Modelling the thought process & thinking aloud

Effective think-alouds involve **demonstrating whilst voicing aloud all your thought processes**. Not just 'how' to do something, but the internal narrative that matches the demonstration. They show students how you have arrived at decisions, reasons for actions, insights into how to complete the task successfully, pitfalls to avoid, how to correct mistakes… etc. They should show your thinking very clearly – allowing the student to see the metacognitive processes at work.

Examples of where a think aloud may be used:

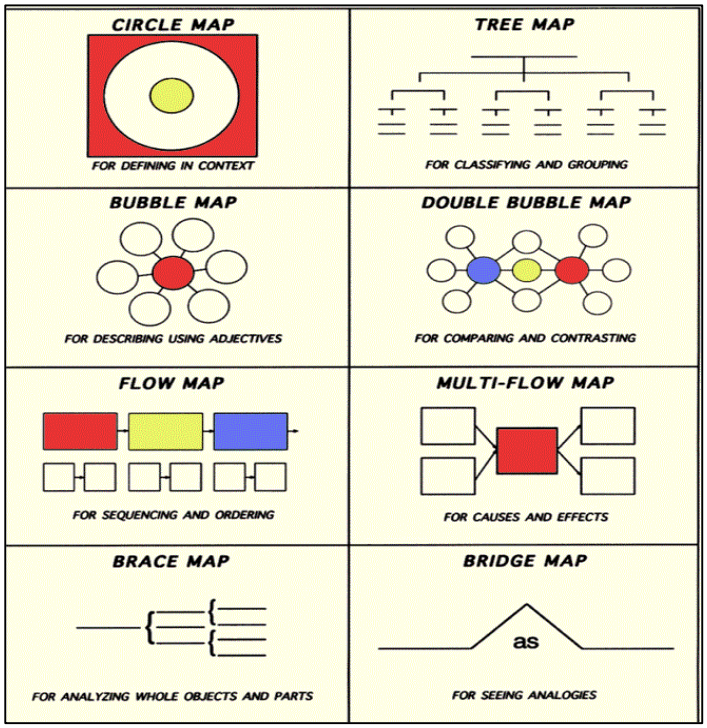
- How to approach a new task
- Thinking through a problem
- Extracting and understanding information from text sources
- Inference and deduction
- Making improvements
- Evaluating work against success criteria
- Modifying an approach when they realise it is not working

A range of tools such as white boards, flipcharts, visualisers, and video can be very helpful for teachers to show their thinking as they model a range of processes.

At the end of a task, pupils can be asked to explain the steps they went through – encouraging them to find their 'thinking voice' and reflect on the learning process.

How could you help teachers to develop and use the skills of a think-aloud and how would this support pupils in developing their own metacognitive skills?

Thinking diagrams and strategies to promote thinking in context



Thinking maps should not be taught in isolation, but should be selected to meet the needs of particular task within a topic. Discussion should take place as to why this thinking map is appropriate for the task (whilst also drawing pupils' attention to other strategies that could be used). It is important to explicitly teach this as a 'strategy for learning' and evaluate its usefulness at the end.

Thinking can also be promoted through techniques such as:

- Brainstorming
- Post it notes / logo visual thinking
- Techniques such as What Went Well and Even Better If
- Questioning each other
- Putting statements on a scale of 0-10
- Venn diagrams

How would you ensure that pupils eventually have a repertoire of thinking diagrams, maps and techniques which they can select and combine to solve a problem or tackle a learning challenge in your subject?.

Purposeful planning and task analysis

In order to be able to work independently, students need to be able to analyse any task or learning challenge they have been set.

Task information can be:

- Plentiful or scarce
- Familiar or unfamiliar
- Reliable or unreliable
- Interesting or not
- Organised or disorganised

Task knowledge informs the person of the range of possible acceptable outcomes, knowledge about task difficulty, and mental or tangible resources for its completion.

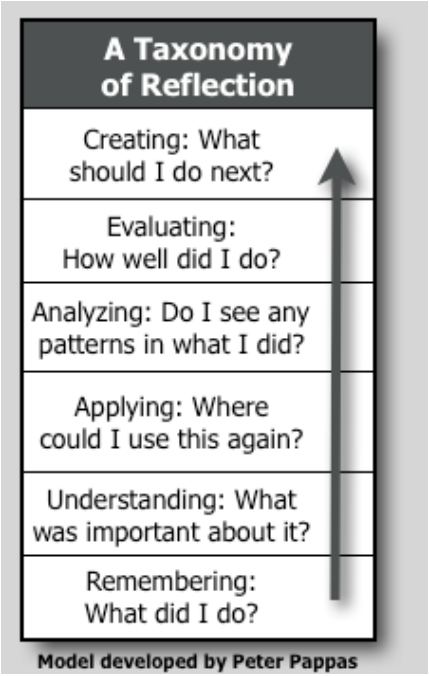
How can you help pupils to develop the metacognitive thinking skills that will enable them to break down a task so that they thoroughly understand it?

How can you help them develop the metacognitive skills necessary to enable them to tackle tasks more independently in the future?

Developing skills of reflection

Pupils are able to reflect on their learning with various degrees of sophistication, not necessarily age related. The metacognitive reflection includes not only an evaluation of the quality of work produced, but also the approach they have taken. It needs to focus on 'them as learners'. Pupils need to understand that learners can increase their effectiveness and efficiency, that learning in itself has a skill set that they can develop. Being reflective is a way to examine and eventually enhance their learning prowess.

How can you help pupils to develop their skills of reflection?



The most important thing I have learnt today is...

What helped me when something got tricky was...

What surprised me was...

What I found difficult was...

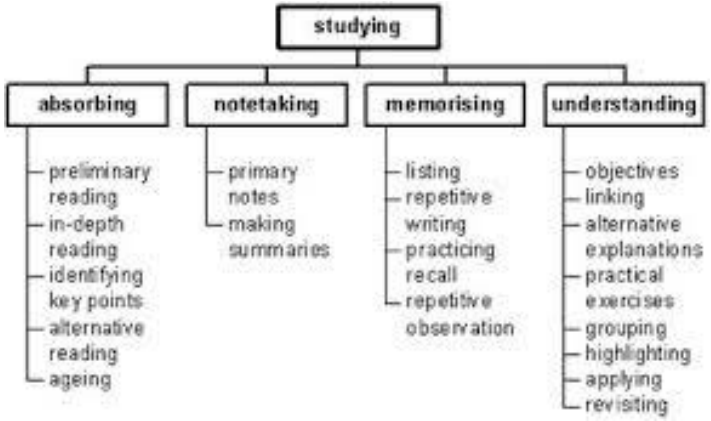
Opportunities to test out and evaluate learning strategies

When was the last time you **explicitly taught** a pupil a **learning strategy**? Did you consider alternative approaches with them? Did you evaluate how effective it was as a strategy after the task had been completed? Why did you teach this strategy at this particular time? How did it relate to your subject? How proficient would the pupil be if asked to use this strategy again?

e.g. There are multiple strategies that could be deployed to help pupils achieve a study skill such as note taking. There are lots of different ways to 'make notes' and lots of ways 'note taking' could be evaluated. What does 'good' note taking look like and why? Pupils need to be aware of the different forms of note taking and strategies they could use when someone asks them to make notes. They need to be skilled in a variety of forms so that they can independently select and use strategies for any challenge they face.

Examples:

- How to learn a set of key words and definitions
- How to summarise a page of text
- How to pick out the key words in a question
- How to use inference and deduction
- How to take notes
- How to answer a question fully
- How to listen to a lecture
- How to categorise objects
- How to write an explanation
- How to skim or scan text



How can you help pupils to develop an understanding of learning strategies, get them to see this as a skill they can develop and become more independent at selecting and applying learning strategies to any task set?

Growth mindsets and seeing themselves as "agents of their own thinking"

In summary: Pupils with a fixed mindset believe that intelligence is fixed and cannot be changed. For example, they see themselves as either 'good at…maths' or 'not good at…maths' and this is not something they have any control over. They were just born that way. Both high and low ability pupils may display a fixed mindset. For example, higher ability pupils might be more reluctant to challenge themselves, fearful of not being successful. This would rock their belief about being 'good at…maths'. Pupils with a fixed mindset often give up easily when faced with challenges. They don't tend to like feedback and see it more as a criticism. Negative feedback would tend to have a demotivating effect. They are often the pupils who want to get 10/10 and everything right with no corrections. They often believe that you should not have to try or work hard, and if you do, it's because you are not 'very good at…maths'.

Whereas, growth mindset pupils tend to love challenge, thrive on feedback, are always looking for ways to improve, are very reflective and more resilient. This is because they believe that intelligence is not fixed and that they can improve their knowledge, skills and understanding. They believe that results come from hard work. They are more likely to believe that their effectiveness and efficiency as a learner can be improved. We want more growth mindset pupils!

How could you ensure a growth mindset culture in your classroom? How could you help pupils to see that they are able to grow and develop as learners?