



Model and....
Checking for understanding



Teaching Habits



1. Recap

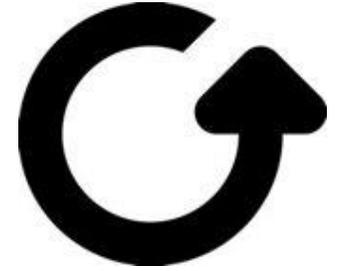
2. Model

3. Practise



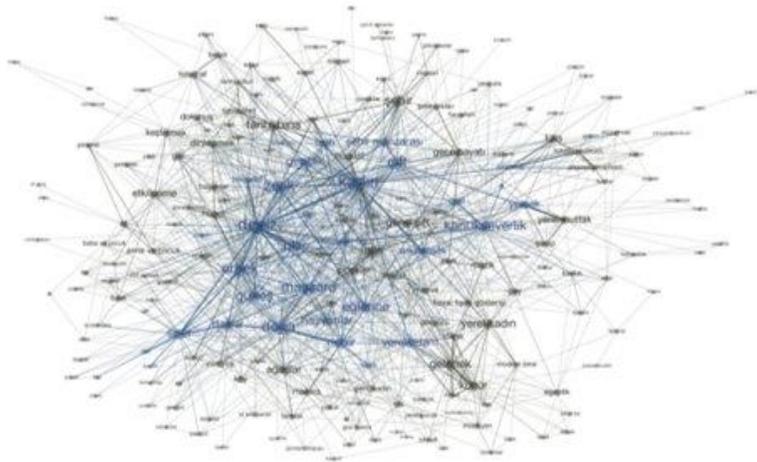
Working memory is a bottleneck so needs frequent **recap**, **checking for understanding** and **practice**

Learning is a change in long term memory

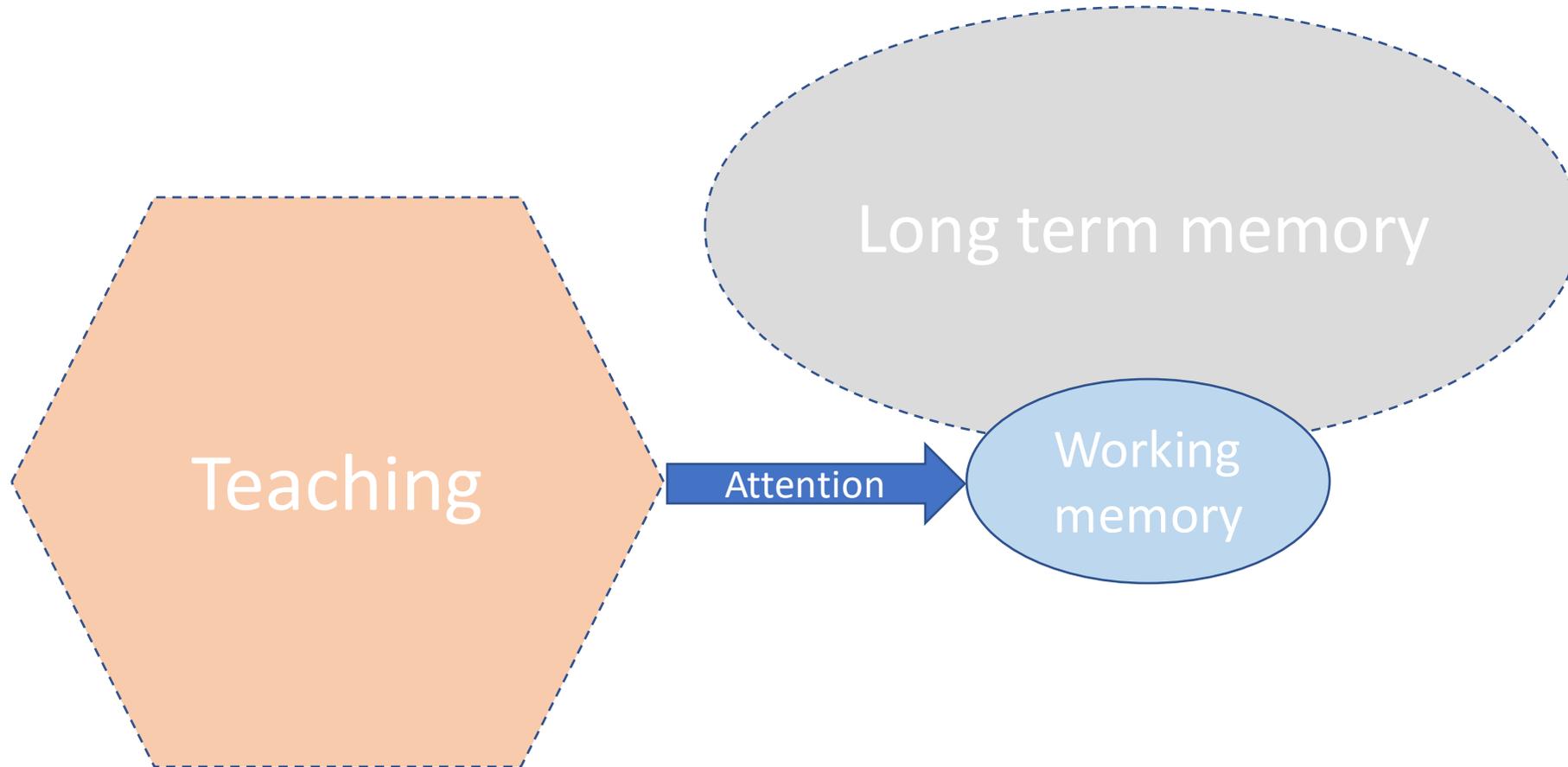


Knowledge is a key ingredient in **building fluency, thinking capacity**, and crucial for the development of **long term memory and higher level conceptual thinking**

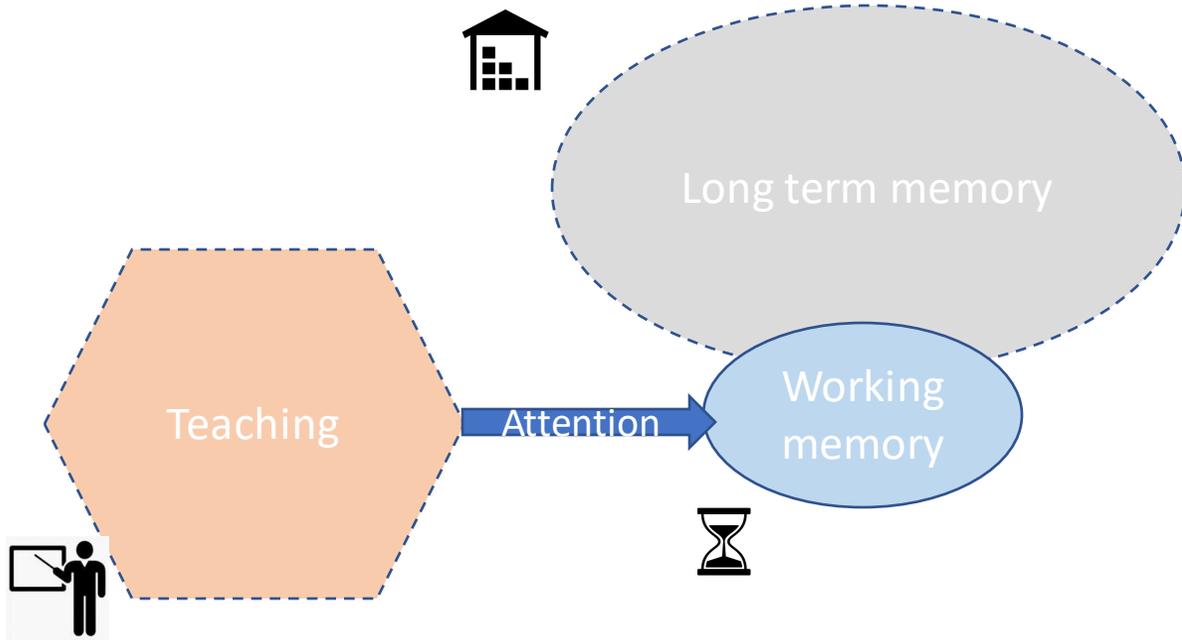
Recap, retrieval and recall free up working memory space and build **secure schemas**, webs of knowledge that allow long term, durable learning structures to build in our minds.



Why is attention so crucial?



Why is attention so crucial?



Clear, concise teaching and direct instruction with expert **modelling**



Working memory is a bottleneck so needs frequent **recap** and **practice**



Schema building in long term memory leads to durable learning

Recap

Mini white boards: Routine (see next slide)

Students share their key ideas or answers at once; teacher scans the responses addressing some key issues, giving corrective feedback.

A sequence of **diagnostic questions** on the board: Students have to answer individually, responding with whiteboards. Every student is made to think. The teacher picks up the trends and addresses key issues that arise.

<https://www.youtube.com/watch?v=d-k8ALbYTOY>

Recap

- 1) Whiteboards out
- 2) Pen lid safe
- 3) Whiteboards secret
- 4) Do not start writing until told to
- 5) Write in large clear writing
- 6) Place whiteboard face down
- 7) When teacher says '3,2,1 show me'. Hold up when the teacher says 'show me'.
- 8) Use both hands so board does not wobble
- 9) Even if not finished hold up the board
- 10) Wait until teacher is ready to put board down.

9 Reading: Whiteboards

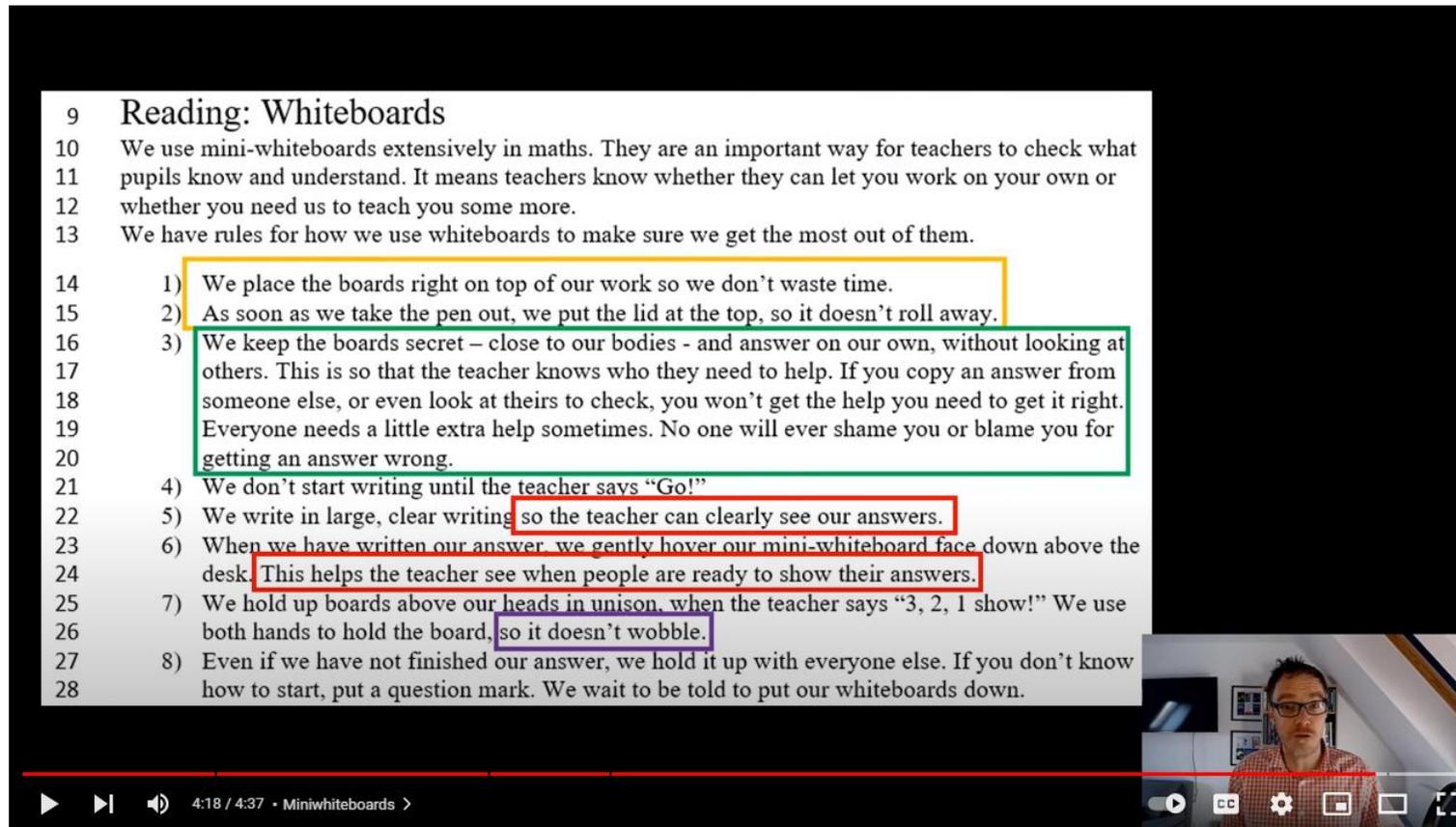
10 We use mini-whiteboards extensively in maths. They are an important way for teachers to check what

11 pupils know and understand. It means teachers know whether they can let you work on your own or

12 whether you need us to teach you some more.

13 We have rules for how we use whiteboards to make sure we get the most out of them.

- 14 1) We place the boards right on top of our work so we don't waste time.
- 15 2) As soon as we take the pen out, we put the lid at the top, so it doesn't roll away.
- 16 3) We keep the boards secret – close to our bodies - and answer on our own, without looking at
- 17 others. This is so that the teacher knows who they need to help. If you copy an answer from
- 18 someone else, or even look at theirs to check, you won't get the help you need to get it right.
- 19 Everyone needs a little extra help sometimes. No one will ever shame you or blame you for
- 20 getting an answer wrong.
- 21 4) We don't start writing until the teacher says "Go!"
- 22 5) We write in large, clear writing so the teacher can clearly see our answers.
- 23 6) When we have written our answer, we gently hover our mini-whiteboard face down above the
- 24 desk. This helps the teacher see when people are ready to show their answers.
- 25 7) We hold up boards above our heads in unison, when the teacher says "3, 2, 1 show!" We use
- 26 both hands to hold the board, so it doesn't wobble.
- 27 8) Even if we have not finished our answer, we hold it up with everyone else. If you don't know
- 28 how to start, put a question mark. We wait to be told to put our whiteboards down.



Mini-whiteboards: go deep on the routine - Tips for Teachers



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Re-teach

A **short round of cold calling to check for understanding**, looking for good recap and consolidation of the material required as a starting point for today. **The teacher re-teaches as needed – making a judgement to balance the need to consolidate with the need to move on.**

Model and check

Demonstrate and Check for Understanding: Teacher demonstrates how to answer a particular question type based on the text.

They do this via a **live modelling process writing by hand under the visualiser, narrating their thinking as they go.**

Periodically, the teacher stops to select students to explain the latest step in the modelled example, checking their understanding. (The reading plus visualiser demonstration feels like a much better intro than clicking through a powerpoint.)

For key words tier 2 and 3

Call and response

Write the word, students write the word

Say the word out loud to the class

The class repeat.

Show them how to do it.

Use your arms/hands to signal when you need the response.

Do this 3 times

This is a good time to share the etymology of the word

atmosphere (n.) 1630s, atmosphaera "gaseous envelop surrounding the earth,"

From **Modern Latin** atmosphaera, from Greek **atmos** meaning "**vapor or steam**"

Comparisons

Multiple examples. More than one similar example is **modelled**. The first two examples are compared side by side so students can see how they are different but also how they follow similar patterns.

The teacher models the self-evaluation process: Is it correct? Is it good? Could I do it better?

They could call students to invite critique, identifying key features of success.

Mini whiteboards

Using whiteboards with a routine is important.

The routine for whiteboards will be

- 1) Whiteboards out with no graffiti
- 2) Pen lid safe
- 3) Do not start writing until told to
- 4) Write in large clear writing
- 5) Place whiteboard face down
- 6) When teacher says '3,2,1 show me'. Hold up when the teacher says 'show me'.**
- 7) Use both hands so board does not wobble**
- 8) Even if not finished hold up the board
- 9) Wait until teacher is ready to put board down.