ABOUT THIS SESSION:
Investigate the study of metacognition and how it can be effectively used to challenge and progress the 'more able' through teaching and learning, reflection and feedback.

ABOUT THE FACILITATOR:
Jodie Greenhough - Over my 4 year teaching career, my main focus continues to be effective and meaningful teaching and learning that allows all students to achieve. I have been involved in professional development; mentored trainees and NQTs along with being subject SCITT lead for history; have had the responsibility of developing the 'more able' at whole school level at John Taylor High School; responsibility within my subject and am currently being trained as a quality first teaching and learning coach. Last year, I completed the inaugural year of the SSAT Leadership Legacy Programme, which allowed me to get involved in research into the most effective teaching and learning methods, something which I am passionate about sharing.

ADVANCED READING:
N. Chick, 'Metacognition'
Ofsted, 'The Most Able students – still too much talent going to waste', June 2016
Griffiths & Burns. (2014) Outstanding Teaching: Teaching Backwards. (Crown House Publishing).

WIDER READING:
Pintrich, Paul R. (2002). The Role of metacognitive knowledge in learning, teaching, and assessing. Theory into Practice, 41(4). 219-225.
Bransford, John D., Brown Ann L., and Cocking Rodney R. (2000). How people learn: Brain, mind, experience, and school. Washington, D.C.: National Academy Press.

Jodie Greenhough
John Taylor High School

Metacognition for the ‘more able’

j.greenhough@jths.co.uk

Metacognition for the ‘more able’

Aims:

To understand the latest research on metacognition.

To evaluate teaching and learning methods which implement this.

1. What is the national picture for the ‘more able’?
2. What is metacognition?
3. What does this research look like in practice?
4. What teaching and learning activities will ensure I embed metacognitive understanding in my classroom?

‘Metacognition should not be an ‘extra task’ that adds to teacher’s workload but is intrinsic to their teaching activities’.

Metacognition for the ‘more able’

National picture

More than a quarter of those who achieved Level 5 in English and mathematics at the end of Year 6 failed to attain at least a B grade at GCSE in those subjects.

Too often, the curriculum did not ensure that work was hard enough for the most able students in Key Stage 3.

In some schools, teaching for the most able lacked sufficient challenge in Key Stage 3.

There are ‘disproportionate efforts’ being made to get pupils over the C borderline and not the A/A*.

Ofsted 2013-16 reports on more able provision

Metacognition for the ‘more able’

What is ‘metacognition’?

Cognition	• Understanding what allows pupils to learn successfully and what techniques would allow them to be able to identify this.
Metacognition	• Understanding ‘cognition’ and what techniques/revision methods etc. works for them but ‘metacognition’ is the process of understanding why that works and being able to monitor and evaluate their learning.
Motivation	• The willingness to engage our metacognitive and cognitive skills and apply them to learning. E.g. a student convincing themselves that they need to start with the hardest revision area so they prevent problems in the long term, rather than starting with the easiest.

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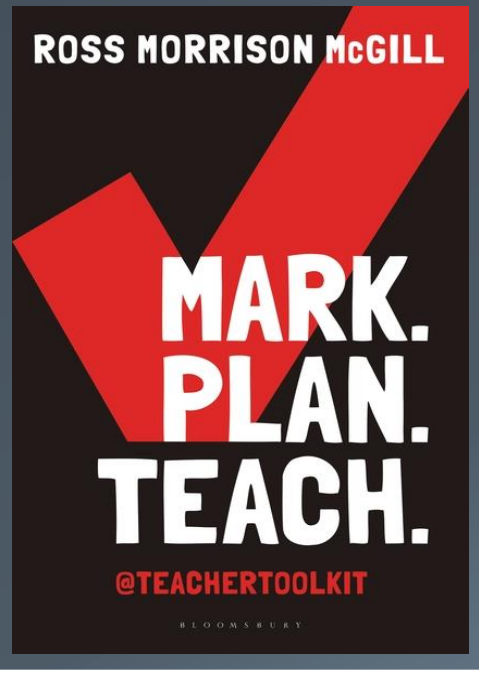
What is ‘metacognition’?

When discussing goal setting and having clear targets and outcomes, **John Hattie’s** research suggests that doing this has a 0.6 impact on student outcomes which equates to half a grade over the academic year.

+7 months progress

This constitutes:

- ❑ Clear learning objectives that they understand and reflect on
- ❑ Mid-long term goals shared e.g what skills/themes/grammatical rules etc. are they learning?
- ❑ Relate this to how it helps them with their exam/assessment/development



Education Endowment Foundation

Metacognition for the ‘more able’

What is ‘metacognition’?

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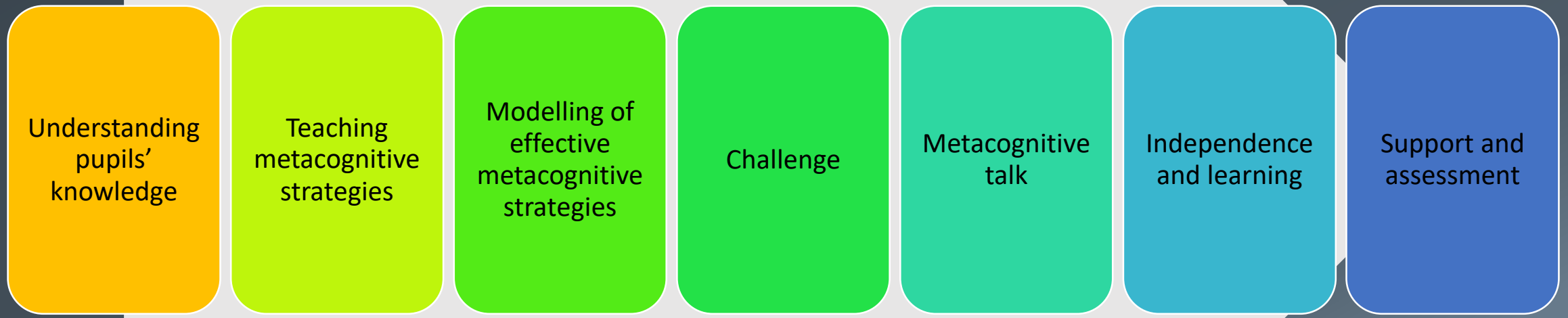

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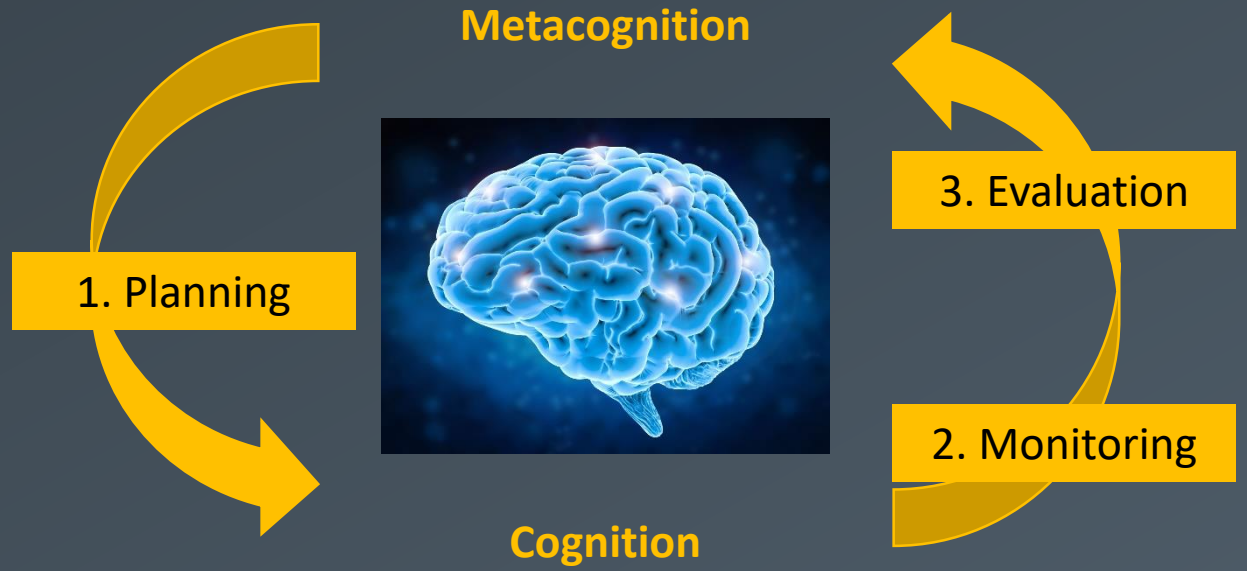
1. Understanding pupils’ knowledge

- Pupils having the understanding of their strengths and weaknesses and what motivates them
- To establish an ongoing cycle in your classroom of:



1. Skills/topic lists needed for success – have pupils rank their strengths and weaknesses and this then translates into revision priorities. This could also be done after exams to aid reflection (see example).
2. Assessment grid – tally every time they have a specific target e.g. common targets get tallied to show them what their areas for development are to gain motivation.
3. Individualised homework – instead of a normal homework menu, have skills based ones – makes it more relevant for MA as you can ensure challenge.

1.

Y11 trial exams feedback review

	Q		Marks	My Mark	Marks lost	Revision Priority
The Making of America 1789-1900	1a	Name one of the five tribes removed from the East between 1830-1838.	1			
	1b	Name one of the settlements built by Mormons in Utah between 1838-1860.	1			
	1c	Name one state which joined the Southern Confederacy.	1			
	2	Write a clear and organised summary that analyses the experience of African Americans living in the South during the Civil War 1861-1865. Support your answer with examples.	9			
	3	Why did the Sioux and the United States come into conflict during the Great Sioux War 1876-1877?	10			
	4*	'The growth of the cotton industry was the main driving force behind American expansion before the Civil War'. How far do you agree with this statement?	18			
	5*	'The Mormons faced more challenges going west than any other migrants'. How far do you agree?	18			

➢ 5. 'The Mormons faced more challenges going west than any other migrants'. How far do you agree?

Structure		Knowledge		Two sided argument		Judgement	
Targets:							

4. Menus of exam questions – structures/mathematical processes etc. this gets them to have a clear point of reference and increase independence.
5. Pupils have to understand the process of a skill/exam question/equation etc. so they need to understand at what point they might hit a barrier – starters or points throughout the lesson, have a representation of what you're trying to achieve and talk through what the process is; the issues; their options when this happens – it allows MA to showcase their strategies and explain them for others to learn from.
6. Increasing 'cognition' (understanding) – dissect questions e.g. theme, date, factor, opinion:

'To what extent were the *democratic reforms of 1919* responsible for the *political instability of the liberal state 1896-1922*?' Assess the validity of this view. [25]

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2. Teaching metacognitive strategies

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- Plan
- Monitor
- Evaluate

‘Explicit instruction’ – not just telling them what to do, questioning that makes them think about their process e.g. if you’re drawing a self portrait, asking ‘what did you learn from the examples we looked at earlier?’; ‘did my line guide strategy work?’; ‘what are the ways you could improve next time?’.

‘Self regulated strategy development’ – done by the Calderdale Excellence Project added 9 months to the writing of KS2 pupils by setting up clear acronyms and intervention for pupils (primary/literacy coordinators).

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2. Teaching metacognitive strategies

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How to teach metacognitive strategies?

1. **Activating prior knowledge** (recapping what they already know)
2. **Explicit strategy instruction** (explains the task and what skills it’ll bring them and its importance – big picture)
3. **Modelling** (models part of the task)
4. **Memorisation of strategy** (after partial completion, teacher checks understanding and if they’ve encountered any problems with the task)
5. **Guided practice** (if so, models again)
6. **Independent practice** (Pupils complete the task)
7. **Structured reflection** (questioning on subject content, why that particular task was chosen for that subject matter and what skills they’ve used)

Cause
Ideology
Molecule
Verb etc.

Event
Equation
Thinking
question
Sentence

Effect
Consequence
Reaction
Etc.

JTMAT Conference

Metacognition. Collaboration. Feedback.

National Forest Teaching School
learn teach grow share

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3. Modelling of effective metacognitive strategies

‘Deliberate difficulty’ – Bjork and Bjork (2011) state the importance to challenge pupils is to purposely have activities where pupils have gaps where they have to think for themselves to solve the problem/increase their learning.

Removing scaffolding is the way to do this:

1. Activating prior knowledge
2. Explicit strategy instruction
3. Modelling
4. Memorisation of strategy
5. Guided practice
6. Independent practice
7. Structured reflection

As you go through this process, the teacher to student input is changing – increasing the student input and therefore removing scaffolding.

1. Hypothesis questions – as staff, you know what the next topic/skill is, deliberately ask challenge questions that centre around that next step e.g. you’ve looked at the socio-economic consequence of this, but what could be the political based on context? What would happen if I added this chemical to this solution? Etc.
2. Structure/process sheets so they can ‘internally scaffold’.
3. Study partners – any process of taking away the reliance on the teacher and overcoming barriers.

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4. Challenge

Pupils need to be able to understand the challenge level of each activity for them to understand what they find more difficult.

‘Cognitive load theory’ – the amount of information our working memory can hold at any one time.

‘Flooding’ is a way that this can be utilised. Giving pupils a large amount of information, with the necessary tools/metacognitive understanding to succeed, and they have to work their way through the problem – highly challenging.

1. Quigley, 2016 states the way to challenge is to ‘interleave’ topics which means placing wider gaps between learning the content and repeating/revising the content so ‘the brain is forced to do a harder job at remembering’.
E.G. teach topic x, teach topic y, revise/recover topic x and revise topic y.
2. Structured planning templates, teacher modelling, worked examples and breaking down activities into steps are the ways the EEF say you can achieve the challenge.

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Individual improvement task set by the teacher:

What do I need to do to ensure that this essay is improved next time (highlight as appropriate):

1. Use the structure sheets given (in your folder, given at the start of the year)
2. Take more time with my essays and ensure I try my hardest
3. Review the topic/theme in the question to ensure I have a better understanding
4. To get the work from the lessons missed so I don’t have any gaps in my knowledge
5. To make a clear plan before I start writing so that I can organise my information in a more effective way
6. Do some wider reading around the topic in question

What are you pleased with from this essay?

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1. Any activity that will develop oracy – debates, Socratic circles etc.
2. ‘Talk partners’
3. Ability for pupils to explain where they’re at; what their strengths are and what is their next area to develop – parents’ evenings?
4. Group activities such as ‘pit’ activities – together, they will have to develop their way out of a difficult process. MA could be leaders.
5. Assessment reflections

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6. Independence and learning

To increase self regulation, timely feedback is noted as aiding the planning, monitoring and evaluating cycle that pupils need to develop.

Zimmerman (2010) states a number of characteristics that effective learners have that we can all implement and bolster in our classrooms:

1. Set short term specific goals (E.g. revision plan)
2. Understands and implements how to achieve those goals (knowing that revision cards work)
3. Monitors performance (doing exam questions)
4. Restructuring their physical and social context to make it compatible with the goal (leaving their phone in a different room, setting a timer for breaks so they don’t keep checking the time)
5. Manage time effectively (structuring their revision time)
6. Self evaluating their methods (checking whether they’ve achieved all of the things they wanted to in the time)
7. Adapting future methods (realising x took them longer, so adjusting the plan.

All of this is said to increase their **‘accuracy of judgement’** which increases independence.

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6. Independence and learning

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1. Timely feedback = adjustment/increase assessment opportunities = adjustment of mark sheets to minimise a detriment on workload.
2. Department revision sheets – come up with the best ways to revise in your subject and compile a sheet. Give this to pupils and they have to trial 3 techniques and give feedback on them as to why they did/didn’t work for them.
3. ‘Exam wrappers’ – comparison of performance/understanding at different points e.g. year 10 and year 11 trial exams and an action plan for that.

John Taylor High School History department assessment sheet

‘Statement’. Assess the validity of this view. (25 marks)

Positive		Targets
	A clear judgement and argument at the start of the answer.	
	Judgement that is specific and referenced throughout the answer.	
	The factor/issue in the question is evaluated first.	
	Prioritisation of factors throughout.	
	There are three specific pieces of evidence for each of the factors/issues in the question.	
	Depth of evidence is evident.	
	A range of evidence is in the answer to cover all relevant issues to the question and covers the date range.	
	Key words in the question are used and the theme in the question (e.g. foreign policy, religious change etc.) is used throughout.	
	PEEL structure (point, evidence, explain, link) is used for all paragraphs.	
	Links back to the question throughout.	
	A balanced argument in your answer – agree and disagree or 4 factors.	
	Counter arguments with specific evidence referenced at the end of each factor.	
	Clear judgement referenced at the end of each factor/issue.	
	A conclusion that references judgement and a second order concept referenced.	
	Really good understanding of what is being asked in the question.	

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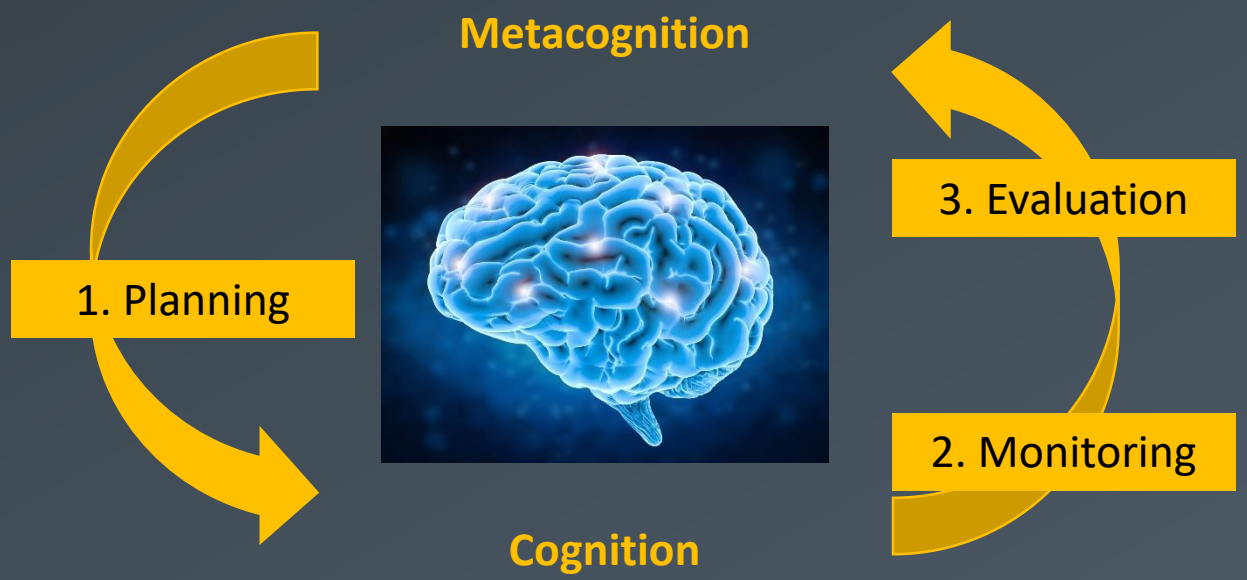
Summary



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