Autumn Scheme of Learning

Year 6

#MathsEveryoneCan

2020-21

White Rose Maths

New for 2020/21

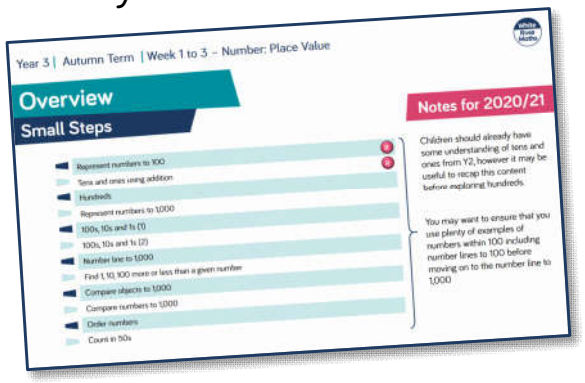
2020 will go down in history. The world has changed for all of us.

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.


Year 3 | Autumn Term | Week 1 to 3 – Number: Place Value

Overview

Small Steps

- Represent numbers to 100
- Tens and ones using addition
- Hundreds
- Represent numbers to 1,000
- 100s, 10s and 1s (1)
- 100s, 10s and 1s (2)
- Number line to 1,000
- Find 1, 10, 100 more or less than a given number
- Compare objects to 1,000
- Compare numbers to 1,000
- Order numbers
- Count in 50s

Notes for 2020/21

Children should already have some understanding of tens and ones from Y2, however it may be useful to recap this content before exploring hundreds.

You may want to ensure that you use plenty of examples of numbers within 100 including number lines to 100 before moving on to the number line to 1,000

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						

Autumn - Block 1

Place Value

Overview

Small Steps

- Numbers to 10,000 (R)
- Numbers to 100,000 (R)
- Numbers to a million (R)
- Numbers to ten million
- Compare and order any number
- Round numbers to 10, 100 and 1,000 (R)
- Round any number
- Negative numbers

Notes for 2020/21

Many children may struggle to work immediately with numbers to 10,000,000 so we are suggesting that this might build up from smaller numbers.

It's vital that children have that understanding/recap of place value to ensure they are going to be successful with later number work.

Autumn - Block 2

Four Operations

Overview

Small Steps

- Add whole numbers with more than 4 digits (R)
- Subtract whole numbers with more than 4 digits (R)
- Inverse operations (addition and subtraction) (R)
- Multi-step addition and subtraction problems (R)
- Add and subtract integers
- Multiply 4-digits by 1-digit (R)
- Multiply 2-digits (area model) (R)
- Multiply 2-digits by 2-digits (R)
- Multiply 3-digits by 2-digits (R)
- Multiply up to a 4-digit number by 2-digit number
- Divide 4-digits by 1-digit (R)
- Divide with remainders (R)
- Short division
- Division using factors

Notes for 2020/21

Year 6 assumes a lot of prior understanding of four operations. A deep understanding of these concepts are essential to help prepare children for secondary education and beyond.

Some children may not have had much practice in the last few months so we've included extended blocks and plenty of recap.

Overview

Small Steps

- Long division (1)
- Long division (2)
- Long division (3)
- Long division (4)
- Factors (R)
- Common factors
- Common multiples
- Primes to 100
- Squares and cubes
- Order of operations
- Mental calculations and estimation
- Reason from known facts

Notes for 2020/21

Year 6 assumes a lot of prior understanding of four operations. A deep understanding of these concepts are essential to help prepare children for secondary education and beyond.

Some children may not have had much practice in the last few months so we've included extended blocks and plenty of recap.

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Autumn - Block 3

Fractions

Overview

Small Steps

- Equivalent fractions (R)
- Simplify fractions
- Improper fractions to mixed numbers (R)
- Mixed numbers to improper fractions (R)
- Fractions on a number line
- Compare and order (denominator)
- Compare and order (numerator)
- Add and subtract fractions (1)
- Add and subtract fractions (2)
- Add mixed numbers (R)
- Add fractions
- Subtract mixed numbers (R)
- Subtract fractions

Notes for 2020/21

Many children may have missed the block of learning from Y5 on fractions therefore we are suggesting recapping this.

Spend time ensuring children can add and subtract proper fractions, before moving onto mixed numbers.

These skills require understanding of equivalent fractions.

Overview

Small Steps

- Mixed addition and subtraction
- Multiply fractions by integers
- Multiply fractions by fractions
- Divide fractions by integers (1)
- Divide fractions by integers (2)
- Four rules with fractions
- Fraction of an amount
- Fraction of an amount – find the whole

Notes for 2020/21

Many children may have missed the block of learning from Y5 on fractions therefore we are suggesting recapping this.

Spend time ensuring children can add and subtract proper fractions, before moving onto mixed numbers.

These skills require understanding of equivalent fractions.

Autumn - Block 4

Position and Direction

Overview

Small Steps

- The first quadrant
- Four quadrants
- Translations
- Reflections

Notes for 2020/21

Position and direction was probably missed in the summer of Y5 so treat this topic as brand new learning.