Note-taking2. Reading3. Memory and Understanding4. Group Work5. Study Groups	<ol style="list-style-type: none">1. Time Management and Organisation2. Procrastination and Concentration3. Stress Management4. Motivations	<ol style="list-style-type: none">1. Referencing and Plagiarism2. Essay writing3. Scientific writing4. Thesis writing
CRITICAL THINKING	PRESENTATION SKILLS	EXAM SKILLS
Resources to:	Resources on Presentation:	Resources on Exam:
Help you develop your critical thinking, reading and writing skills	<ol style="list-style-type: none">1. Planning2. Preparing3. Practising4. Presenting	<ol style="list-style-type: none">1. Preparation2. Practice3. Revision4. Performance

See <http://student-learning.tcd.ie> for instructions on enrolling

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SLD
Student Learning Development

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Student Learning Development are here to help you achieve your academic potential while studying in Trinity.

We provide workshops and events on a range of academic skills through the year, e.g. self-management skills, study and exam skills, presentations, writing and critical thinking. In addition we also see students on a one-to-one basis for more specific queries by appointment or at our drop-in clinics.

We also collaborate with academic departments to deliver tailored academic skills workshops for students.

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Announcements

- The **SLD Blackboard Module for 2017/2018** contains all of our best resources - [click here](#) to learn how to enrol.
- For our Undergraduate Workshop Brochure [click here](#)
- For our Postgraduate Workshop Brochure [click here](#)
- International Students Video** - [Click here](#) to view our animated video answering some common International student questions.
- "How to study at Trinity as an International Undergraduate Student"**. [Click here](#) for student guide.
- Workshop Feedback** [Click here](#)

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Tues: 9.00am - 8.00pm
Fri: 9.00am - 5.00pm
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