

One curriculum that works for all: Using the WRM schemes with pupils with SEND

Welcome to the third in our series of blogs about how the White Rose Maths schemes relate to the 2019 Ofsted Framework. The **first blog** looked at the overall curriculum, the **second blog** looked at the sequencing of our primary and secondary curricula, and this considers the issue of SEND.

Why SEND?

In judging the quality of education, inspectors will evaluate the extent to which ‘leaders take on or construct a curriculum that is ambitious and designed to give all learners, particularly the most disadvantaged and those with special educational needs and/or disabilities (SEND) or high needs, the knowledge and cultural capital they need to succeed in life’. Since its inception, White Rose Maths has had the motto #MathsEveryoneCan. We believe that everyone, no matter what their starting point is, can learn and improve at maths and so we welcome the increased focus on pupils with SEND in the 2019 Ofsted Framework.

Is the White Rose Maths curriculum ambitious?

At each key stage, the White Rose Maths curriculum covers the whole of the content of the 2014 National Curriculum. More than this, our scheme of learning is designed to support the development of reasoning and problem solving alongside fluency to ensure challenge and ambition for all pupils.

But what does ‘ambitious’ mean in the context of pupils with SEND?

This will clearly depend on individuals’ needs. We need to remember also that pupils with SEND are not always low attainers, so for some it will be the usual curriculum with additional resources suitable for meeting their particular needs. If some other pupils are operating one or two years behind the expectations for their year group then schools will need to consider what is realistic for these pupils, given their needs, in terms of catching up and keeping up. Is it sufficiently ambitious to aim for pupils to remain two years behind? Or could they, with appropriate support, catch up over the next term, year or key stage? Schools should know their individual pupils and their needs well enough to define and demonstrate what

is ambitious for each individual, and what measures they are putting in place to help pupils meet these goals. The small steps structure, the progression documents and the assessments that underpin the White Rose Maths curriculum will help teachers to identify gaps. They can then take steps to support all pupils to make progress, perhaps by using material or structures from earlier year groups.

But surely some pupils' needs are more than just mathematical?

Absolutely. Some pupils may also need the support of speech therapists, educational psychologists and/or many other specialists to have their needs met; the White Rose Maths curriculum is only one element of the support schools and their partners already provide.

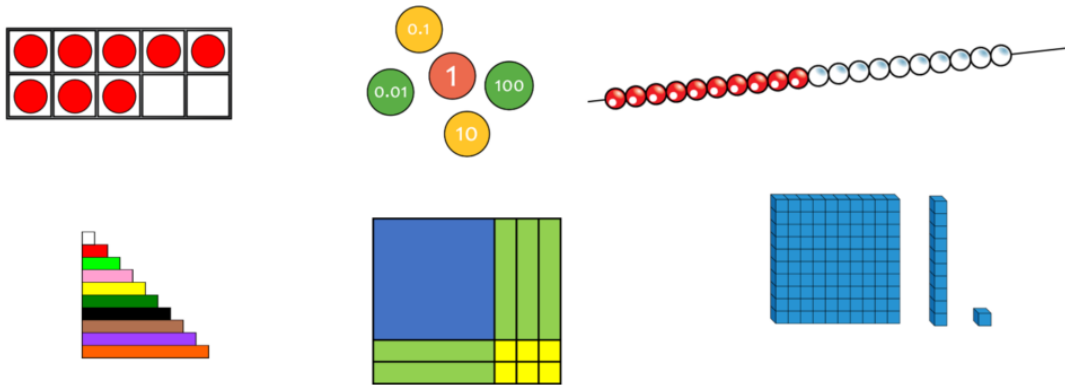
So what specific support does the White Rose Maths curriculum give to schools, teachers and pupils with SEND?

A key aim of the White Rose Maths scheme of learning is to be inclusive for all pupils. In both primary and secondary, we encourage the use of one curriculum that works for all, with everybody studying the same topic and being provided with support and challenge as needed. Many of the teaching strategies we advocate for all pupils are particularly useful for pupils with SEND. For example:

Using concrete and pictorial representations

Our materials are replete with examples in all year groups to develop these strategies to deepen and embed understanding. For many pupils, the CPA approach is a 'way in' to a topic whilst also it can be challenge for pupils to find an alternative representation to the ones they already have.

Here are just a few examples of equipment we recommend all pupils have access to, to support and stretch their understanding.



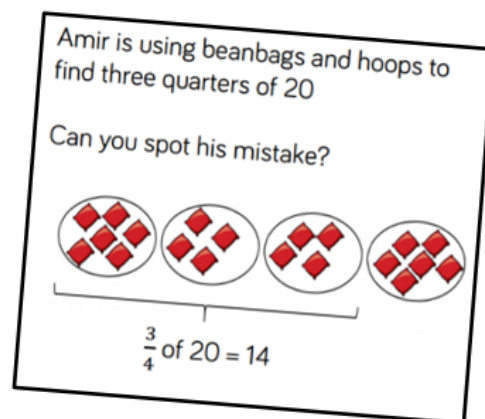
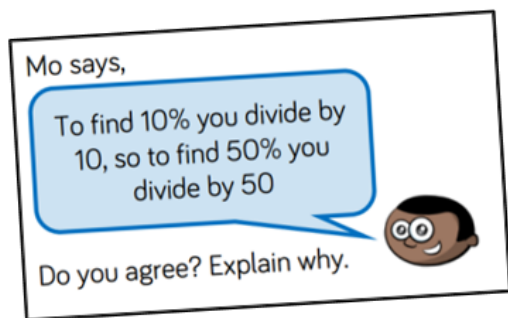
It is very beneficial for the teacher modelling the use of manipulatives at the start of a topic to make it clear that the resources are suitable for those who still need them later on.

Revisiting and reminding

As discussed in our [last blog](#), we have designed the curriculum to include multiple opportunities to look at topics again in new contexts. This enables teachers to support students who have struggled with a topic to spend more time reconsidering and developing their understanding. Also, our [premium resources](#) **Flashback 4 activities** are ideal to assess what has been learnt and what might need an intervention.

Plan for misconceptions

Our schemes of learning include many examples of where pupils could go wrong, challenging the pupils to spot, explain and rectify errors. Pupils' responses to these prompts helps teachers to identify and tackle misunderstandings early on rather than let these incorrect ideas become established in pupils' minds. Read our [Mathematical Misconceptions](#) blog for further insight.



Use of technology

Our interactive whiteboard files are very useful both in providing visual stimuli (supporting the concrete and pictorial approach discussed above) and allowing pupils to directly interact with the material whilst learning new concepts. Similarly our secondary curriculum points to many areas where the use of programs such as dynamic geometry software will help pupils to see and understand the mathematics, and our reception schemes links to useful websites for teachers and pupils to use. Our professional development training also contains many references and support for the use of technology.

What other suggestions do you have?

Knowledge of precursors

The notes and guidance we provide for our small steps often include indicators of what pupils need to have covered before in order to access a step. Incorporating revisiting these before a topic is taught, for example, remind the pupils about multiplying and dividing by 10 and 100 before upcoming lessons on metric conversions. They will then have less to think about when covering the metric conversions...which brings us to the next point!

Awareness of cognitive overload

When teaching, we need to consider the key aim or aims of a lesson. If the focus of a lesson is understanding that the area of a rectangle is found by multiplying the length by the width, then providing pupils with times-tables grids or calculators will help them to focus on this rather than struggling with the mechanics of the calculations if these are an obstacle. We strongly recommend this

strategy throughout our secondary schemes **(for example when introducing algebra)** and there is a strong case for using this approach at primary level too.

Pre-teaching

Going through some key ideas with pupils in short targeted sessions before the topic is taught enables them to have a head start and be prepared for what's coming up often hugely increasing confidence and participation at the start of a topic.

Intervention

Finally, providing additional out-of-class support after lessons can help to close gaps and/or deepen understanding. It may again be useful to look back at previous years' steps to support this.

What about differentiation?

The Ofsted framework talks about 'teachers present subject matter clearly...they respond and adapt their teaching as necessary, without unnecessarily elaborate or differentiated approaches'. We agree with the mastery principle that pupils should broadly move through the curriculum at the same pace. As far as possible, pupils should stay together on the same topic with necessary differentiation such as removing barriers and providing targeted support, but without the need for many different levels of worksheet for every single step. Our schemes include examples of 'low floor, high ceiling tasks' that support this approach to differentiation together with reasoning and problem solving questions that will challenge all pupils and allow the 'quicker graspers' to look at the maths in greater depth.