



Hill West Primary School

Pedagogical Newsletter – May 2021

Covid-19

As of the 8th March we were all delighted to see restrictions start to lift in line with the government's four-step roadmap out of lock-down. The success of the vaccination programme nationwide and the hard work of us all in suppressing COVID-19 means we can all begin to enjoy a little more freedom.

That said however, Public Health England's advice to schools is that the system of controls within which we have been working for quite some time remains the best way to control the virus, even with the current new variants. As such we are continuing to:

1. Minimise contacts with individuals who are required to self-isolate by ensuring they do not attend school.
2. Wearing face coverings in recommended circumstances.
3. Cleaning hands thoroughly and more than usual.
4. Ensuring good respirator hygiene.
5. Maintaining enhanced cleaning.
6. Minimising contacts across the site and maintaining social distancing whenever possible.
7. Keeping occupied spaces well ventilated.



Issue 30 May
2021

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Reminders:

School closes for half
term on Friday 28th
May

School reopens on
Monday 7th June.

Multiplication Check for Year 4

Do you have a child in Year 4?

If so, they will have the opportunity to take the optional multiplication tables check (MTC), in June 2021. The purpose of the check is to determine whether pupils can fluently recall their times tables up to 12, which is essential for future success in mathematics. It will also help us, as a school, to identify pupils who may need additional support.

What is the MTC?

The MTC is an on-screen check consisting of 25 times tables questions. Your child will answer 3 practice questions before moving on to the official check and will then have 6 seconds to answer each question. On average, the check should take no longer than 5 minutes to complete.

What if my child cannot access the check?

There are several access arrangements available for schools to use, and teachers will be able to ensure that these are appropriate for your child prior to the check window in June.

There are, however, some circumstances in which it may not be appropriate for a pupil to take the check. If you have any concerns about your child being able to access the MTC, you should talk to your child's Phase Leader.

Do I need to do anything to prepare my child for the check?

No. You do not need to do anything additional to prepare your child for the check. As part of usual practice, teachers may ask you to practise times tables with your child, as they would with spelling. In terms of preparing pupils for the on-screen nature of the MTC, schools will have access to a 'try it out' area. They will be able to use this to familiarise pupils with the check and try out any access arrangements that may be required.

How will the results be used?

For June 2021, the MTC is optional and no performance data will be published. Schools will be able to view pupil results, however there is no requirement to report these results to parents or carers as the assessment is not statutory for this year.





Cognitive Science – an overview

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Retrieval Practice

Retrieval practice is a strategy in which bringing information to mind enhances and boosts learning. Deliberately recalling information forces us to pull our knowledge “out” and examine what we know. For instance, recalling an answer to a science question improves learning to a greater extent than looking up the answer in a textbook. And having to actually recall and write down an answer to a flashcard improves learning more than thinking that you know the answer and flipping the card over prematurely.

Often, we think we’ve learned some piece of information, but we come to realise we struggle when we try to recall the answer. It’s precisely this “struggle” or challenge that improves our memory and learning – by trying to recall information, we exercise or strengthen our memory, and we can also identify gaps in our learning.

Retrieval practice makes learning effortful and challenging. Because retrieving information requires mental effort, we often think we are doing poorly if we can’t remember something. We may feel like progress is slow, but that’s when our best learning takes place. The more difficult the retrieval practice, the better it is for long-term learning.

The last two decades have seen the blossoming of an authentic dialogue between education and neuroscience, which is intended to enhance teaching and learning with insights from scientific research into how the mind and brain work. Unfortunately, early research was often unscientific in approach and rather than inform education, these programmes often promoted misunderstandings about the brain – creating so called ‘neuromyths’ (Howard-Jones, 2014).

However, more recent Cognitive Science research attempts to identify genuine scientific insights that can inform teachers’ understanding and practice. Rather than producing a brain-based approach, these approaches converge on the view that neuroscience is one important source of insight into learning that should be considered alongside other scientific and educational sources. At Hill West we are committed to applying the Science of learning in the classroom (Howard-Jones et al, 2018) so as to support our children’s learning and progress. Those working across neuroscience and education point to how our understanding of the mind and brain are complementary to each other (Howard-Jones, Varma et al, 2016).

Cognitive science therefore is defined as: the interdisciplinary, scientific study of the mind and its processes. It examines the nature, the tasks, and the functions of cognition (in a broad sense). Cognitive scientists study intelligence and behaviour, with a focus on how nervous systems represent, process, and transform information. Mental faculties of concern to cognitive scientists include language, perception, memory, attention, reasoning and emotion; to understand these faculties, cognitive scientists borrow from fields such as linguistics, psychology, artificial intelligence, philosophy, neuroscience and anthropology.

Essentially cognitive science is the study of the mind, how it / we process information and / or stimuli, i.e., think, transform it, store and retain it, perceive it, reason, emote, and otherwise employ cognitive functions for a variety of purposes. Cognitive science, then, is research that helps us to understand how people / children think and remember. This links neatly with the current Ofsted inspection framework principle that requires children to know more and remember more! By understanding how children think and remember, we, as teachers, can plan to provide effective and efficient learning opportunities to help the children do exactly this. Although, cognitive science research can inform classroom practice, Dylan Williams reminds us that nothing works everywhere and everything works somewhere – we need to select suitable approaches for our setting, pupils and context. Implementation is important too!

From Cognitive Science research we know that:

- To learn new ideas, children do this by referring to ideas they already know (they make links with prior knowledge)
- To learn new information, children need to transfer information from their working memory (where they process information consciously) to their long term memory (where they store information and retrieve information from)
- Working memory capacity is limited – we can usually only hold 4 or 5 things in our working memory at one time
- Children can be overwhelmed if a task is too cognitively demanding
- Children can’t understand a new idea if there is too much information provided at one time
- Cognition (understanding) does not develop in age-related stages; mastering new concepts happens in ‘fits and start’.

As such our work on curriculum development and implementation is underpinned by the research currently available on cognitive science and specifically centre around

- Learning, memory and knowledge
- Cognitive Load Theory
- Retrieval Practice
- Spacing and Interleaving
- Dual Coding and using multimedia
- Knowledge organisers



SAFEGUARDING – Respectful Relationships

I am sure you will have all been concerned about the reports nationally of sexual violence and sexual harassment. An understanding for all pupils of healthy relationships, acceptable behaviour and the right of everyone to equal treatment will help ensure that pupils treat each other well and go on to be respectful and kind adults. The focus in primary school is on teaching the fundamental building blocks and characteristics of positive relationships, with particular reference to friendships, family relationships, and relationships with other children and with adults.

Respectful relationships is underpinned by the teaching of the following themes: The importance of respect; boundaries and personal space, respecting difference, self-respect and happiness, respect for ourselves and others, respecting people in authority, improving relationships, supporting relationships, courtesy and good manners, bullying including cyber bullying, responsibilities and bystanders, understanding stereotypes, seeking permission and giving permission.

Pupils should know how to report concerns and seek advice when they suspect or know that something is wrong. At all stages it will be important to balance teaching children about making sensible decisions to stay safe (including online) whilst being clear it is never the fault of a child who is abused and why victim blaming is always wrong.

Spaced Retrieval

Spacing is a powerful strategy that boosts learning by spreading lessons and retrieval opportunities out over time so learning is not crammed all at once. By returning to content every so often, **students' knowledge has had time to rest** and be refreshed. Simply spacing learning opportunities across multiple days leads to much higher achievement than studying the same amount of information all in one session. When students encounter information repeatedly in one session, it quickly becomes familiar—what we call an “illusion of knowing.” However, when information is quickly acquired, it's often quickly forgotten. Immediate repetition helps students remember something for a short time — i.e., just a few seconds or minutes later — but only because that information is in short-term memory. It can be much more difficult to remember the information after a week, or even a day. Thus, cramming increases the amount of information in short-term memory, but it does not improve long-term memory.

Based on a wealth of research, we also know that cramming feels easier than spacing, but information learned through cramming is temporary and shallow. In contrast, when learning opportunities are spaced apart, students engage in increased effort to retrieve the information, which improves the durability of learning – what we call a “desirable difficulty.” Similar to why retrieval practice works, when students have to retrieve things from memory and think deeply about what they are learning, they are more likely to remember the information over the long-term.

Students who engage in spaced practice learn the concepts better and also show enhanced understanding — not just memorisation — of how the concepts apply to new situations. Being able to apply knowledge to a new situation is known as transfer of learning, and is an important goal of education.

The key to spaced practice is to provide opportunities for students to engage with material they are learning on multiple occasions that are separated in time. This can be done in a number of ways: breaking lessons up into smaller sessions, revisiting concepts that have been taught in previous lessons, harnessing technology to help pupils set a spaced study schedule, including cumulative retrieval practice.

Tests and Quizzes

Cognitive scientists used to refer to retrieval practice as “the testing effect.” Prior research examined the fascinating finding that tests (or short quizzes) dramatically improve learning. More recently, researchers have demonstrated that more than simply tests and quizzes improve learning: flashcards, practice problems, writing prompts, etc. are also powerful tools for improving learning. Whether this powerful strategy is called retrieval practice or the testing effect, it is important to keep in mind that the act of pulling information “out” from our minds dramatically improves learning, not the tests themselves. In other words *retrieval* is the active process we engage in to boost learning; tests and quizzes are merely methods to promote retrieval.

Pupil Engagement

At Hill West we value the opportunities we get to engage with pupils' views and perspectives to hear what they have to say about our school. In our most recent questionnaire they told us:

- ✓ They like school – 169 / 174
- ✓ They feel successful as learners 169 / 174
- ✓ Teachers help them to do their best 168 / 174
- ✓ They are encouraged to have excellent behaviour 167 / 174
- ✓ They are encouraged to look after their physical and mental health 164 / 174
- ✓ They feel safe 162 / 174
- ✓ They were happy to return to school following the school closures this year 166 / 174

Our children also told us what they think we need to do better:

- They want to know their next steps in learning 34 / 174
- They want more challenging work 24 / 174
- They want greater opportunity to learn about individual subjects they love 18 / 174

