



Teaching and Learning newsletter: information for parents and carers

Edition 4, November 2018

Welcome to the teaching and learning newsletter, designed to keep parents & carers informed about what's happening in lessons so that you can best support your child.

There is a science to learning; it is not magic. Our brains behave in certain ways that suggest some teaching approaches are more likely to be effective than others in given contexts. At the same time, teaching nearly always blends multiple factors: relationships, routines and instructional techniques, driven by the reality of teaching a class of individuals at the same time. As evidence-informed as we may be, the process can feel more art than science.

For the most part, it is not necessary for students to understand the science of learning. That is for us, as teachers, to understand and embed in our teaching processes. However, **revision and the process of committing information to the long-term memory** is one area where it is necessary for students to have explicit instruction on what techniques work well. The purpose of this newsletter is to inform parents and carers of the most effective strategies for revision, so that you can best support your child in learning.

If you were able to attend our curriculum information evenings, this newsletter will overlap but will offer more detail and links. Likewise, your son or daughter may already be familiar with some of this information, as we have a programme of assemblies to all year groups on 'The Science of Revision'.

Students today have a greater burden on their long-term memory than their counterparts 3 or 4 years ago. GCSEs and A-levels have recently been significantly reformed (some subjects are still in the final stages of this reform). On the whole, the reformed examinations have more content to learn; that content is more challenging; and coursework has largely been removed, or reduced in its weight versus final examinations. These three factors combined lead to a greater burden on students' long-term memories, in examination years.

Ebbinghaus' 'Forgetting Curve' hypothesizes that, after a month, roughly 80% of information is lost from our memories if no attempt is made to retain it. For this reason, students should not consider revision as a 'pre-exams' process. Rather, it is necessary to build the techniques in to study routines as early as possible; the primary purpose of this newsletter is not to facilitate exam success, but to facilitate excellent learning. Students need to remember what they have been taught, because prior learning connects ideas and concepts in future years. If students forget the 'bedrock' learning in, say, Year 7, then learning in Year 8 onwards becomes incredibly difficult.

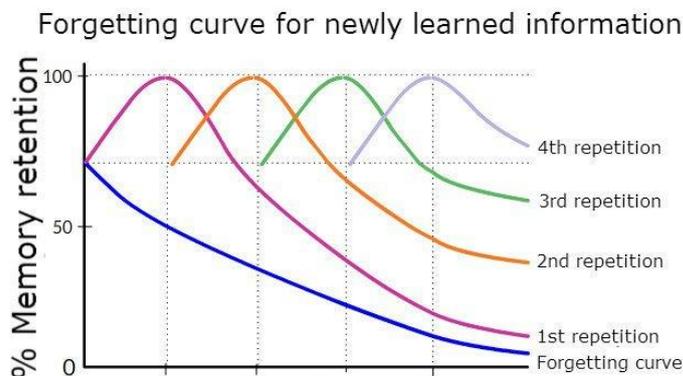
This is nothing for students to feel anxious about: our Year 11s who left last summer sat these 'more difficult' GCSEs and achieved sensational grades leading to BLS being ranked 3rd in Cheshire East on the provisional Progress 8 measure. Time is one of a student's most valuable resources, and therefore we have a duty to ensure that it is used as effectively as possible, whether a student is 11 or 18 years old. The study strategies overleaf are evidence-informed to support this.

You will see that the three strategies suggested are all from a common source: <http://www.learningscientists.org/> which is an excellent resource for students, parents and teachers alike. If you would like more information on evidence-informed study strategies that work (as well as a list of those that don't!) I would strongly recommend Dunlosky's *Strengthening the Student Toolbox* article <https://www.aft.org/sites/default/files/periodicals/dunlosky.pdf>

As a parent or carer, you can support your child's learning by helping them to embed study routines which involve these strategies. Regularly reviewing lesson notes or self-testing on lesson content may be set as homework, or may constitute independent study if the phase of learning in the classroom did not present opportunities for relevant and effective homework. We recognise that some parents would like us to set more homework whilst other parents would like us to set less. By embedding study routines to review prior learning, we hope that parents can have greater control over the time that their children are studying at home, and thus make allowances for busy extra-curricular schedules or encourage more academic study, as needed.

1. Spaced Practice

Start planning early for exams and set aside a little bit of time every day. Five hours spread over two weeks is better than the same 5 hours all at once. If students can review lesson notes, just for a few minutes at a time, at **spaced intervals** then the 'Forgetting Curve' is slowed. Ideally, students will review lesson notes after 1 day, then 1 week, then 1 month and then a fourth time some while later. By allowing the content to get to the brink of being forgotten, the memory will have to work harder to remember it. That extra effort is very fruitful, and helps the material to 'stick' in the long-term memory.



When students are reviewing material, they should use material from the most recent lesson(s) but also go back and study older information to keep it fresh. For more information on spaced practice, please visit <http://www.learningscientists.org/spaced-practice>

2. Retrieval Practice

When students sit down to review material, they should use strategies which **force the memory to recall the information**. Re-reading or highlighting notes is not an effective way to make material 'stick' in the long-term memory. Self-testing is an effective strategy. Students could make flashcards or 'knowledge organisers' (topic summary sheets) and test themselves from these, checking for accuracy once they have tried to retrieve the information. There are lots of websites which harness the power of the 'testing effect', such as www.senecalearning.com (particularly good for science) and <https://www.bbc.com/bitesize/> by selecting the *test* options. Remember, students: if you are 'giving' your memory the information, it won't stick. Make your memory do the hard work and retrieve the information, to make it stick.

For more information on retrieval practice, please visit <http://www.learningscientists.org/retrieval-practice>

3. Interleaving

When students sit down to review material, using techniques which force the memory to recall information, they should switch between topics or ideas during a study session. They should spend long enough on a topic to understand it fully, but try to get a variety of topics / subjects, too. Interleaving will feel harder than studying the same thing for a long time, but this is actually helpful to learning. It is known as a 'desirable difficulty'.

For more information on interleaving, please visit <http://www.learningscientists.org/interleaving>

And finally...

Last January, a 'Parent Voice Group' was formed. This group offered a huge amount of valuable insight from a parental perspective. From this came some excellent suggestions, which have led to a re-formulated Year 7 induction programme, as well as tweaks to homework, positive schooling, parental communication and the level of challenge in lessons. We are very grateful to these parents for their time and ideas.

We would love to continue the Parent Voice Group. This year, we will be focusing on parental engagement: how can we get more parents / carers engaged in learning (both curricular and extra-curricular), more of the time? How can we reach parents / carers, who do not value the concept of schooling highly? Linked to this, we will also continue a focus on Home Learning and also on Assessment and Feedback, to ensure that all parents have a clear understanding of the Assessment and Feedback methods at Brine Leas School and the rationale behind these. Please see <http://brineleas.cheshire.sch.uk/Docs/NewsLetters/TandLNewsletter-Jul2018.pdf> if you were unable to read this last July.

If you feel that you could help us with these foci, please email emma.bentley@brineleas.co.uk