



# Teaching and Learning Newsletter

## Spring Term 2022

*“The best available evidence indicates that great teaching is the most important lever schools have to improve pupil attainment. Ensuring every teacher is supported in delivering high-quality teaching is essential to achieving the best outcomes for all pupils, particularly the most disadvantaged among them.”*

*(Education Endowment Foundation)*



## Introduction

As an outstanding school with a commitment to ongoing teacher development, we continue to use research to identify how we can further improve our practice. Alongside the work we have completed on Rosenshine's principles, the most recent Good Practice Week allowed staff to learn from others. A diverse series of sessions were offered to ensure all staff were able to benefit and further develop their knowledge, understanding, and skillset in an area they feel they would most benefit from.

The process began by gathering information on staff CPD 'offers' and 'wants', in order to ensure the programme of sessions offered staff the opportunity to attend a session related to a topic that was of particular interest to them. As you will see from the following pages, there were a range of sessions which covered, teaching and learning, ICT and well-being. The session on long term memory was particularly well-attended reflecting the research and work we have completed so far this year on knowledge retention and retrieval.

# Retrieval Practice and Examination Preparation Classroom Ideas – Miss S. Webster

Trying to find fun and interesting ways to revise can be a challenge for all subjects. Games such as Articulate and Around the World were demonstrated to show how we can mix up the format of retrieval practice and revision to ensure variety within our classrooms.



## Around the World

- The first two students pair off against each other
- You ask a question, and whoever shouts the answer first wins
  - The winner stands and moves to the next contestant
- The goal is to move as many seats as possible before losing, at which point the losing student sits in the seat of the person who eventually beat them
- The game ideally continues until one student makes it “around the world” and gets all the way back to their own seat. Often, though, the game simply ends when time is up, and the person who travelled the farthest wins

To improve examination technique, students can be encouraged to learn from each other. Being able to see how their peers are approaching questions can demonstrate to students how they can further improve their own answers. Creating a ‘tip jar’ for students to add their best ideas into, or using activities such as ‘Magpie’ or ‘Something Old, Something New, and Something Borrowed’ can act as a quick way to support improvement.



Improving exam technique by  
learning from each other...

*Magpie*

- Read the answer written by someone else
- What can you ‘steal’ from their answer that would improve your own



© Maggie Chindig

*Something Old*

What did you also include?

*Something New*

What is in their answer that is new to you/something you didn't consider in your own?

*Something Borrowed*

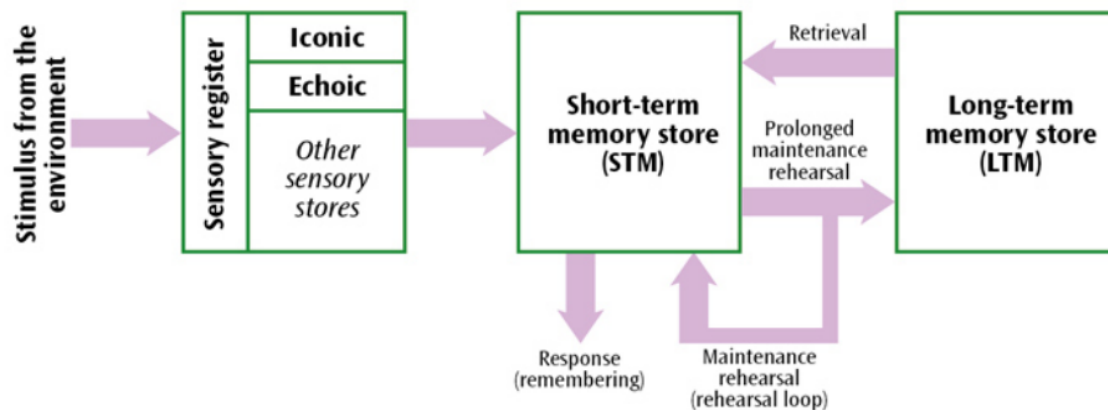
What can you ‘borrow’ from their answer to improve your own?



We also spent some time looking at modelling in relation to examination technique. When we model, it can be really beneficial for students to see how the teacher gets to the answer. By narrating and modelling our thinking, rather than just the end result, students can see the thought process that goes into creating a final answer. When we provide students with model answers, it is also good practice to get them to review each part of the answer and write the narrative; for example, why is this section good? What have they included? Which part of the question does this address?

# The Psychology of Memory – Mr O. Pointon

During our teaching and learning focus this year, we have spent a lot of time talking about our memory. Further understanding this will allow us to further support our students in developing their ability to recall information in the future. Below is a simple diagram of how the human memory is thought to be structured. Beneath this you will find an explanation for each section, with the implications that this might have for how we teacher and how students learn.



## Sensory Register

A **stimulus** from the environment passes into the **sensory register** and into one of **five memory stores**.

The sensory register has a very **high capacity** and a very **short duration**, with information being passed on through the process of **attention**.

It is therefore important to be aware that just because a student is **listening, watching** or even **writing things down**, that **doesn't mean that they are learning**.

It is important to **draw students attention** to **small pieces of information**, and to **not overwhelm their senses**.

## Non-Declarative Memory

Procedural memory contains our memory of **actions, skills**, and how to **do things**.

We can recall these memories **without** a great deal of **conscious effort**.

These are the sorts of skills that we find **difficult** to **explain** to someone else.

It is therefore important that students are strengthening both of these memories (e.g. **what** the equation **is** for photosynthesis is and **how** to respond to a **question** about a change in the reactants).

## Short Term Memory

The Short Term Memory is a **limited capacity store**.

It has a **capacity** on average of **7 +/-2 items** and a duration of around **18-30 seconds**.

**Maintenance rehearsal** occurs when we repeat information to ourselves, and information remains in the STM as long as it is **rehearsed**, and if rehearsed long enough will eventually **pass on to the LTM**.

Students need the opportunity, **almost instantly**, to **rehearse** the information that has been presented.

This could be through **repeating it to themselves / writing it down, you repeating it aloud**, or allowing them time to **link it to prior knowledge (elaborative rehearsal)**.

## Declarative Memory

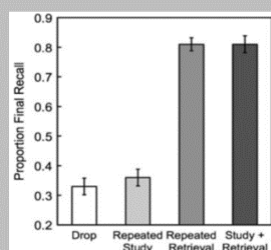
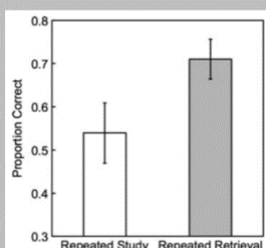
**Episodic** memory refers to our ability to recall **events (episodes)** from our lives, and are compared to a **diary**.

These memories are **time-stamped**, single episodes contain **several elements**, and a **conscious effort** has to be made to **recall** episodic memories.

**Semantic** memory contains **knowledge** of the world and has been compared to a combination of a **dictionary** and an **encyclopaedia**.

These memories are not **time-stamped**, are **less personal**, and the semantic memory contains an **immense collection** of material which is **less vulnerable to distortion** and **forgetting**.

## Implications for Teaching



## Implications for Teaching

### Practice Testing

Retrieving **knowledge** to generate an **answer to a question** (e.g. past papers, multiple choice, writing essay answers). This is more effective when it is "**low-stakes**".

### Elaborative Interrogation

Asking why something is **true** or **why** something might be the **case**?

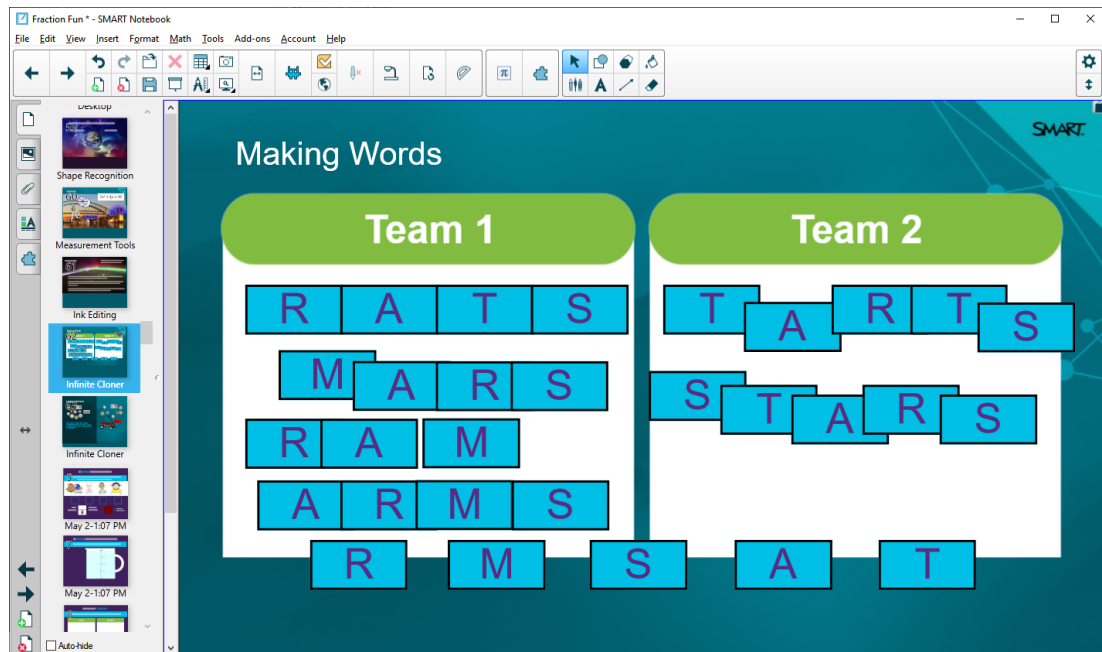
### Distributed Practice

Retrieving knowledge for **short periods** of time **often**, rather than for a prolonged period of time. This can be most effective when it allows for **forgetting** and **re-learning**.

### Interleaved Practice

**Not** studying modules / topics / problems as **discrete**.

# Smart Board and Notebook Software – Ms D. Branson



With Smart Boards and Notebook Software in our classrooms, many staff identified that they would benefit from some tips and tricks as to how to get the most from this technology. Within the session, staff were shown how to use the various whiteboards available without mirroring your computer monitor; a useful tip allowing you to have two students writing on the board at a time while you take the register for instance. There is a whole array of different board templates including graph paper, columns and flow charts all stored on the board until you remove them, so you can revisit them at any time.

Alongside this, staff were introduced to the SmartBoard Notebook software itself. Being able to save sound files, internet links and even documents or PowerPoints into a file so that it's available for future use saves having to open many different items before starting to teach. It's also great for Teams as all annotations are fully visible to everyone. There are numerous features of the software alongside using it to draw and type, including interactive tools like timers and dice.

Finally, staff were shown how to use the SmartBoard tools on any screen, particularly the screen shade and spotlight options to reveal parts of the screen at a time.

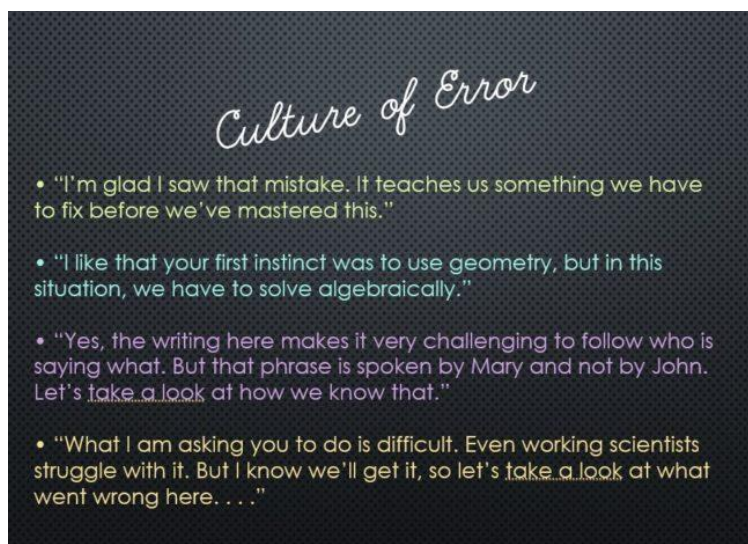


# Rosenshine's Principles: Practical Classroom Strategies

## – Mr D. Postle

In this session, we focused on exploring four practical classroom strategies, each of which was closely linked to one of the four strands from Tom Sherrington's book, *Rosenshine's Principles in Action*. This session also provided a good opportunity for staff to share some of the strategies they had been working on within their Professional Learning Groups.

### 1. Culture of Error (Sequencing, Concepts and Modelling)



The strategy is one that can be found in Doug Lemov's *Teach Like a Champion*. We started by considering how we approach a situation where a student shares an answer in class, but it is not the correct one. Lemov proposes creating a culture in the classroom where such situations are always framed in a positive manner and one in which students are explicitly taught that errors and misconceptions are a fundamental part of the learning process. You can read more about creating a 'culture of error' here:

<https://teachlikeachampion.com/blog/building-a-culture-of-error-a-tlac-3-0-excerpt/>

### 2. Cold Calling (Questioning)



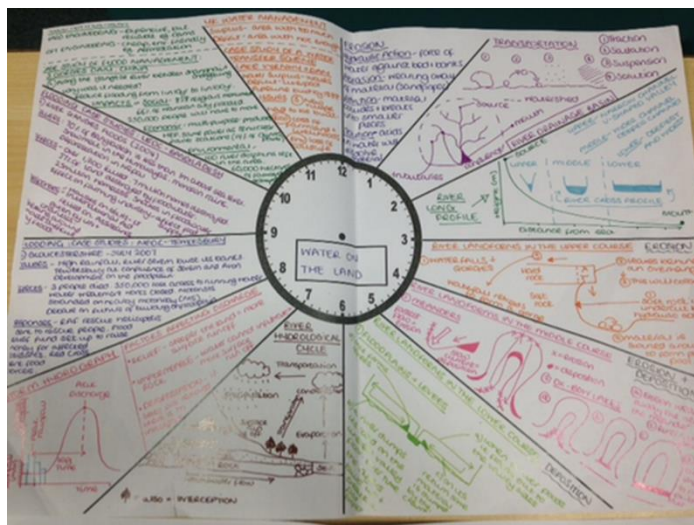
<https://teacherhead.com/2021/02/07/cold-calling-the-1-strategy-for-inclusive-classrooms-remote-and-in-person/>

This strategy has been a key one for the questioning Professional Learning Group, as it is both powerful and simple to use in the classroom. We started by talking about all the reasons a student might not raise their hand to answer a question and the impact this might have on both focus and learning. 'Cold Calling' is fundamentally about ensuring all students are ready to 'have a go' at answering a question, as the teacher can select any student at any moment. Tom Sherrington has suggested that it should be teacher's default mode of questioning, describing it as 'one of the strategies with the biggest impact on the overall effectiveness of lessons.'

# Rosenshine's Principles: Practical Classroom Strategies

## – Mr D. Postle

### 3. Knowledge Retrieval Clock (Reviewing Material)

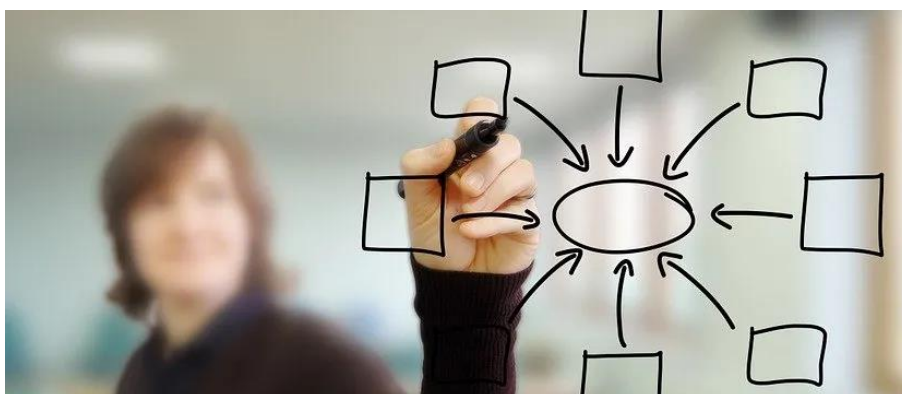


This is a simple and effective retrieval practice strategy which involves minimal preparation. The clock is divided into five-minute segments. Students start by selecting a topic area and then they identify twelve subtopics. Students then spend five minutes retrieving as much knowledge as they can from memory. It is important that they do this without notes, but they can check the revision clock against their notes once it has been completed. More information can be found here:

<https://thehecticteacher.co.uk/2020/01/29/retrieval-clock-starter/>

<https://www.resourceaholic.com/2016/05/revisionclocks.html>

### 3. Live Modelling (Stages of Practice)



In the final part of the session, we explored the importance of live modelling and how by sharing our thought processes with students we can, for example, demystify the steps involved when solving a problem or answering a question. We focused on the seven tips for live modelling identified by Ross McGill (Teacher Toolkit) and you can find out more here: <https://www.youtube.com/watch?v=TWVRPGV-5c68> and here: <https://www.teachertoolkit.co.uk/2019/06/05/one-minute-cpd-58/>

# SIMS: Useful Tips and Tricks – Mrs K. Jones



The purpose of this session was to increase familiarity with SIMS; particularly the reporting function.

The session covered how to use the student lists area of SIMS (Reports, Student List, General Student List) to quickly find student data including;

- Key pastoral information, such as FSM, EAL, PP and SEND indicators.
- % Attendance.
- Curriculum information for example; identifying which students are free during a certain period and finding out which other subjects students study.

We also looked at how to filter and sort these lists. For example, if you wanted to speak to all students who study chemistry in Year 12, you can filter the student list to show you who those students are and then by adding an additional column to the report, you can find out when they are free to meet you. A lot of information can be obtained quickly from this area of SIMS.

To filter, click here and choose your filter from the pop up box.

To add additional information to the list, you can select different options from the Select Data Area panels

A screenshot of the SIMS Student List interface. The window title is "t Girls' High School". The menu bar includes "Utilities", "Tools", "Window", and "Help". Below the menu bar is a toolbar with icons for "Forward", "Sort", "Filter", "List", "View", "Settings", "Move First", "Previous", "Next", "Move Last", "Photo", "Print Options", and "Export". The main area displays a table with columns "Year Group" and "Reg Group". The table contains 20 rows of student data. A red arrow points from the text "To filter, click here and choose your filter from the pop up box." to the "Filter" icon in the toolbar. Another red arrow points from the text "To add additional information to the list, you can select different options from the Select Data Area panels" to the "Select Data Area" panel on the right. This panel has a dropdown menu currently showing "Standard", and a list of options including "Additional Information", "Telephone Numbers", "Email Address", "Travel Mode", "Route", "Meal Pattern", "SEN Status", "Dietary Needs", "Free School Meals", "English as Additional Language", "In Care", "Fees Pupil Reference number", "Young Carer", "Pupil Premium Indicator", and "% Attendance".

Year Group	Reg Group
Year 12	S6
Year 10	10Rod
Year 11	11Rod
Year 13	R6
Year 9	9Rod
Year 9	9Rod
Year 9	9Aus
Year 13	S6
Year 13	A7
Year 11	11Sea
Year 7	7G
Year 11	11Rod
Year 12	R8
Year 9	9Rod
Year 12	R8
Year 11	11Rod
Year 10	10Sea
Year 13	S7
Year 8	8Aus
Year 8	8Rod
Year 13	A8
Year 11	11Rod
Year 12	S8

We also talked about other pre-defined reports that are available which give you information regarding students' attendance, behaviour and achievement as well as how to customise your SIMS homepage.

# Introducing New Information – Ms J. Clarke



Focusing on introducing new material and sharing ideas from history lessons, this group talked through strategies to show how information can be introduced to students in ways other than simply presenting it. The four key ideas discussed were:

## 1. *New detail through enquiry*

Rather than a focus on what happened, when, where and who did what, students conduct an enquiry using a series of clues. By using the new information to solve a mystery, the detail and the narrative are introduced in a different way and the detail is more likely to be retained as students are using it rather than just learning it.

- Example KS3 – why did a medieval King allow himself to be whipped in the church? Students are fed clues (including red herrings) to help them to solve the mystery. They have no prior knowledge of the topic. Each clue is taken one at a time to decide whether it has relevant information or helps to answer the question.
- Example KS4 – Why did Stalin blockade Berlin in 1948? Students are given clues in the form of sources. They must evaluate the source and identify what relevant detail it gives to help to answer the question why. Students have knowledge of the Cold War but not the specific event.

## 2. *New detail through story telling*

Using drama or role play to act out the narrative helps students become immersed in the narrative. Pauses along the way allow for students to ask and answer questions.

- Example KS3 – the story of 1066. The aim is to help students understand the chronology of events and why key figures might have acted in certain ways. Students are not given the story to read, they are assigned roles and act out the events. Questions along the way help students to focus on key aspects of the story e.g. how do you feel knowing that you now need to march to London? Why have you to come England? Students tend to remember the narrative and the names and retain it for some time.

## 3. *Flipped learning*

At A Level, students complete reading for homework to create a timeline of events then use the information in class to deal with analysis such as the creation of a causation diagram, hierarchy of causes, and key questions to ask.

## 4. *Carousel activities*

Groups of students become the expert in a part of a topic and then have to find a way to remember the detail and teach their peers.

- Example KS3 – students looked at the different aspects of what life was like on slave plantations and then had to teach it to another group of students who then had to teach it to others. This included reflection time on what detail had been retained and what helped students the most to retain it – teaching it or being a passive learner.



# Supporting student wellbeing in the classroom – specifically anxiety – Mrs K. Danby



With research indicating a growing concern around students' mental health and wellbeing, it is important that we all feel confident in supporting students in our classroom. Research suggests that:

- 20% adolescents may experience a mental health problem in any given year
- 50% of mental health problems are established by age 14
- 1 in 6 young people will experience anxiety

Our aim is to normalise the feelings of anxiety and help our students learn to cope and manage. The following points were shared as to how staff can help in the classroom:

- If you can recognise the early signs, you may be able to prevent a student having to leave the classroom.
- Always first establish if the student has asthma as this can often present in the same way; if so, call a first aider.
- If you establish it is not asthma, give reassurance.
- Often students are embarrassed and do not want to draw attention to themselves so intervention needs to be discreet and calm.
- Ask open questions to get them to talk; this can prevent a spiral into a panic attack.
- Encourage calm steady breathing; make sure they are not breath holding or rapid breathing.
- A good way to regulate breathing is by them taking small sips of water.

If things continue to build into a panic attack, repeat that they are safe and it is just anxiety and they are experiencing a panic attack; it will pass once their breathing is under control. Panic attacks can be really frightening so it is important that you remain calm - if you panic they will feel there is something to panic about. If you are able, help them to manage how they are feeling and how their body is reacting.

You can do this by using techniques to calm such as:

1. Counting out loud to 50
2. Box breathing – in for 4 – hold for 4 – breathe out for 4 – repeat stages 1 to 3
3. Grounding - 5,4,3,2,1 – 5 things you can see, 4 things you can touch, 3 things you can hear, 2 things you can smell, 1 thing you can taste;

With these strategies you can empower a student to take control of their anxiety and ultimately their wellbeing, giving them the tools to cope and helping them succeed.

Remember:

“Anxiety was born in the very same moment as mankind. And since we will never be able to master it, we will have to learn to live with it – just as we have learned to live with storms.”

**If you'd like to find out more about any of the strategies in this newsletter, then please speak to the PLG leaders and the GPW2 leaders, who will be very happy to help.**