Spring Scheme of Learning

Year 6

#MathsEveryoneCan

2020-21

White Rose Maths

New for 2020/21

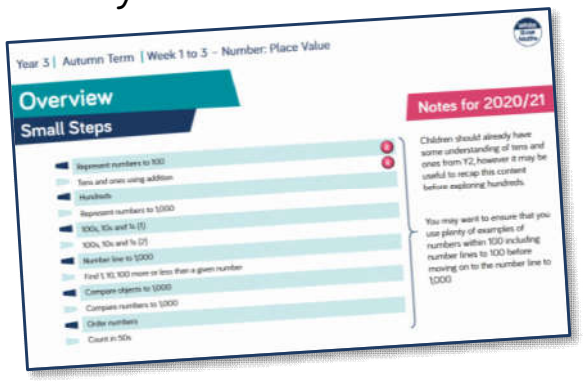
2020 will go down in history. The world has changed for all of us.

We want to do as much as we can to support children, teachers, parents and carers in these very uncertain times.

We have amended our schemes for 2020/21 to:

- ★ highlight key teaching points
- ★ recap essential content that children may have forgotten
- ★ flag any content that you might not have covered during the school closures period.

We hope these changes will add further value to the schemes and save you time.



Lesson-by-lesson overviews

We've always been reluctant to produce lesson-by-lesson overviews as every class is individual and has different needs. However, many of you have said that if blended learning becomes a key feature of school life next year, a weekly plan with linked content and videos could be really useful.

As always, we've listened! We've now produced a complete lesson-by-lesson overview for Y1 to Y9 that schools can use or adapt as they choose. Each lesson will be linked to a free-to-use home learning video, and for premium subscribers, a worksheet. This means that you can easily assign work to your class, whether they are working at home or in school.

Inevitably, this lesson-by-lesson structure won't suit everyone, but if it works for you, then please do make use of this resource as much as you wish.

Teaching for Mastery

These overviews are designed to support a mastery approach to teaching and learning and have been designed to support the aims and objectives of the new National Curriculum.

The overviews:

- have number at their heart. A large proportion of time is spent reinforcing number to build competency
- ensure teachers stay in the required key stage and support the ideal of depth before breadth.
- ensure students have the opportunity to stay together as they work through the schemes as a whole group
- provide plenty of opportunities to build reasoning and problem solving elements into the curriculum.

For more guidance on teaching for mastery, visit the NCETM website:

https://www.ncetm.org.uk/resources/47230

Concrete - Pictorial - Abstract

We believe that all children, when introduced to a new concept, should have the opportunity to build competency by taking this approach.

Concrete – children should have the opportunity to use concrete objects and manipulatives to help them understand what they are doing.

Pictorial – alongside this children should use pictorial representations. These representations can then be used to help reason and solve problems.

Abstract – both concrete and pictorial representations should support children's understanding of abstract methods.

Need some CPD to develop this approach? Visit www.whiterosemaths.com for find a course right for you.

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place Value		Number: Addition, Subtraction, Multiplication and Division				Number: Fractions					Geometry: Position and Direction
Spring	Number: Decimals		Number: Percentages		Number: Algebra		Measurement: Converting Units	Measurement: Perimeter, Area and Volume		Number: Ratio		Statistics
Summer	Geometry: Properties of Shape			Consolidation or SATs preparation		Consolidation, investigations and preparations for KS3						

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Spring - Block 1

Decimals

Overview

Small Steps

- Decimals up to 2 decimal places (R)
- Understand thousandths (R)
- Three decimal places
- Multiply by 10, 100 and 1,000
- Divide by 10, 100 and 1,000
- Multiply decimals by integers
- Divide decimals by integers
- Division to solve problems
- Decimals as fractions
- Fractions to decimals (1)
- Fractions to decimals (2)

Notes for 2020/21

The recap steps are at the beginning of this block to ensure children have a good understanding of numbers up to three decimal places before moving on to multiplication and division.

This should build on place value work in the autumn term and make use of place value grids and counters to build on previous learning.

Spring - Block 2

Percentages

Overview

Small Steps

- Understand percentages (R)
- Fractions to percentages
- Equivalent FDP
- Order FDP
- Percentage of an amount (1)
- Percentage of an amount (2)
- Percentages – missing values

Notes for 2020/21

Children should have been introduced to percentages briefly in Y5 but this work may have been missed. Time spent exploring 100 as a denominator, making the link to decimals and hundredths is important.
Bar models and hundred squares should be used to support understanding.

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Spring - Block 3

Algebra

Overview

Small Steps

- Find a rule – one step
- Find a rule – two step
- Forming expressions
- Substitution
- Formulae
- Forming equations
- Solve simple one-step equations
- Solve two-step equations
- Find pairs of values
- Enumerate possibilities

Notes for 2020/21

All of this block is new learning for Year 6 so there are no recap steps.

Children first look at forming expressions before moving on to solving more complex equations.

This should be introduced using concrete and pictorial methods alongside the abstract notation.

Spring - Block 4

Converting Units

Overview

Small Steps

- Metric measures
- Convert metric measures
- Calculate with metric measures
- Miles and kilometres
- Imperial measures

Notes for 2020/21

All of this block is new learning for Year 6 so there are no recap steps.

Children explore measures in context and build on previous learning about place value.

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Spring - Block 5

Area, Perimeter & Volume

Overview

Small Steps

- Shapes – same area
- Area and perimeter
- Area of a triangle (1)
- Area of a triangle (2)
- Area of a triangle (3)
- Area of parallelogram
- What is volume? R
- Volume – counting cubes
- Volume of a cuboid

Notes for 2020/21

Much of this block is new learning where children build on their knowledge of area and perimeter to explore the area of a triangles and parallelograms.

The recap step on volume covers the difference between volume and capacity and gives time to explore the conservation of volume using centimetre cubes.

Spring - Block 6

Ratio

Overview

Small Steps

- Using ratio language
- Ratio and fractions
- Introducing the ratio symbol
- Calculating ratio
- Using scale factors
- Calculating scale factors
- Ratio and proportion problems

Notes for 2020/21

All of this block is new learning for Year 6 so there are no recap steps.

Bar models are a key representation in this topic. Children may need some extra input here if they have not used bar models throughout KS2.

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Spring - Block 7

Statistics

Overview

Small Steps

- Read and interpret line graphs
- Draw line graphs
- Use line graphs to solve problems
- Circles
- Read and interpret pie charts
- Pie charts with percentages
- Draw pie charts
- The mean

Notes for 2020/21

Time is limited at this stage in Year 6. Line graphs have been covered extensively in Year 4 and 5 so you may choose to skip these steps or merge them into one lesson. This will leave more time for pie charts and the mean.