

Shifting Gears ...

Using a teaching and learning framework
to drive pedagogical change

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Another analogy ...

What's under the hood?

TRUE OR FALSE?


1. We are born with all the brain cells we will ever have.
2. PET scans show that the resting female brain is as active as the activated male brain.
3. Males can store more trivia than females for a longer period of time.
4. The communication centre and emotional memory centre of the female brain is larger and contains greater neural density than the male brain.
5. In most cases the female brain matures earlier than the male brain.
6. Oxytocin, a brain chemical that promotes bonding, is much more functionally present in female brains than male brains.
7. Sitting still in chairs for extended periods of time supports optimal student learning.
8. Good teachers keep the learner's attention for less than half of the time they are in contact.

Tinkering with the Engine

AB COMPLEX REASONING PROCESS **AB**

ABSTRACTING


ORIGINAL	Abstract	NEW



AN COMPLEX REASONING PROCESS **AN**

ANALYSING

NEW INSIGHT			
[Diagram: A large oval at the top connected to four smaller ovals, which are each connected to a square, which are each connected to another set of four ovals]			



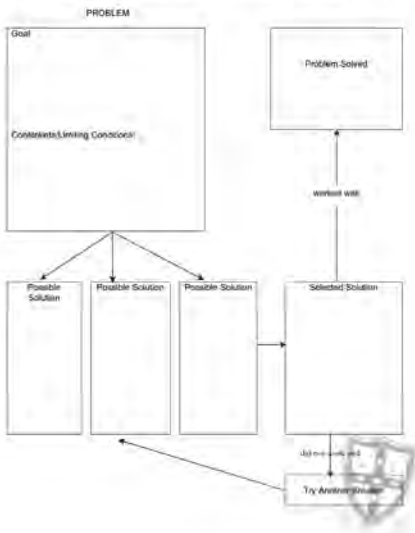
AP COMPLEX REASONING PROCESS **AP**

ANALYSING PERSPECTIVES

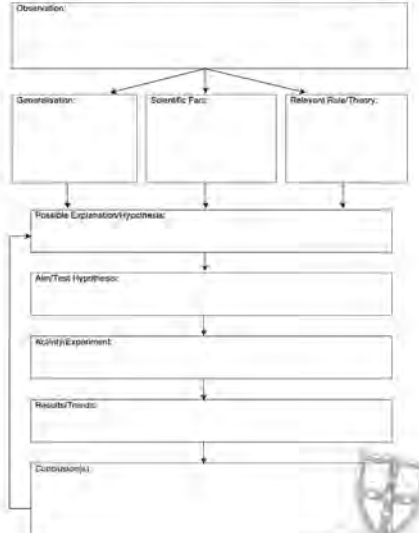
Issue/Statement/Context	
Personal Position	Alternative Position
Supporting Reasoning/Logic	Supporting Reasoning/Logic
Conclusion/Insight/Awareness	



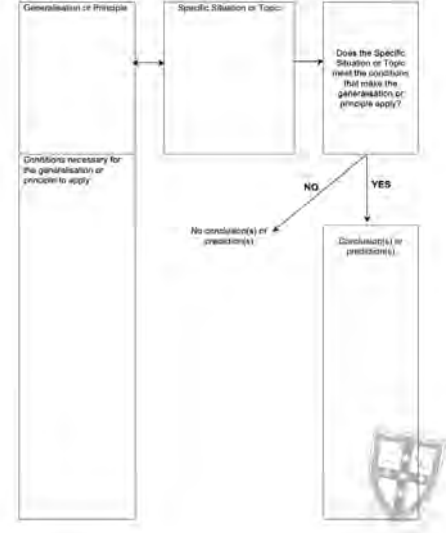
COMPLEX REASONING PROCESS: **PS** **PROBLEM SOLVING** **PS**



COMPLEX REASONING PROCESS: **SM** **SCIENTIFIC METHOD** **SM**



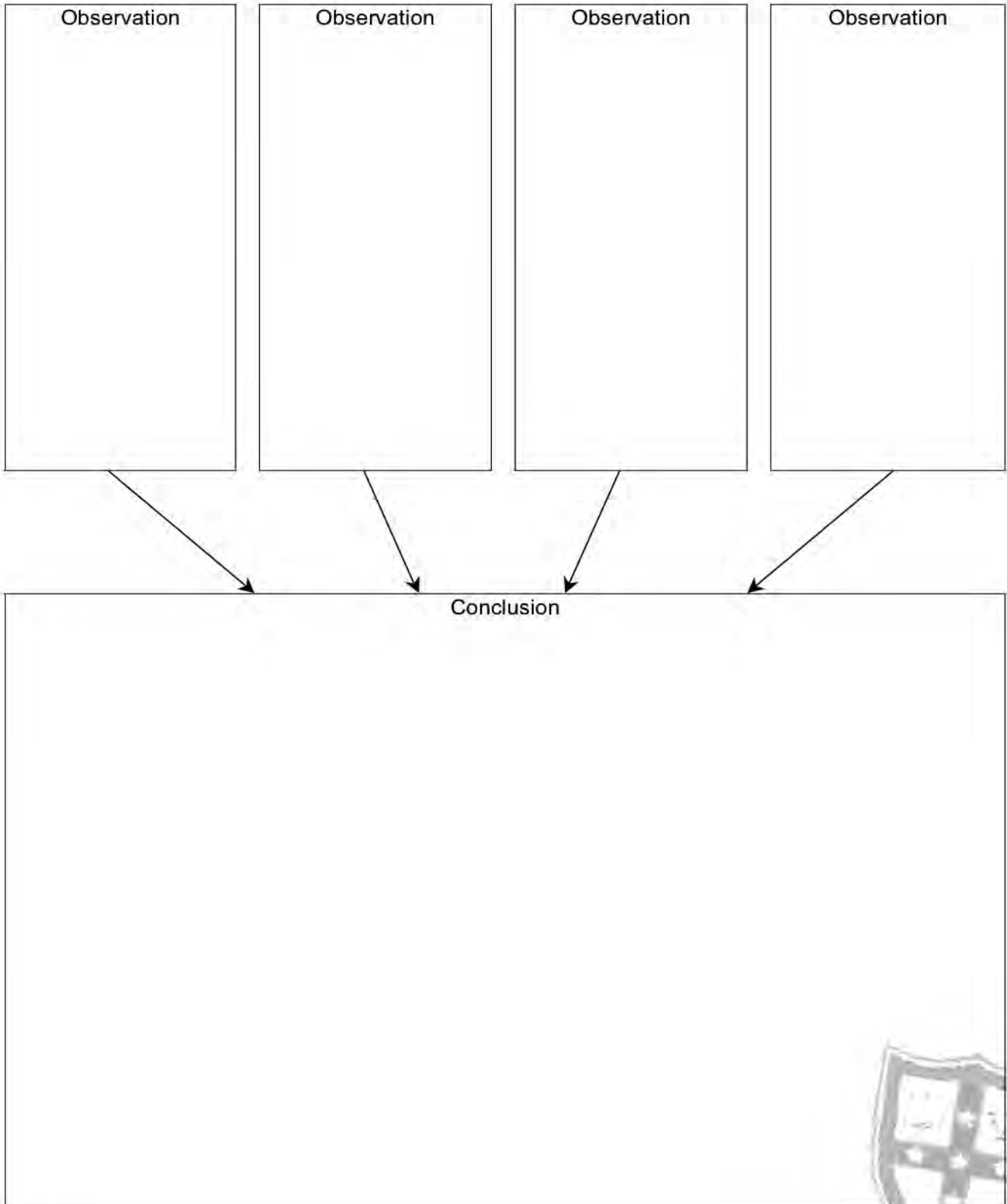
COMPLEX REASONING PROCESS: **SP** **SPECIFYING** **SP**





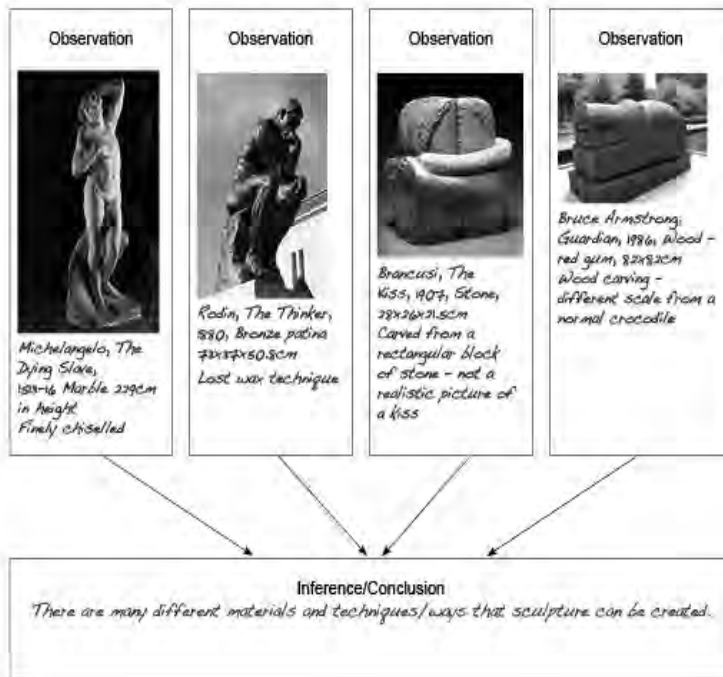
COMPLEX REASONING PROCESS:

GENERALISING



Complex Reasoning Process: Generalising

Year 7 Visual Arts: Does sculpture have limits?



Complex Reasoning Process: Evaluating

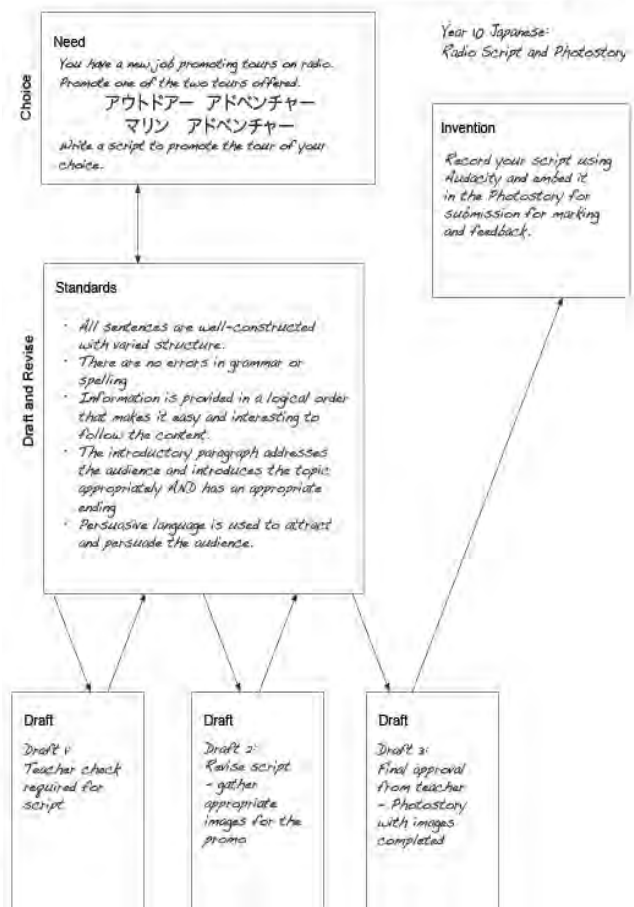
Year 8 Legal Studies: International Law

Information/Argument/Product for Evaluation
Evaluate the effectiveness of international law to deal with crimes against the international community.

Criteria (ranked in importance)	Key Features of Information/Argument/Product	Degree to which criteria are fulfilled by key features		
		Not at all	Partly	Totally
Effective enforcement mechanisms	Sanctions		✓	
	Charges/prosecution of governmental officials.		✓	
	Security Council approved military action against offending parties.	✓		
Codified and accepted laws	Geneva Conventions		✓	
	Rome Statute of the International Criminal Court		✓	
	United Nations Charter		✓	
Existence of legal institutions to sanction parties	International Criminal Court			✓
	United Nations General Assembly/ Security Council	✓		
Effectiveness of international law as a deterrent.	Conflict specific tribunals (i.e. Nuremberg)			✓
	International law as a specific deterrent.		✓	
	International law as a general deterrent.		✓	
Judgement				
International law is only partly effective at dealing with crimes against the international community. Despite the existence of legal institutions and codified laws to punish offenders, the enforcement options available, such as sanctions, are not as effective as those in domestic criminal law. There is no clear right of international law to use force for humanitarian purposes and states do not, generally, like invading other states for the purposes of prosecuting those who commit crimes against humanity. As such, International law is also only partially effective as deterrent, states do not fear military action against them for breaches of law. Finally, the role of the Security Council as a mechanism for enforcement is particularly problematic, as the Veto Power can be used to prevent enforcement of General Assembly resolutions.				

Complex Reasoning Process: Inventing

Year 10 Japanese: Radio Script and Photostory



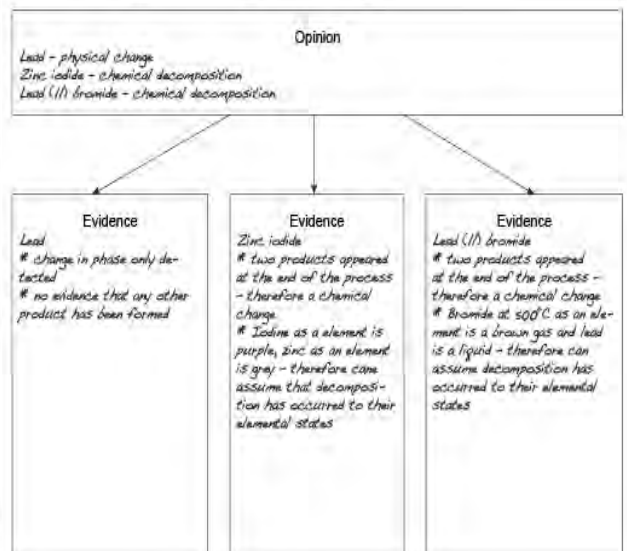
Complex Reasoning Process: Justifying

Year 8 Chemistry: Chemical or Physical Change

Three substances undergo changes when treated as described in the following table.

Substance	Treatment	Observations
Lead	Strongly heated to 500°C	Grey-silver solid melts to form a grey-silver liquid at 327°C.
Zinc iodide	Strongly heated to 700°C	White crystalline solid changes to a grey liquid and a purple vapour.
Lead (II) bromide	Electrolysed at 500°C	Pale yellow liquid which forms a brown gas at one electrode and a silver liquid at the other electrode.

Identify the three changes as physical changes or chemical changes. Justify your answers.



DESIRED RESULTS

Outcomes:

Understanding(s):

Essential Question(s):

Students will learn about:

Students will learn to:

ASSESSMENT FOR LEARNING

Performance Task(s):

Other Evidence:

TEACHING AND LEARNING ACTIVITIES:

DESIRED RESULTS

Outcomes:

What learning outcomes will this unit/lesson attempt to produce?

Understanding(s):

How will students show that they can apply/explain the information or concepts in order to demonstrate understanding?

Essential Question(s):

What provocative/big issues are at the heart of the unit/lesson?

What issues will foster a transfer of learning to other topics or situations?

Students will learn about:

What specific knowledge will students acquire?

Students will learn to:

What specific skills will students acquire?

ASSESSMENT FOR LEARNING

Performance Task(s):

What authentic performance task(s) will students undertake to demonstrate the desired understanding?

What criteria will be used to judge the performance?

Other Evidence:

What other evidence (e.g. quizzes, tests, homework, teacher observations etc) will show student achievement of the desired results?

What opportunities will there be for reflection, self-assessment and improvement?

TEACHING AND LEARNING ACTIVITIES:

What learning experiences and instruction activities will be used to assist students to achieve the desired outcomes?

W = where is the unit going (from the student's perspective)?

H = hook and hold student's interest?

E = equip students with skills, experience ideas, explore issues?

R = opportunities to rethink, reflect and revise their work and understanding?

E = allow students to evaluate their work and progress?

T = tailored to suit the different needs, interests, abilities of learners?

O =- organised to maximise engagement and effective learning?

The rest of the vehicle



DIMENSION 4

While human beings are capable of thinking skilfully, it is their intelligent behaviours – sometimes referred to as “habits of mind” - that provide the basis of personal academic growth. For example, in order to engage in effective thinking, and in particular the development of knowledge, skills and understanding, students might need to be equipped with the ability to manage their impulsivity, display empathy, be inquisitive and persistent.



These intelligent behaviours encompass all subject areas taught at Cranbrook and they are applicable to adults as well as students. They are part of the culture, values ethos and norms of the entire school community.



The sixteen intelligent behaviours integral to the Cranbrook School Teaching and Learning Framework are:



- applying past knowledge to new situations;
- finding humour;
- creating, innovating, imagining;
- responding with wonderment and awe;
- acting with understanding and empathy;
- questioning and posing problems;
- managing impulsivity;
- persisting;
- remaining open to continuous learning;
- taking responsible risks;
- thinking flexibly;
- striving for accuracy and precision;
- thinking about thinking (metacognition);
- thinking and communicating with clarity and precision;
- thinking and working interdependently;
- gathering data through all senses.



Students are assisted to develop intelligent behaviours by their teachers, tutors, directors, conductors, coaches and parents who model, teach and reinforce these same behaviours.



DIMENSION 5

Assessment for Learning acknowledges that assessment should occur as a regular part of teaching and learning and that the information gained from assessment activities can be used to shape the teaching and learning process. It provides students with the learning opportunities to achieve the desired learning outcomes identified at the beginning of the unit of work.



Searching for spare parts?

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