Graphic Organisers

Metacognition - Planning

Why Use Them?

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1. A tool that forces students to stimulate and expand their thinking process, leading to greater higher order thinking.
2. Support students in engaging with work in a more interesting manner. (Where engagement = greater thinking).
3. Support the formation of schemata (through linking knowledge).
4. Support the encoding of knowledge to long-term memory, as well as the retrieval of knowledge from long-term memory. ('Sticky' knowledge).
5. Support the chunking of knowledge to avoid cognitive overload.
6. Enhance students metacognitive abilities: planning; monitoring; evaluation.
7. Encourage the use of dual-coding to strengthen student learning.

When to Use

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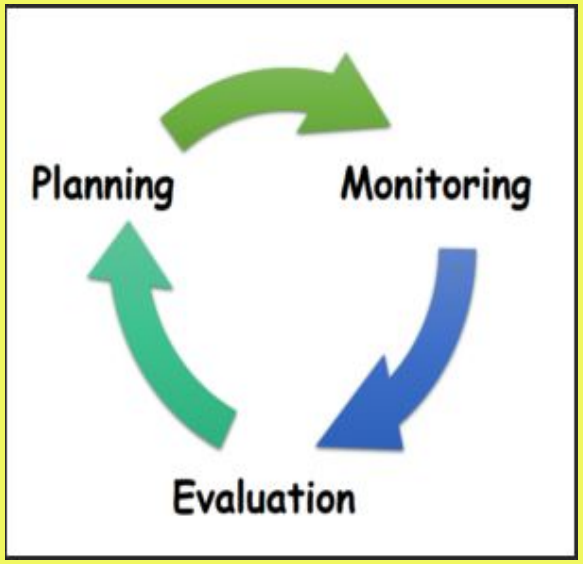

- All Graphic Organisers can be used for/as:
  1. Recall/revision activity e.g. ‘knowledge dump’.
  2. Low-stakes testing.
  3. Problem-solving scaffold.
  4. Consider requirements of a task or problem and the information provided.
  5. **To support with planning for a task (Metacognition Stage 1)**
- Each Graphic Organiser has other specific uses too.

What Do We Need To Consider?

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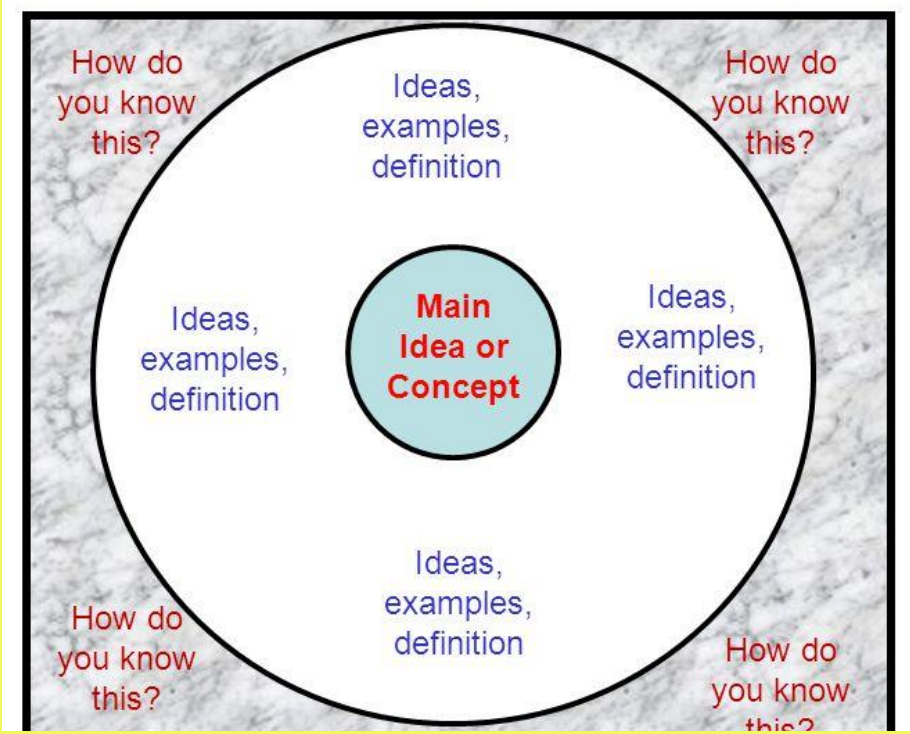
1. The knowledge that students already have and what we can reasonably expect them to recall.
2. What is the key information that you want students to be engaging with?
3. What do you want students to be doing with the Graphic Organiser once complete? E.g. independent writing? Exam questions? Higher order thinking?
4. Graphic Organisers provide us with key notes and ideas, rather than streams of sentences. (Though they should be used to provide the scaffolding for the latter as a separate task).
5. A new Graphic Organiser cannot be taught alongside new knowledge – this is cognitive overload. So:
   - New GO + learnt knowledge
   - Learnt GO + new knowledge.

Circle Map



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What it is used for?:

Defining within a context.

Typically broader topic.

Great template for a ‘knowledge dump’.

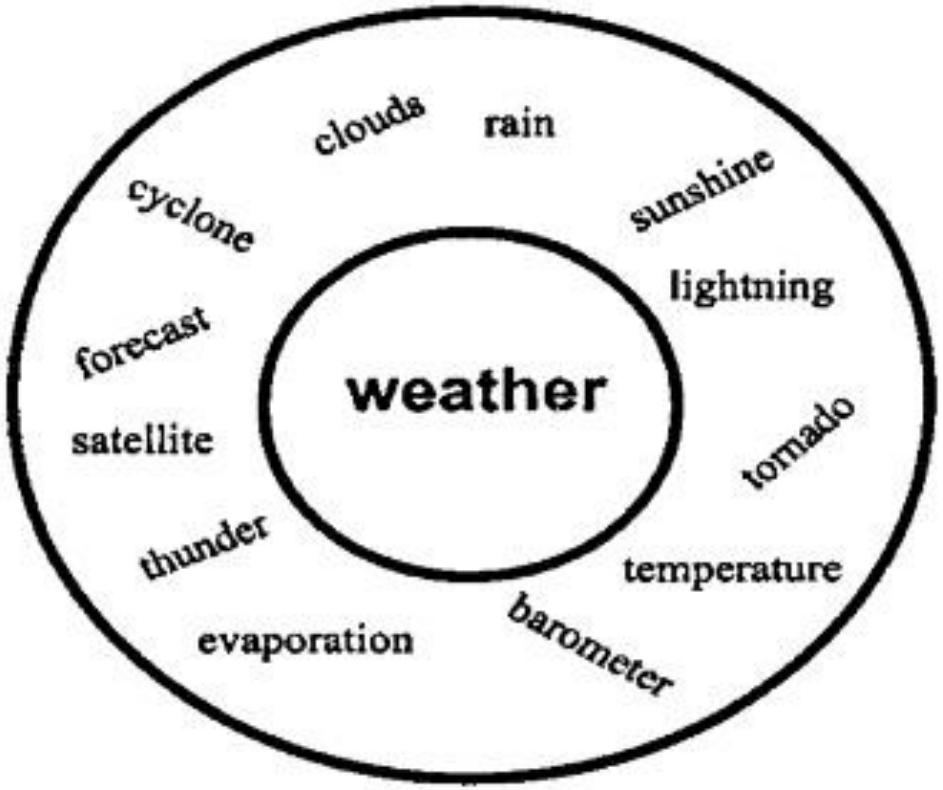
From This:

Students could be asked to orally explain their wheel.

Students could write a short paragraph describing the ‘thing’ using their key words.

Students could pair and share ideas to increase the amount that they have down.

A frame of reference can be included so that students need to justify or explain where their information is coming from.



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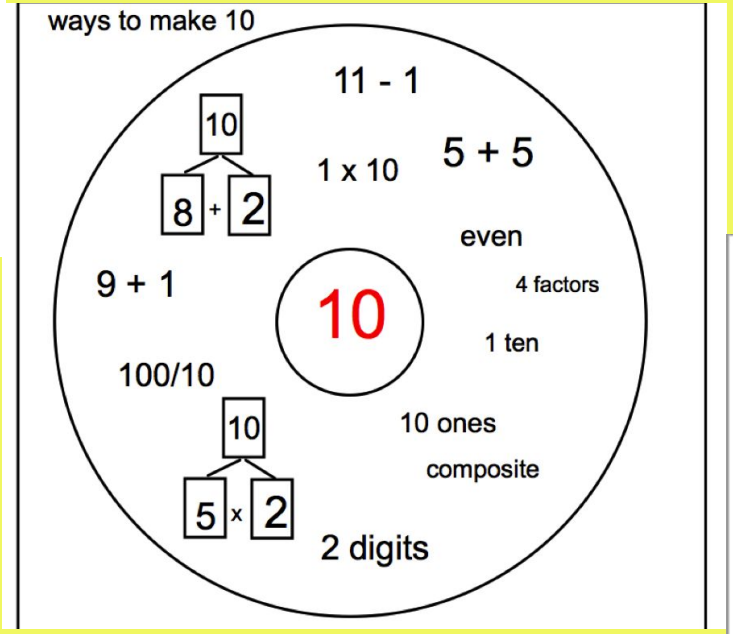

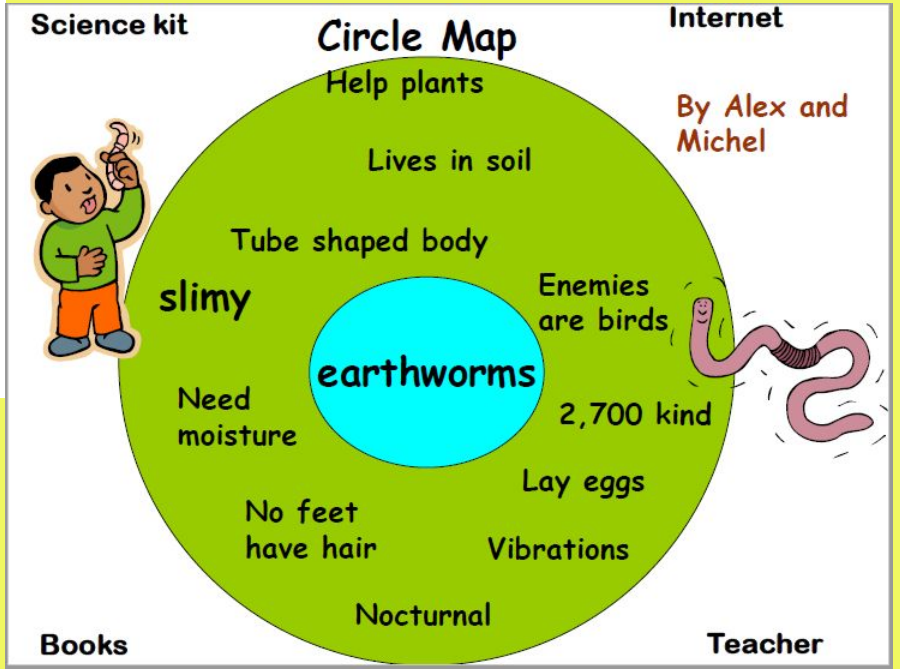

Bubble Map

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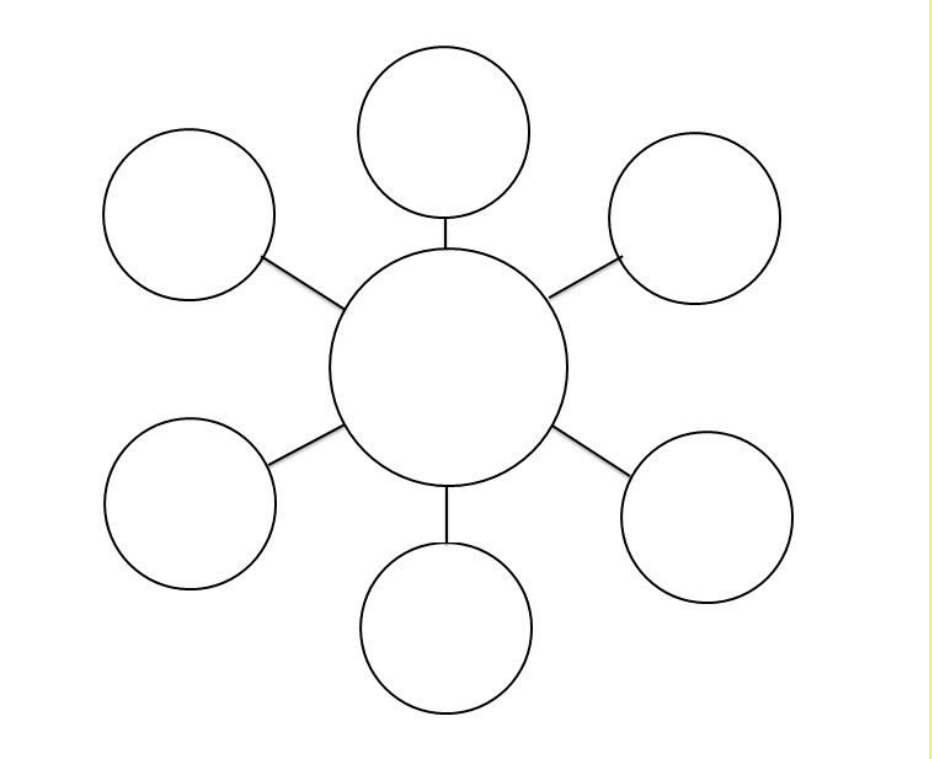
What it is used for?:

Used to describe things in a concise manner.

Helps organise thoughts before descriptive writing or exam question.

Recall on a specific concept/idea.



From This:

Students could write a descriptive piece of work.

Students can compare bubble maps to produce a double bubble map.

Answer an exam question.

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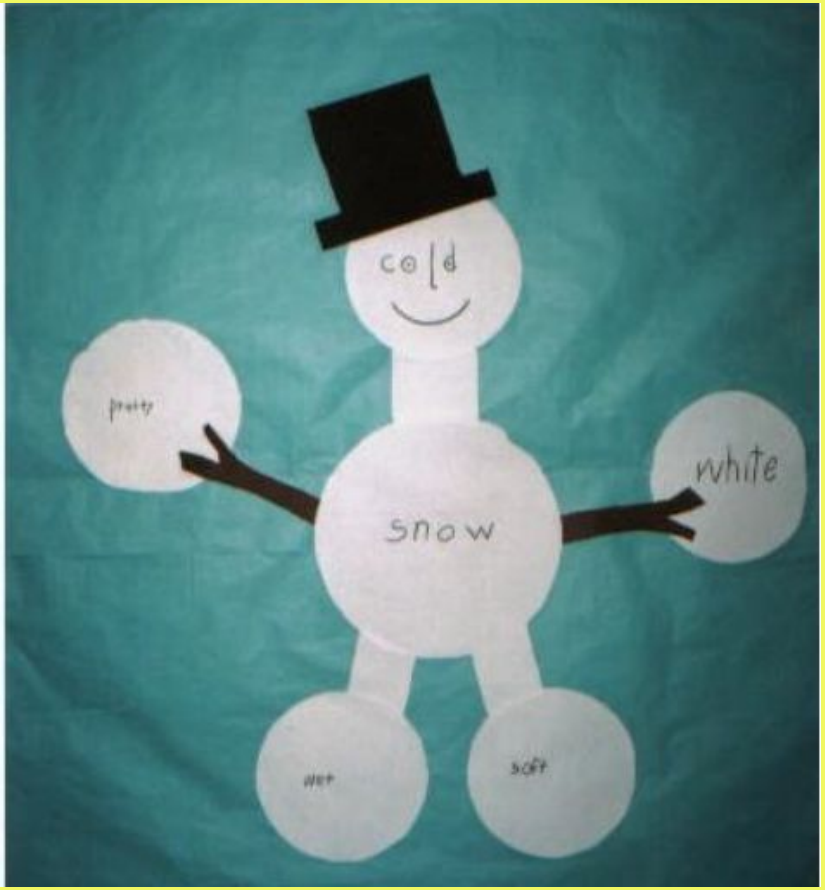

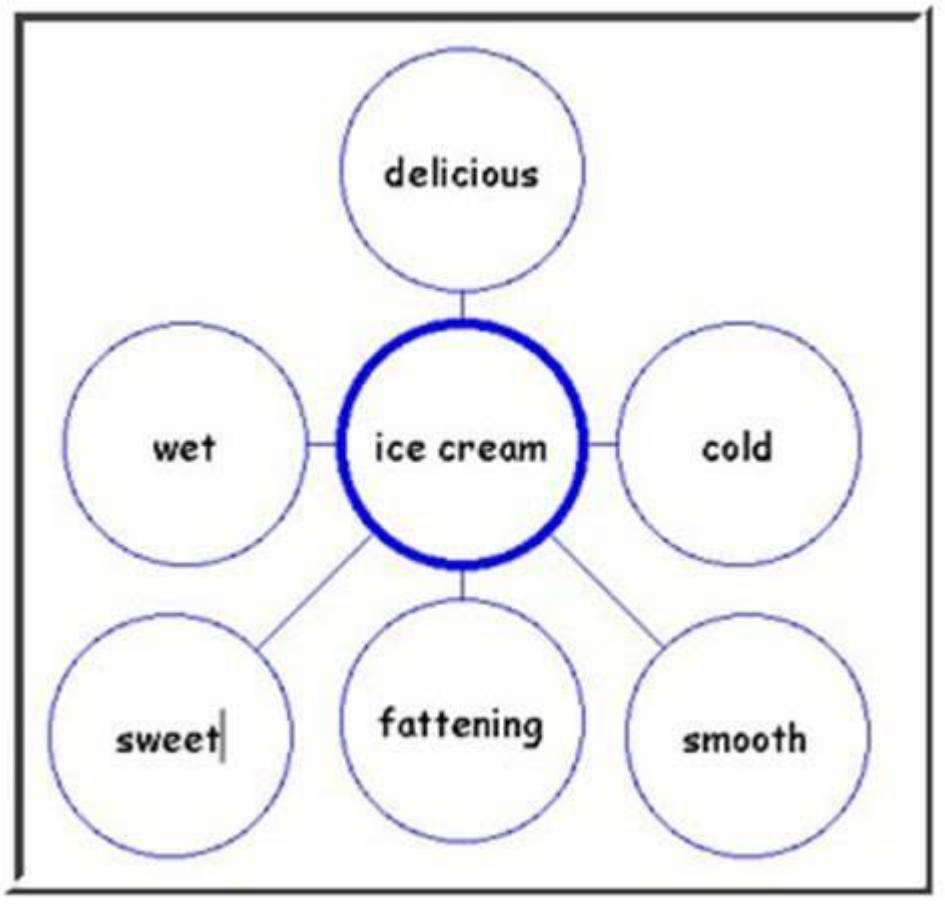

Double Bubble Map

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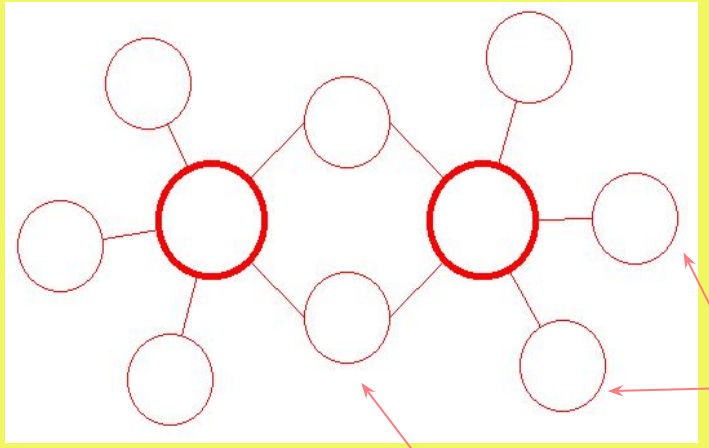
What it is used for?:

To compare and contrast two 'things'.

Comparison; what is alike? What is different?

(Content and strategies?)



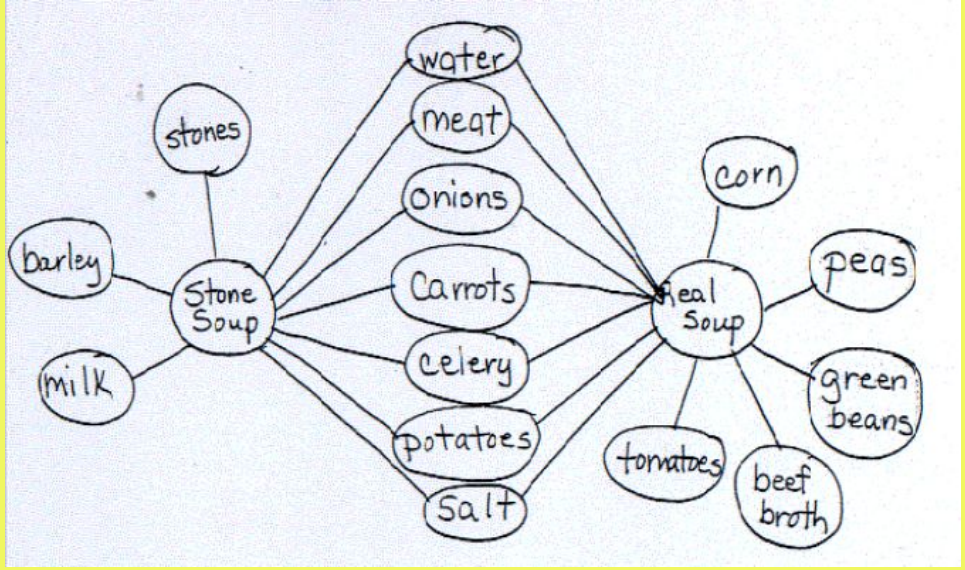
From This:

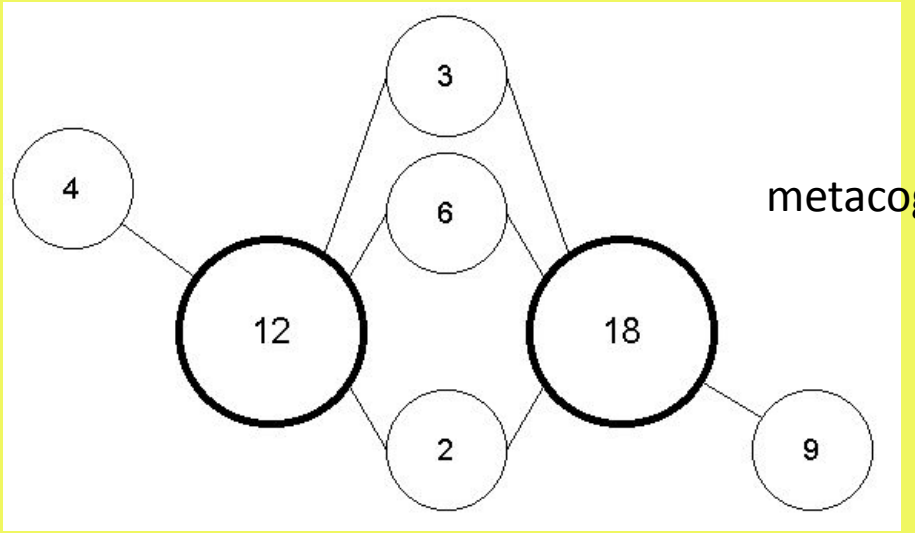
Students could write a comparative piece based of work. (Extended writing)

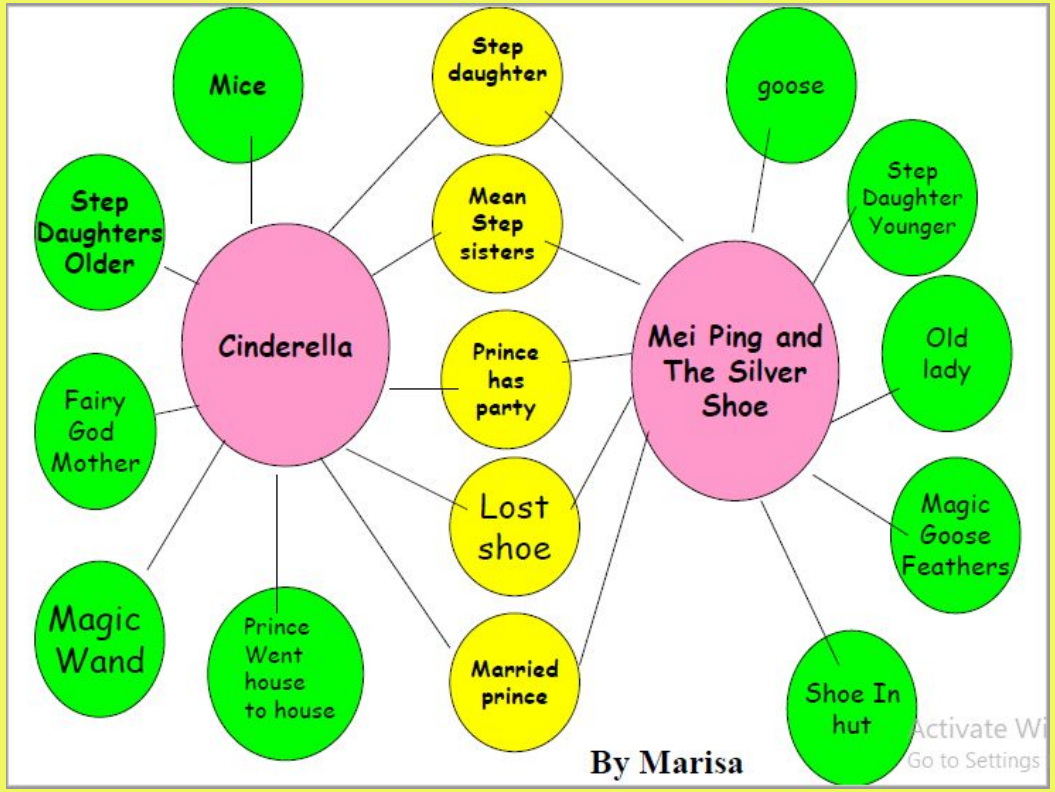
Students can each take a 'thing', and then compare it with a partner, forming a combined double bubble (this ensures individual learning responsibility).

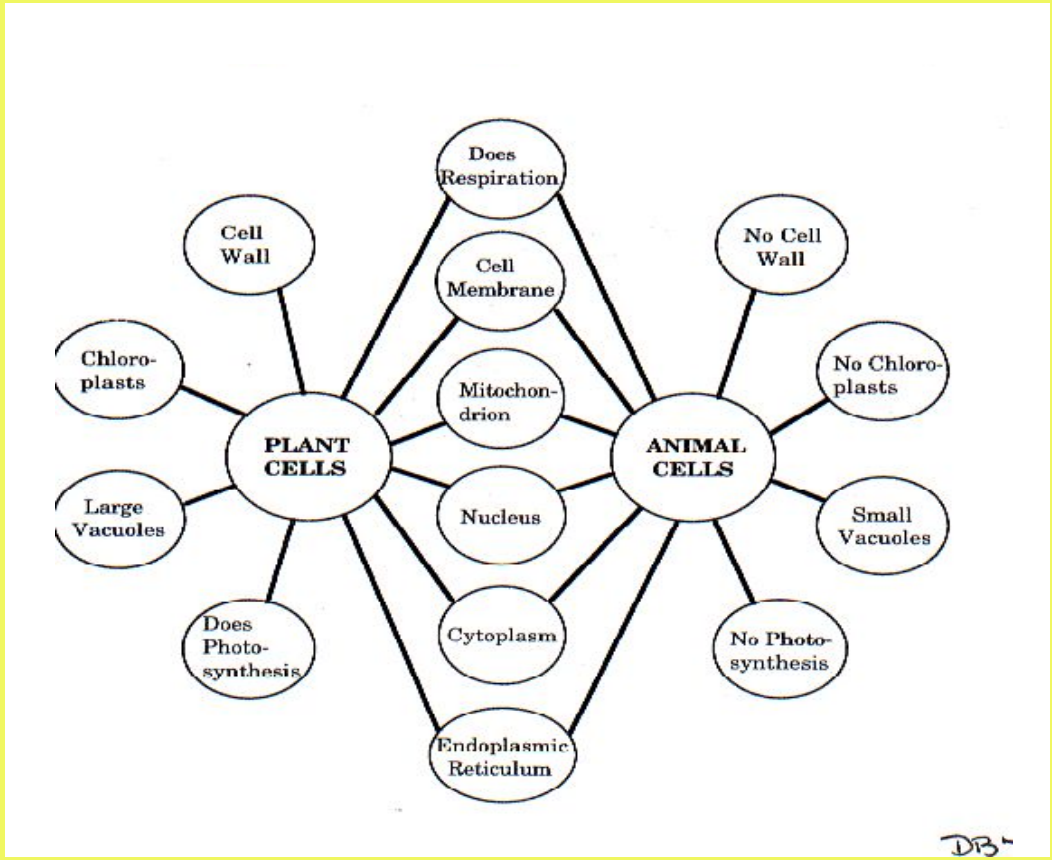
Extend to a triple bubble to compare further factors.

Lead discussions on appropriate strategies and inform future strategy use and planning.









Flow Map

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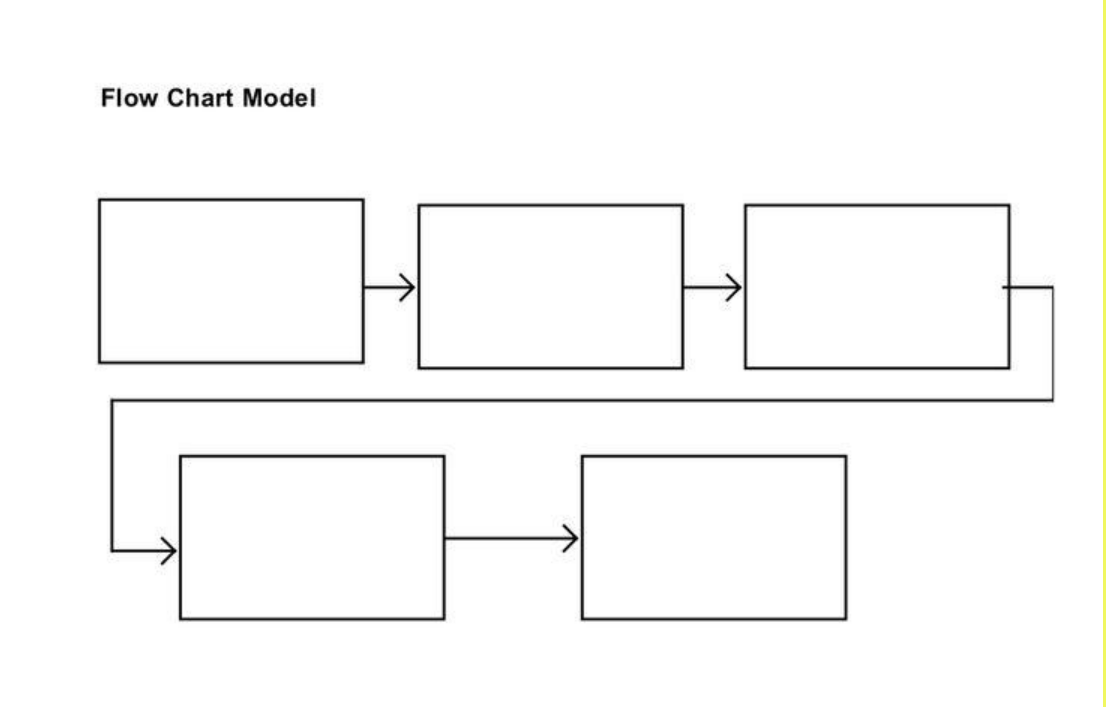
What it is used for?:

To sequence/place in order. (Events, process, steps.)

Develops synthesis skills and ability to sequence.

Recalling steps to answer a question, recall a process etc.



From This:

Produce instructions.

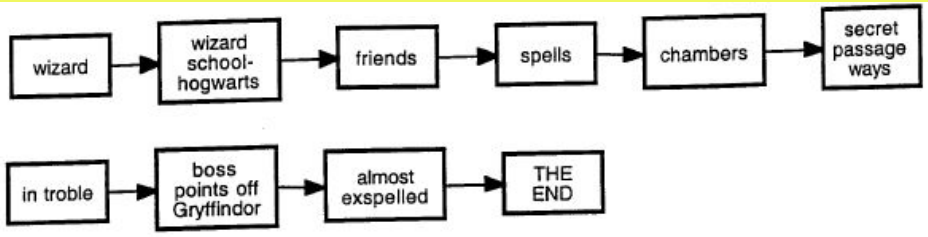
Produce extended pieces of writing.

Students evaluate steps they can recall and identify areas to revise.

Further synthesis.

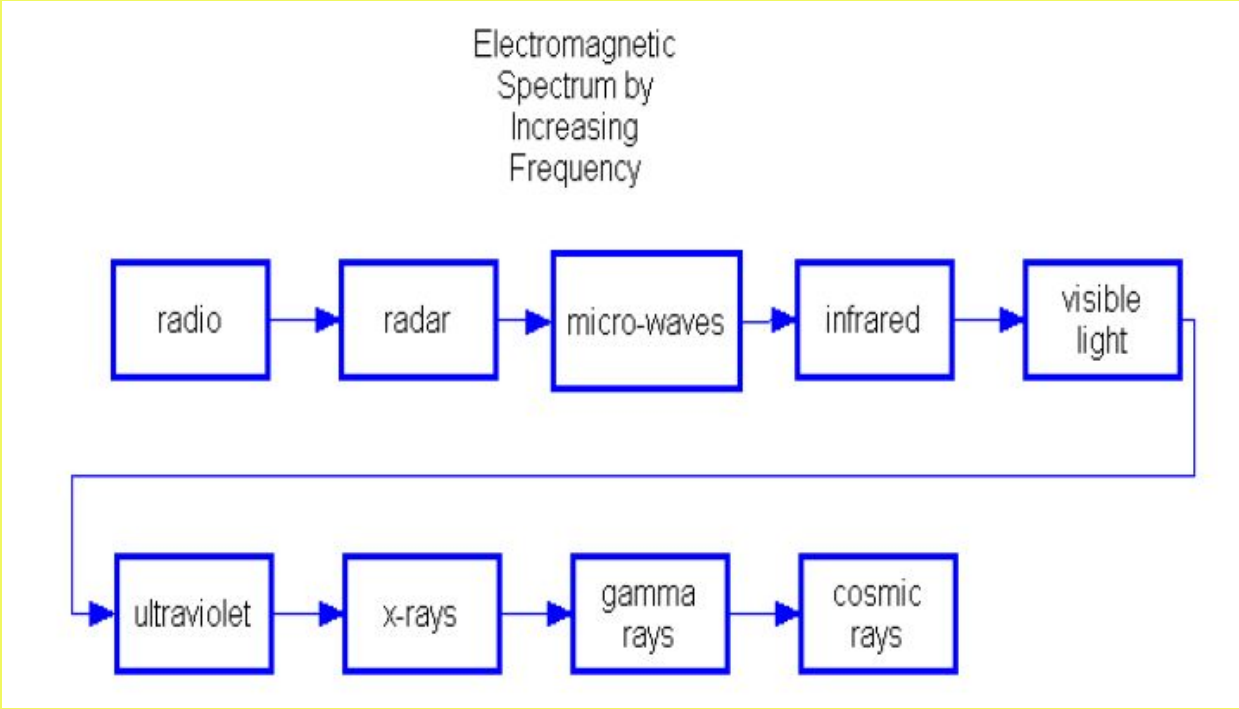
Expanded flow map.

Synthesis comparison and discussion. I.E. what key points needed to be included?



Harry Potter

One day there was a boy named Harry Potter.He was a normal boy,until one letter changed his life.This letter was about a school. A wizard school,called Hogwarts.He was amazed! Harry Potter was a wizard! So he traveld to the school on a train.At the train he met his first friends. There names were Ron
Weasly and Hermione Granger.He thought it was cool that he got to cast spells! There were many
different chambers and some funny passwords like lemon drop. The secret passage ways were cool
but Harry,Ron,and Hermione got in trouble for lurking in the hallways at night.There were five points
taken off Gryffindor. They were almost expelled. They will never do that again.



Multi Flow Map

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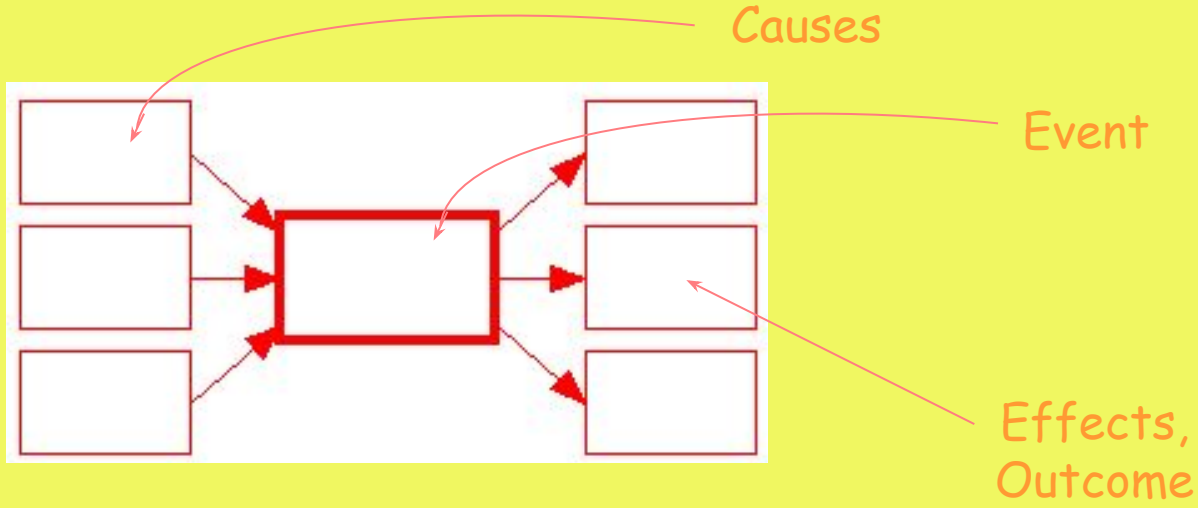
What it is used for?:

Understanding cause and effect.

Develop and challenge reasoning.

Facilitates metacognitive discussion.



From This:

Students could combine together multi-flow maps to highlight greater connections between work.

Used as a planning tool to write extended answers or exam questions.

To support predictions.

To write up scientific experiments.

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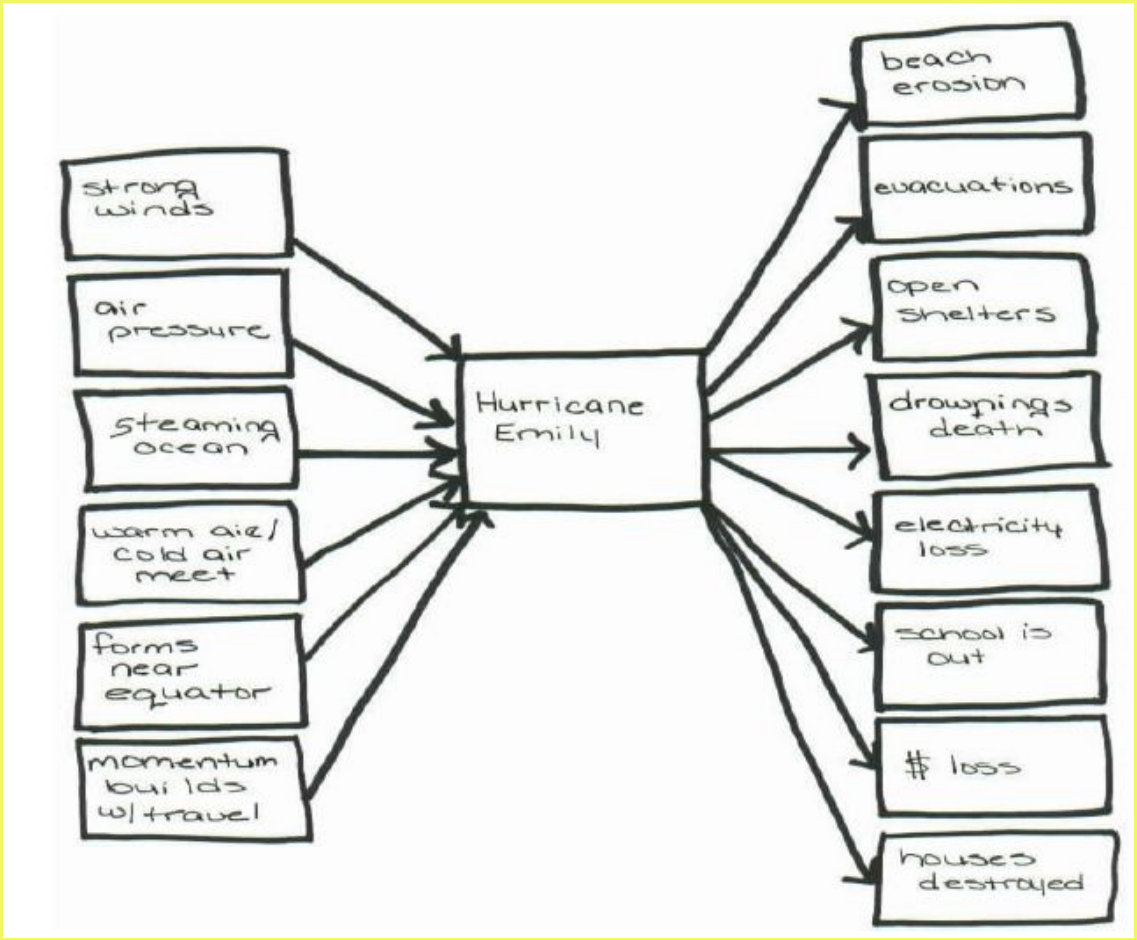

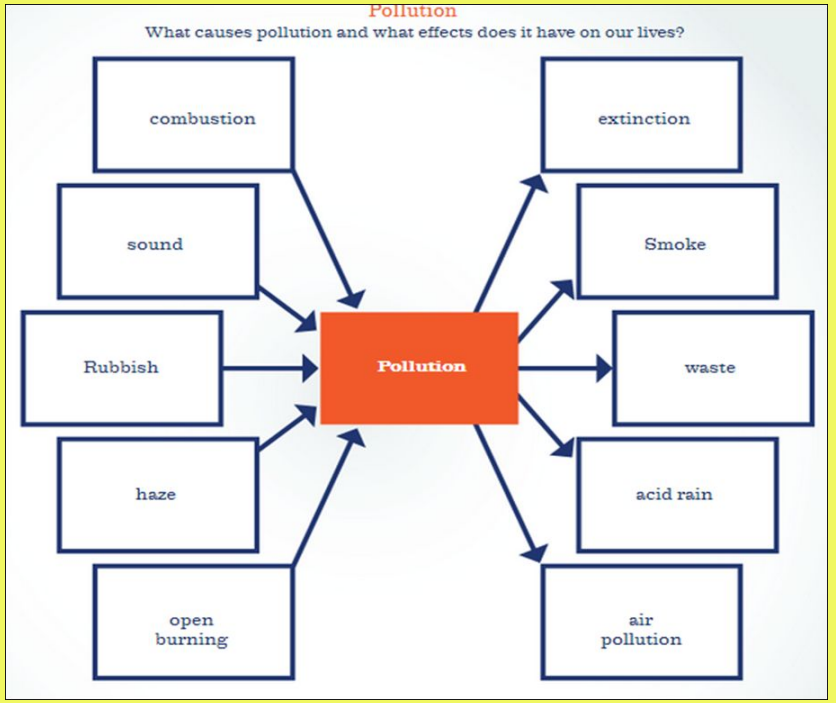

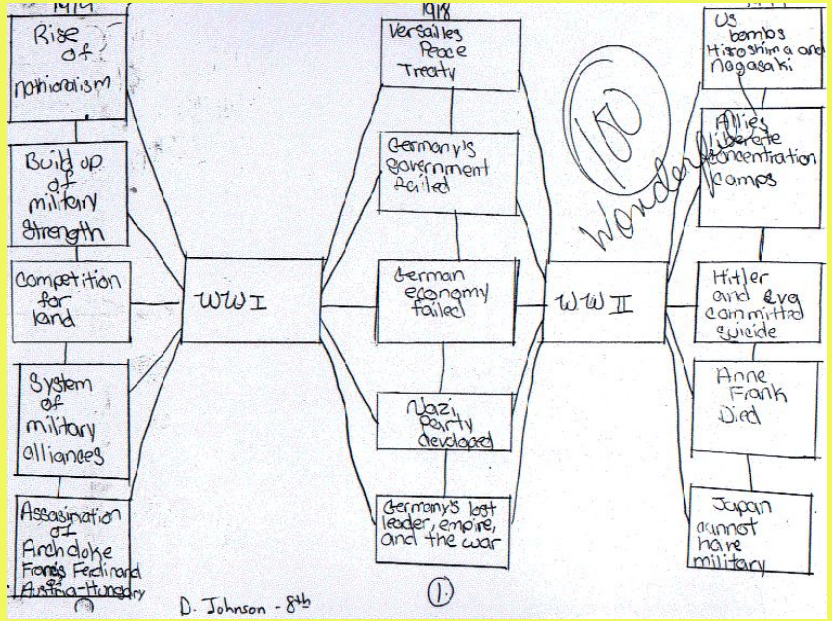

Fishbone

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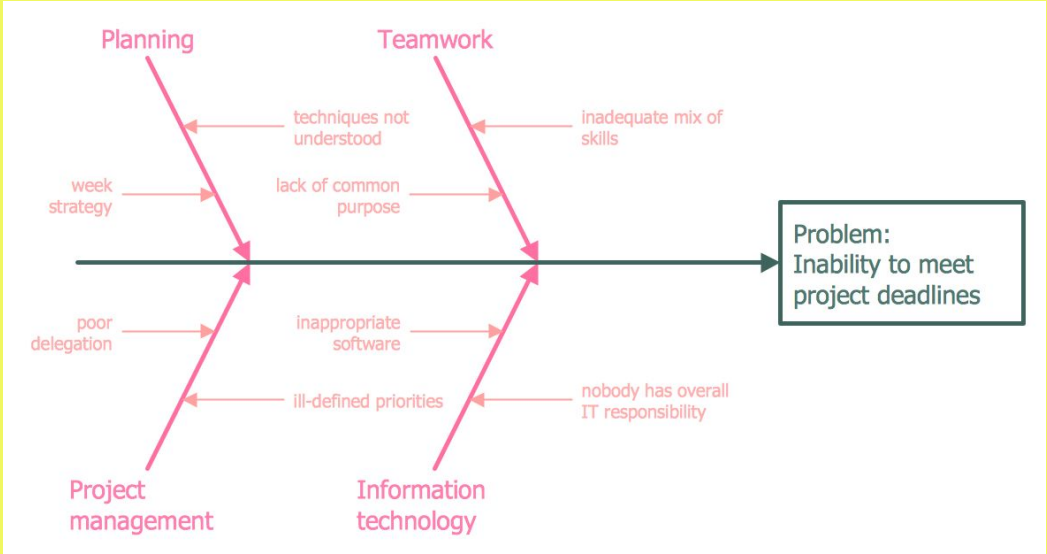
What it is used for?:

Understanding causes in more depth.

Develop and challenges reasoning.

Facilitates metacognitive discussion.



From This:

Students could combine together multiple fishbone diagrams to consider more causes.

Students could combine together fishbone diagrams to highlight greater connections between work.

Used as a planning tool to write extended answers or exam questions.

To support predictions.

To write up scientific experiments.

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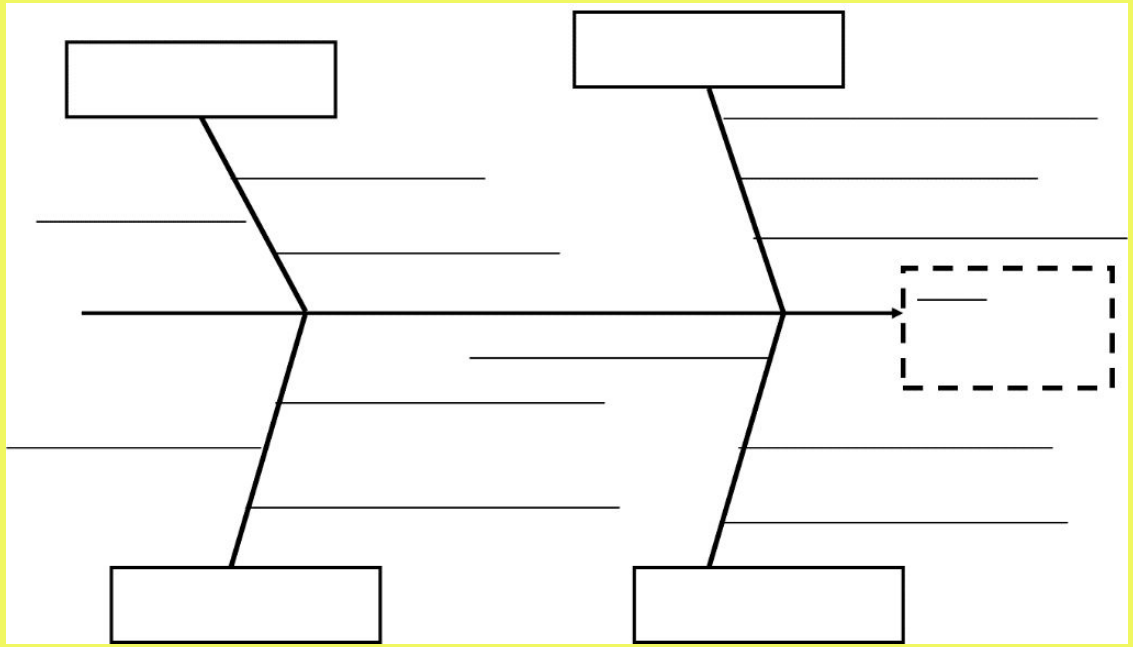

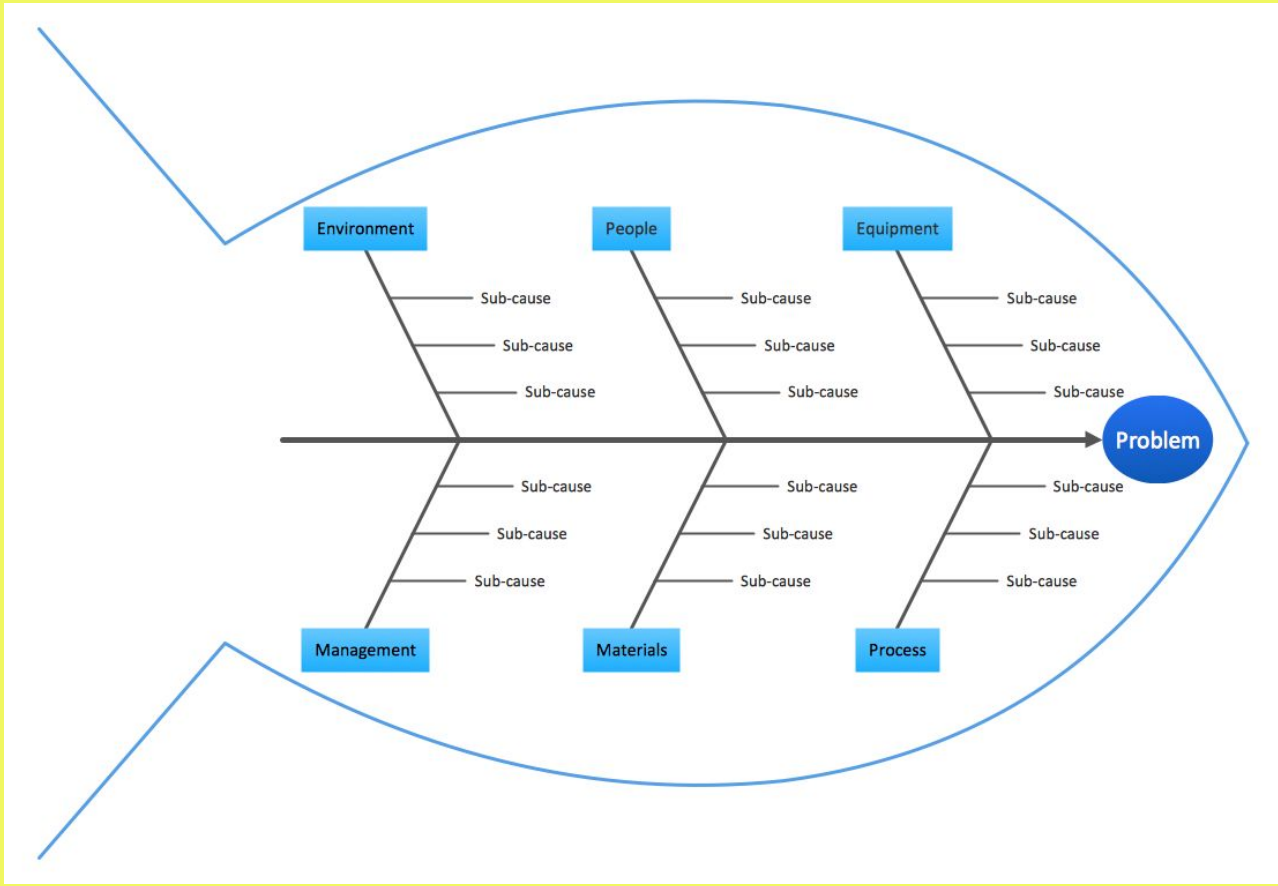

Tree Map

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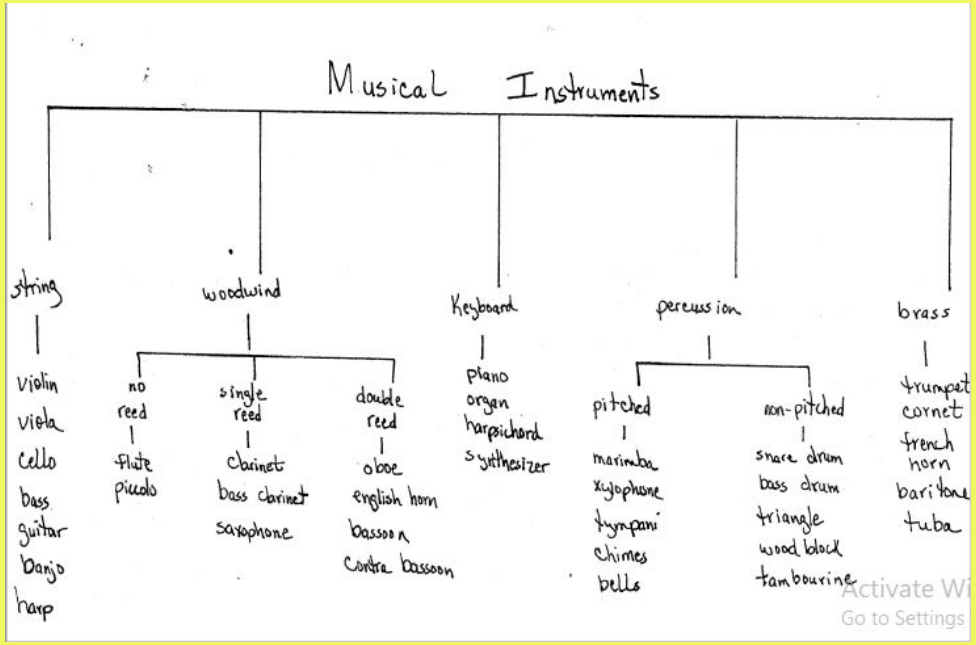

What it is used for?:

To classify things (which are related, but have special characteristics).

Breaking down topic areas.

From This:

Students could write a comparative or descriptive piece of work. (Extended writing).

Identify smaller differences between like things.

Exam question preparation.

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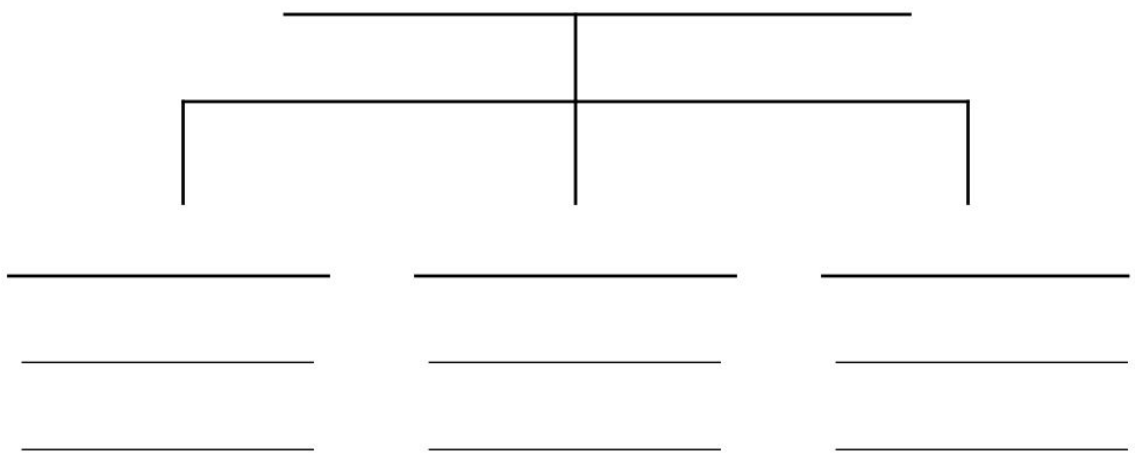
Tree Map



Tree Map

Life Cycle of a Butterfly

Egg — Caterpillar — Chrysalis — Butterfly

Egg: Blue — Green; tiny; 500

Caterpillar: eats; sheds skin

Chrysalis: changes; gold

Butterfly: Lays egg; Two weeks

By Jewell and Anh

Brace Map

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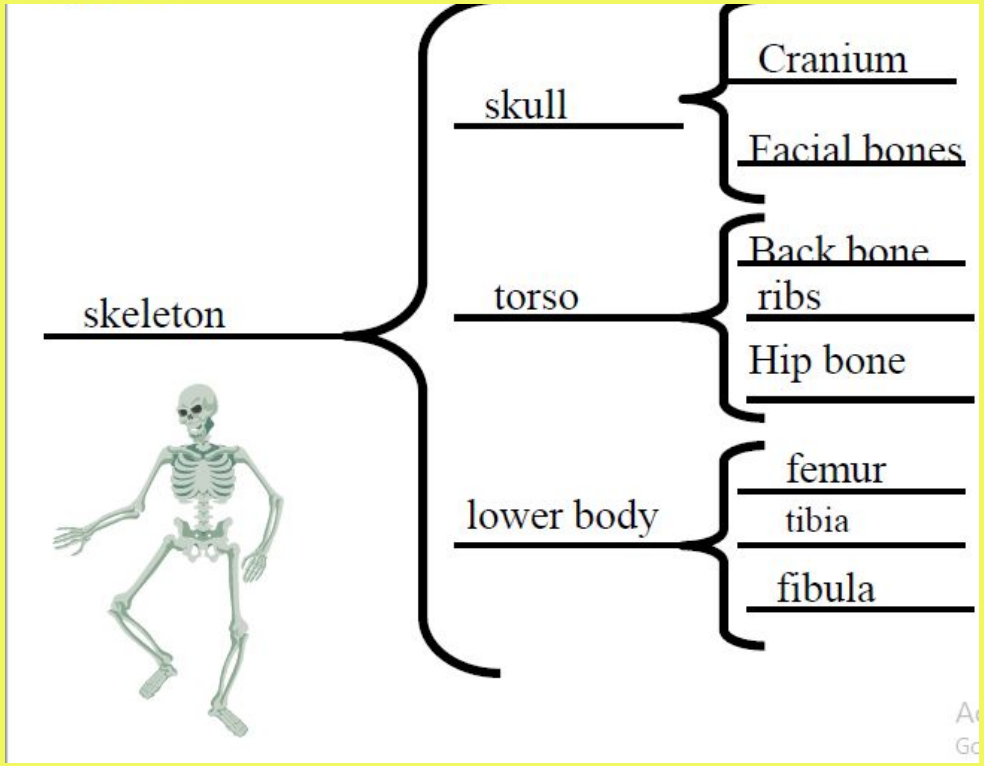
What it is used for?:

To consider the structure and constituent parts of a whole thing by breaking it down into specific parts.



From This:

Allows comparison between different parts of a whole.

Students could write a comparative or descriptive piece of work. (Extended writing)

Supports more in-depth description of a ‘thing’.

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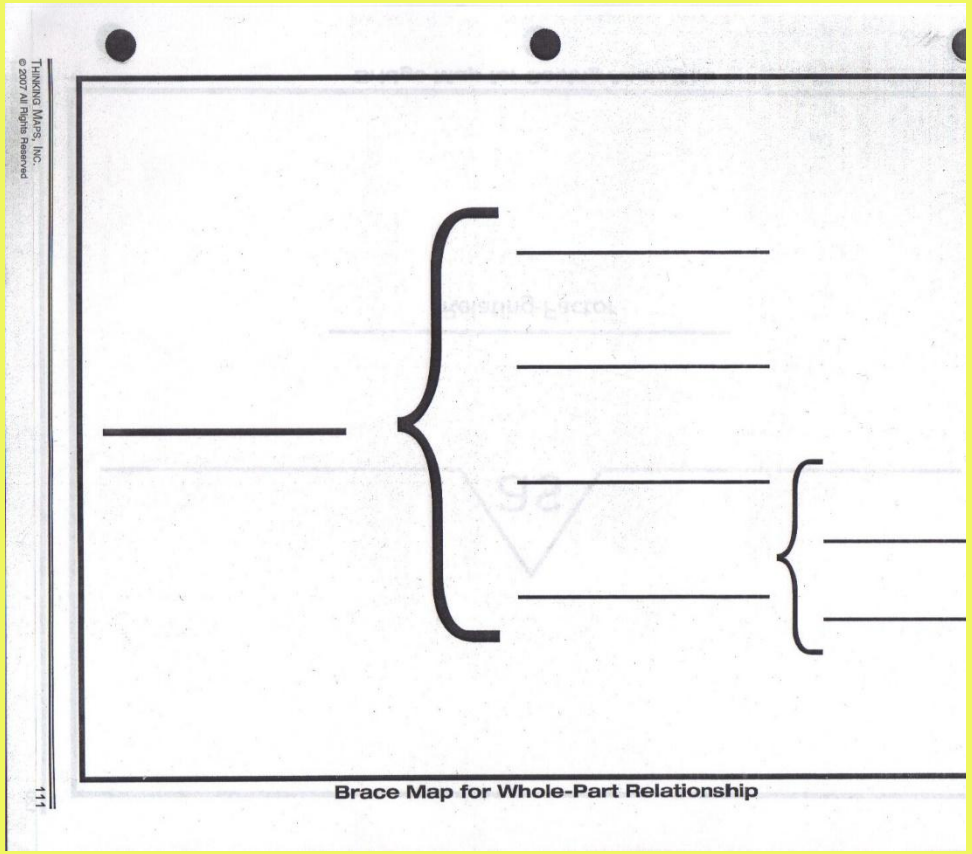

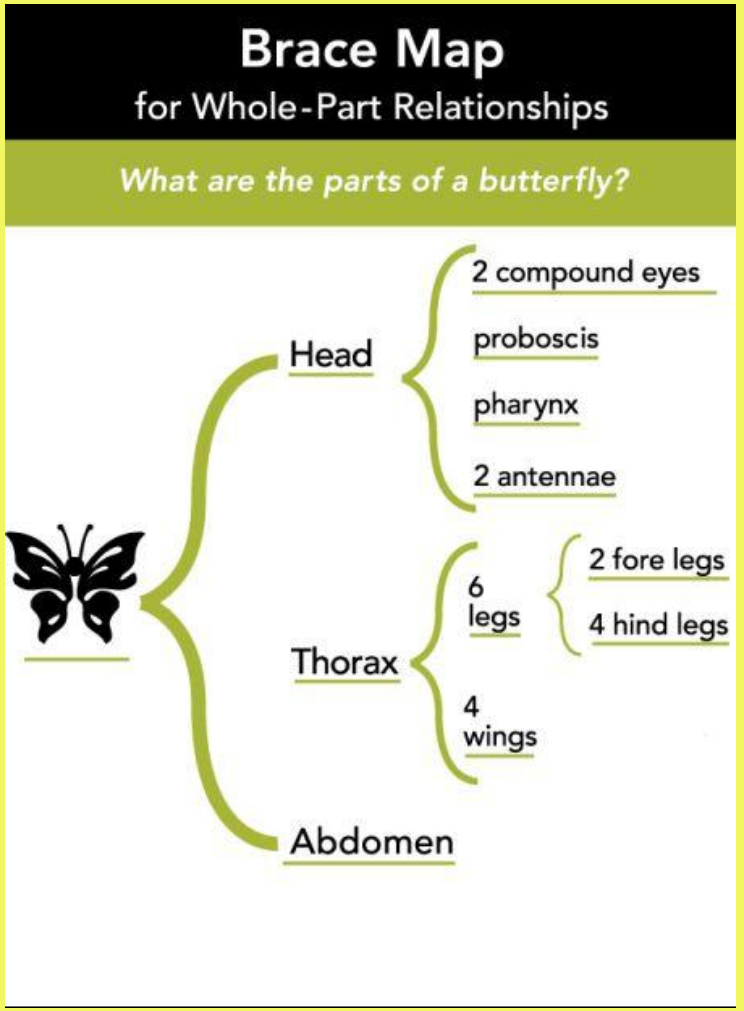

Bridge Map

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What it is used for?:

Used for identifying analogies and links between key words.

Higher order thinking.

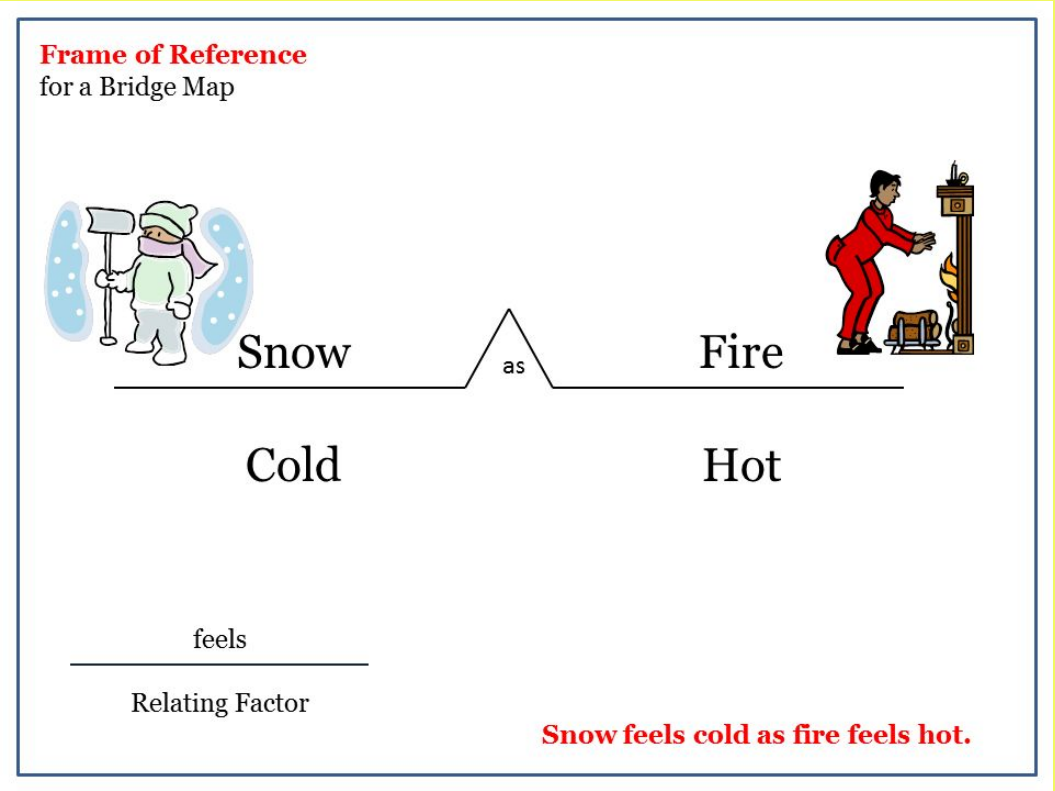
From This:

Students could produce their own bridge maps.

Descriptive writing.

Simile or metaphor writing.

Students check their relating factor by writing out sentences with it in. (Self-evaluation).



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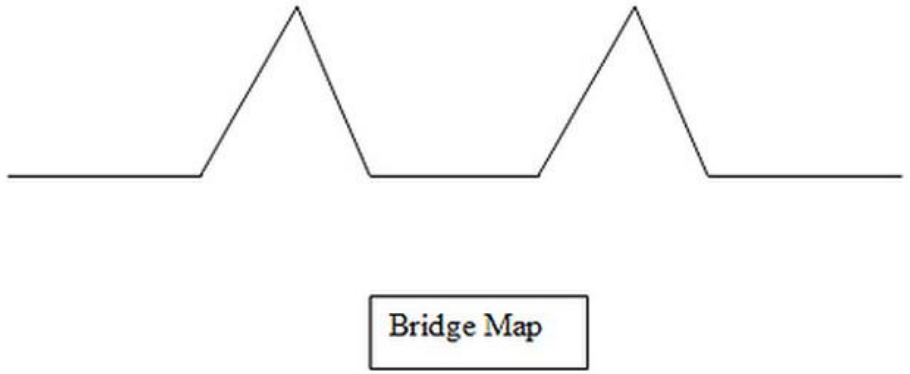

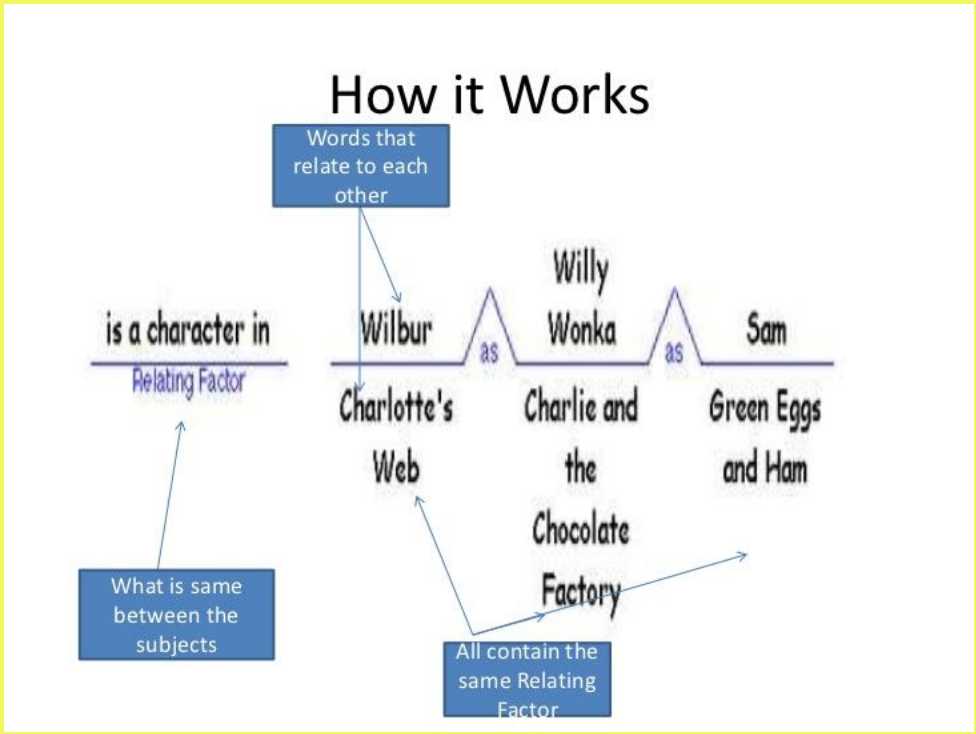

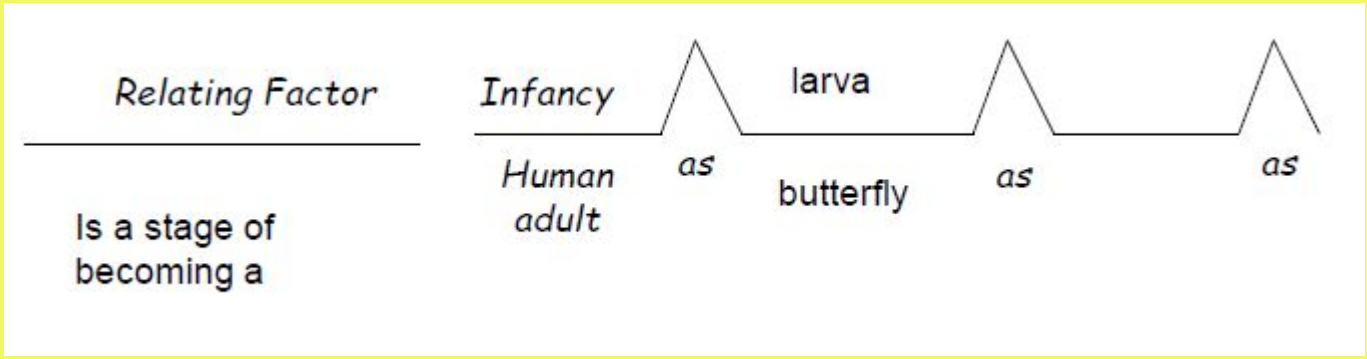

Frayer Model

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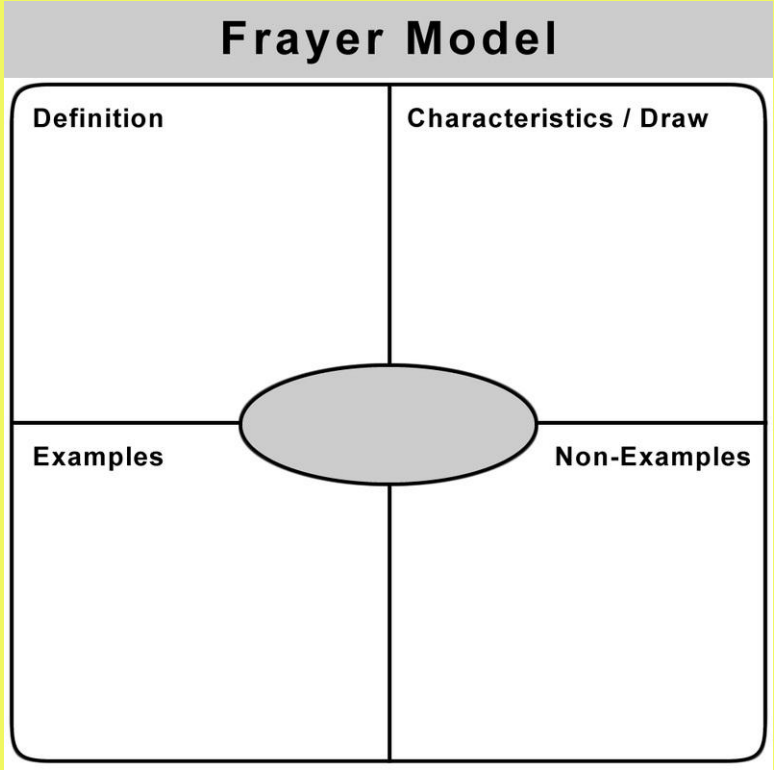
What it is used for?:

More detailed research into a key word/process/topic. Possible to change titles.

‘Summary of topic’ revision task.

Evaluation/plenary task.

Re-teaching lesson task.



From This:

A paragraph explanation of a key word could be written.

Pair and share with others to improve their diagram.

Produce a class Frayer Model.

Identify misconceptions.

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My Definition

A reptilian animal with a hard shell on its back

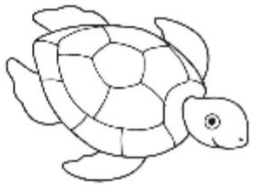
Characteristics/Facts

- *Can pull its head and legs back inside its shell*
- *Can live a long time*
- *Is cold-blooded*

Turtle

Examples

- *Myrtle at the Aquarium*
- *Snapping Turtle*
- *Sea Turtle*



Non-Examples

- *Lizard*
- *Snake*
- *Alligator*
- *Fish*

Definition:

Illustration:

Examples:

Non-Examples:

Student Choice

- Initially, you are going to need to use templates for student to complete Graphic Organisers.
- In time, get students to draw out their own Graphic Organisers.
  - Less limiting/anxious.
  - Some may still need scaffolds.
- Over time, students should be allowed to choose their own Graphic Organiser rather than being directed towards a certain one.
  - Strengths Metacognitive thinking (strategy selection).

Beware…

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- Are you using the names given to each Graphic Organiser correctly?
- Are you selecting the correct Organiser for the correct type of thinking and outcome activity?
- Are you minimising cognitive load?
- Are you embedding Graphic Organisers into further practise or leaving them as bolt-ons?
- Are you using scaffolds when you don’t need to?

Knowledge Organisers and Graphic Organisers

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- Knowledge Organisers are only useful if students are transforming that information (application, orally explaining, retrieval testing etc.).
  - Students cannot just ‘learn’ the Knowledge Organiser
- Graphic Organsiers are a perfect way to transform information from a Knowledge Organiser.
  - Retrieval task.
  - Assessment of understanding of ‘facts’.
  - Scaffold for further tasks – i.e. problem solving/exam questions.
- E.G. A Knowledge Organiser on geographical features that includes the process for the formation of a waterfall can be transformed into a flow map; a Knowledge Organiser on the events prior to WW2 can be turned into a Fishbone Diagram or Multi-Flow Map.

For Example:

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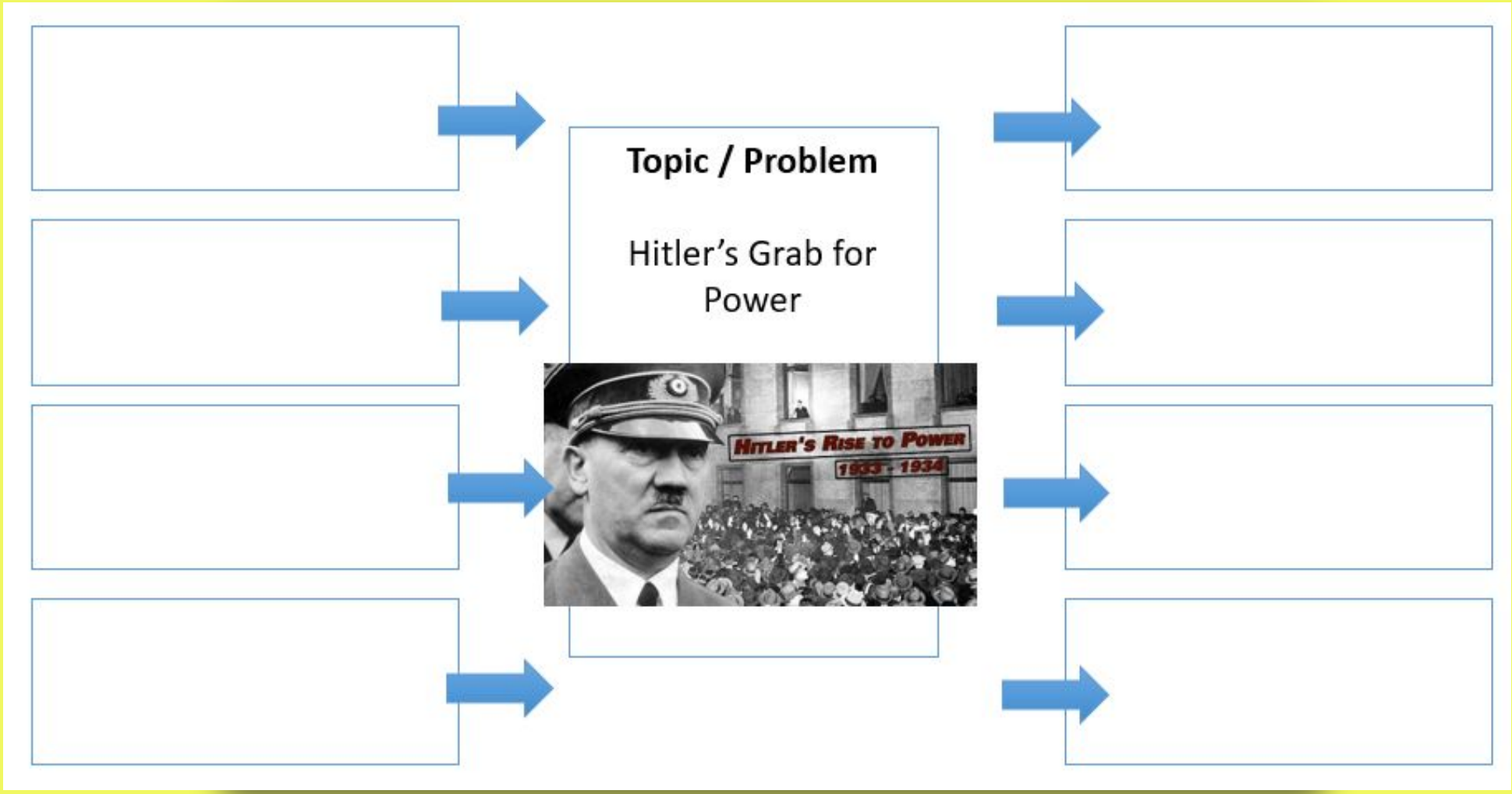

Student Videos

- Student ‘how to use’ videos available for all 10 Graphic Organisers in student section.
- Set as homework/flipped learning/L2L.
- All contain tasks, final quiz and additional worksheet.

Leadership

- Consistent language within and across departments is crucial:
  - Reduce load on students.
  - Improve efficiency.
- Consistent templates within and across departments is crucial:
  - Reduce load on students.
  - Improve efficiency.
- How will you establish effective QA for Graphic Organisers if you mandate them?
- How will you ensure staff are well trained in the 10 different types, their uses, outcome activities and pitfalls?
- Do you need to provide training to students on how to use Graphic Organisers?
  - Drop Down Days/PHSE lessons/assembly/tutor time?
  - This will reduce load on teachers (i.e. they won't have to train students to use each Graphic Organiser).
  - metacognition.org.uk student videos….
  - *Embedded in practise and content*.

Thank you

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