

# Strategies and Metacognition



## Kim's Game

Pupils are shown a range of objects (physical is better but pictorial can also be used). After a few minutes, the objects are covered. The pupil has to recall as many items as possible.

The activity itself is not metacognitive. What *is* metacognitive is pupils thinking about and articulating the strategy they used to remember the items, evaluating how successful the strategy was, comparing their strategy to those used by other pupils, considering how working memory functions, and why strategies are important in extending working memory, changing and adapt strategies to improve performance, practicing and evaluate strategies. Pupils and teachers should also adopt a longer term view of supporting pupils to independently match memory strategies to task requirements, from a large range of known strategies they have acquired.

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<b>Colours</b> Blue Red Yellow	<b>Numbers</b> Twelve Eighteen Thirty Six	<b>Environment</b> Cactus Oasis Desert
<b>Months</b> November January March	<b>Letter 'A'</b> Antelope Aristotle Acute	<b>Cars</b> Toyota Primera Mercedes (Toy Primer)

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### 1. Mnemonics

First letter: A system using a pattern of letters, images, ideas or associations which help you to remember something

**SHAPE**  
**APPEARANCE**  
**TEXTURE/TASTE**  
**SIZE**  
**UNIT COST**  
**MATERIALS**  
**AGE (OF CONSUMER)**  
**STORAGE**

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### Make Revision Fun

Revision mats

Fortune Teller

Jenga

Learning Grids

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## Revision Strategies

Revision strategies are not metacognitive. They are simply a range of strategies, What *is* metacognitive are the following:

- Considering how many revision strategies you are aware of.
  - Considering how effective your current methods are.
  - Comparing your methods to those of others.
  - Changing, adapting and practicing revision strategies with a view to increasing performance.
  - Considering why revision strategies are needed – e.g. curve of forgetting.
- Judgements of knowing
- How do you decide if you have fully understood something?
  - How do you decide which topics to revise?
  - How do you decide how long to spend on revision? How do you know when you have committed something to long term memory?

*Some pupils have a limited awareness of revision strategies. Some pupils do not spend sufficient time and energy in considering how to improve their revision strategies. Some pupils spend too long, or not enough time on revising topics because their 'judgement of knowing' is very inaccurate. Metacognition can therefore help them to see how to take greater control of the learning process and improve their performance.*



Teacher demonstration

**BASIC COLOR THEORY - YouTube**  
www.youtube.com/watch?v=FigzYUih0Dcg  
10 Sep 2013 - Uploaded by The Artist Block  
ONLINE STORE: http://society6.com/JONGRIM KEEP CALM POSTERS, SHIRTS AND MORE!

**Understanding Color - YouTube**  
www.youtube.com/watch?v=Qj1FK8n7WgY  
27 Feb 2014 - Uploaded by Blender Guru  
Why Color is so important, Saturation and Value and six Color ... Does this cover the color theory? because im about to read that book and im ...

Video clips



iPad apps



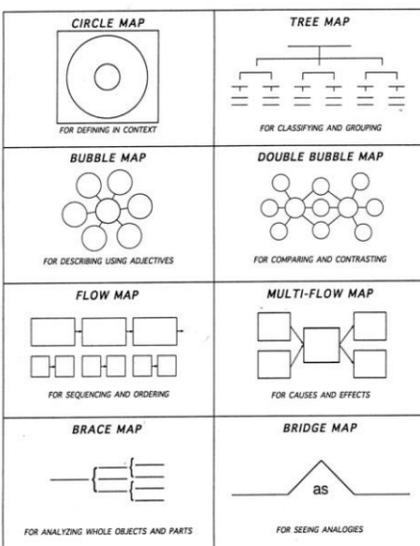
Collaborative puzzle



Exploration and experimentation

## Colour theory at Guiseley School

The pupils learnt about colour theory using a range of strategies (illustrated above). The strategies themselves are *not* metacognitive. What *is* metacognitive is considering which was *the most effective way to learn, which strategies increased their depth of understanding* of colour theory, if they now had to study a new element of art such as 'pointillism' *which of the methods would they choose and why?* Having being introduced to a range of strategies **pupils need to have the opportunity to try new strategies, adapt and change strategies, and evaluate their use of a strategy.** This is with a view of increasing pupil's repertoire of strategies and for them to eventually select and match strategies to task requirements. The chance to use a range of strategies increases pupil independence and helps to demystify the learning



## Learning grids with a meta-twist: extension tasks with meta-questioning

- Put pupils in pairs
- Each roll the dice to get co-ordinates for a box on the grid
- Allow a minute thinking time
- Allow 2 minutes sharing time
- Allow 3 minutes planning time
- 3 minutes sharing time

**Think Pair Share**

- ✓ Differentiation
- ✓ High order questioning
- ✓ Independent learning
- ✓ Collaboration
- ✓ Engaging
- ✓ Challenge
- ✓ Adaptable
- ✓ Pace

Reference: Griffith and Burns: *Engaging Learners* 2012

Examples of the statements and questions in the grid:

- Zoom in on a section of work. How will you decide which section to choose?
- Recreate your image in the style of an artist. What decisions should you make to help you choose which artist to use?
- Do a continuous line drawing. What decisions do you need to make about layout and scale?
- Use two alternative ways of recording your image. How do you know which techniques will be suitable to try?
- Make a black and white negative of your image. E.g. dark tones become light, Where would the best place to start be?
- Change the mood of your piece. What do you need to consider in order to do this?
- Take away three elements of your work and add in three new elements to create new piece. What impact will this have?

Tools such as the 8 thinking maps or game grids (illustrated above) are *not* metacognitive. However, they lend themselves to pupils developing metacognition as **they make thinking visible and encourage pupils to 'think about their thinking'**. It is not the tool itself, but **how they are used** that make the activity metacognitive. E.g. Reflecting on the usefulness of a thinking map, adapting a thinking map, learning how to match thinking maps to particular types of task, even simply being aware of them as a strategy for sharing their thinking are all metacognitive.