





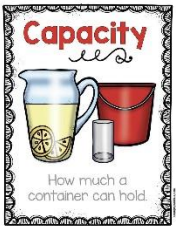
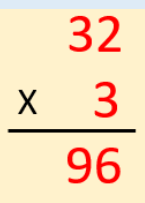
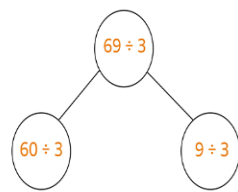
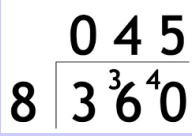
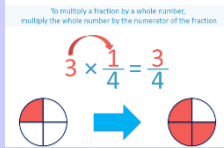

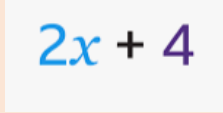


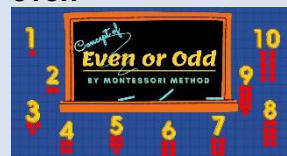
Cycle A White Rose Whole School Spring

	Year R Foundational Knowledge	Year 1/2	Year 3/4	Year 5	Year 6
Spring term	<p>Alive in 5!</p> <ul style="list-style-type: none"> Introducing zero  <ul style="list-style-type: none"> Comparing numbers to 5 Recognising a group has 5 objects without counting 1 more/1less Conceptual subitising to 5 <p>When you see 5 dots, you might see 2 and 3 or 4 and 1!  +  = 5</p>  <p>Compare different weight.</p>  <p>Find a balance</p>  <p>Finding out about capacity</p> 	<p>Addition and Subtraction</p> <ul style="list-style-type: none"> Related facts Add and subtract 1s Add to the next 10 Add to a 10 Add across a 10 Subtract to a 10 Subtract from a 10 Subtract across a 10 Add 10s Subtract 10s Add two 2-digit numbers (across a 10) Mixed addition and subtraction Compare number sentences Miss number problems <p>Multiplication and Division</p> <ul style="list-style-type: none"> Factor pairs Multiply and divided by 10 and 100 Reasoning about multiplication Multiply three numbers Efficient multiplication Scaling Correspondence problems Multiply up to a 3-digit number by 1-digit number – no exchange Multiply up to a 3-digit number by 1-digit number- with exchange Related calculations – multiplication and division Divide by 1-digit number - flexible partitioning number by a 1- digit number – with remainders Count in 2s, 5s and 10s Count in 3s Recognise equal groups Add equal groups Make arrays Multiplication sentences Commutativity Make equal groups 	<p>Multiplication and Division</p> <ul style="list-style-type: none"> Factor pairs Multiply and divide by 10 and 100 Reasoning about multiplication Multiply three numbers Efficient multiplication Scaling Correspondence problems Multiply up to a 3-digit number by a 1-digit number – with exc Multiply a 2-digit number by a 1-digit number (no exchange) Divide a 2-digit by a 1 digit (no exchange) Divide up to a 3-digit number by a 1-digit number – no exchange Divide up to 3-digit number by 1-digit number – with exchange Divide up to a 3-digit number by 1-digit   <p>Length and Perimeter</p> <ul style="list-style-type: none"> Measure in cm, mm Measure in kilometres and metres Kilometres, metres, centimetres and millimetres Equivalent lengths What is perimeter? Calculate perimeter Perimeter of rectilinear shapes Calculate perimeter of rectilinear shapes Perimeter of polygons <p>Fractions</p> <ul style="list-style-type: none"> Understand denominators Compare and order unit fractions Understand numerators Understand the whole Fractions on a number line Compare and order non-unit fractions Equivalent fractions 	<p>Multiplication and Division</p> <ul style="list-style-type: none"> Multiply up to a 4-digit number by a 1-digit number Multiply a 2-digit number, by a 2-digit number (area model) Multiply a 2-digit number by a 2-digit number Multiply a 3-digit number by a 2-digit number Multiply 3-digit number by a 2-digit number Multiply a 4-digit number by a 2-digit number Solve problems with multiplication  <p>Fractions</p> <ul style="list-style-type: none"> Multiply a unit or non-unit fraction by an integer Multiply a mixed number by an integer Calculate a fraction of a quantity Fractions of amounts Finding the whole Use fractions as operators  <p>Decimals and percentages</p> <ul style="list-style-type: none"> Decimals up to 2 decimal places Equivalent fractions and decimals (tenths) Equivalent fractions and decimals Thousandths as decimals Thousandths on a place value chart Order compare decimals (same number of decimal places) Round to the nearest whole number Round to 1 decimal place Understand percentages Percentages as decimals 	<p>Ratio</p> <ul style="list-style-type: none"> Add or multiply Using ratio language Introduction to ratio and symbol Ratio and fractions Scale drawing Use scale factors Similar shapes Ratio problems Proportion problems Recipes  <p>Algebra</p> <ul style="list-style-type: none"> 1-step function machines 2-step function machines Form expressions Substitution Formulae Form equations Solve 1-step equations Find pairs of values Solve problems with two unknowns  <p>Decimals</p> <ul style="list-style-type: none"> Place value within 1 Place value – integers and decimals Rounding decimals Adding and subtracting decimals Multiplying and dividing by 10, 100 and 1000 Multiply and divide decimals in context Dividing decimal by integers Multiply and divide decimals in context <p>Fractions, decimals and percentages</p> <ul style="list-style-type: none"> Decimal and fraction equivalents Fractions as division Understand percentages Fractions to percentages

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Finding 6, 7 and 8
Represent 6, 7 and 8 using picture and objects
1 more/1 less than a number or object
Composition of 6, 7 and 8
Number composition:
 Making 5 using smaller numbers (e.g., $2 + 3 = 5$ or $4 + 1 = 5$).

Making pairs of odd and even



Double numbers to 8

Length, height and time

Explore/compare length

Explore/compare height

Talk about time

Order and sequence time – morning, afternoon, night time.

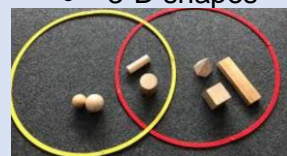
Building 9 & 10

Counting to 9 & 10

- Comparing numbers to 10
- Representing 9 to 10
- Recognising 10 without count objects
- Bonds 10



- 3-D shapes



To 20 and beyond

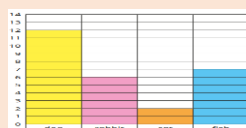
- Make equal groups – sharing
- The 2 times-table
- Divide by 2
- Doubling and halving
- Add and even
- The 10 times-table
- Divide by 10
- The 5-times table
- Divide by 5
- The 5 and 10 times-table

Length and Height

- Measure length using objects
- Measure length in centimetres
- Compare length in metres
- Order lengths and heights
- Order lengths and heights
- Four operations and lengths heights

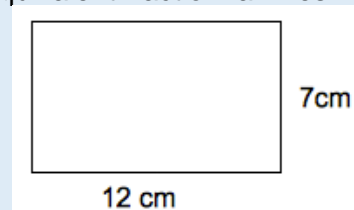
Statistics

- Tally Charts
- Tables
- Block diagrams
- Draw pictograms
- Interpret pictograms



Shape	Total
triangle	6
square	11
circle	5
rectangle	2

- Count beyond 1
- Partition a mixed number
- Compare and order mixed numbers
- Understand improper fractions
- Convert mixed numbers to improper fractions
- Convert improper fractions to mixed numbers
- Equivalent fraction families



Mass and Capacity

- Measure mass in grams
- Measure mass in kilograms and grams
- Equivalent masses
- Add and subtract mass
- Measure capacity and volume in millilitres
- Measure capacity and volume in millilitres
- Measure capacity and volume in millilitres and litres
- Equivalent capacities and volumes
- Add and subtract capacity and volume.

Fractions

- Add fractions
- Add fractions and mixed numbers
- Subtract fractions
- Subtract from whole amounts
- Subtract from mixed numbers
- Unit fractions of an amount
- Non-unit fractions of an amount
- Reasoning with fractions of an amount.

$$\frac{3}{9}$$

$$\frac{4}{8}$$

- **Equivalent fractions, decimals and percentages.**

Perimeter and area

- Perimeter of rectangles
- Perimeter of rectilinear shape
- Area of compound shapes
- Estimate area

Statistics

- Draw line graphs
- Read and interpret line graphs
- Read and interpret tables
- Two-way tables
- Read and interpret timetables

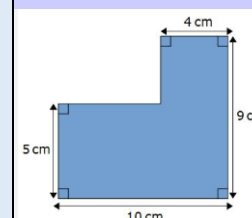
Decimals and Percentages

- Decimals up to 3 places
- Understanding percentages
- Percentages as fractions and decimals
- Equivalent fractions, decimals and percentages

$$\frac{50}{100} = \frac{1}{2} \quad 50\% \quad 0.5$$

Area and Perimeter

- Draw line graphs
- Reading and interpreting tables



Statistics

- Draw line graphs
- Reading and interpreting tables

- Equivalent fractions, decimals and percentages
- Percentage of an amount – multi-step
- Percentages – missing values

Find 30% of 70. 21

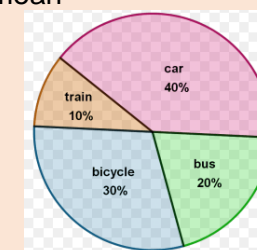
$$30\% = \frac{3}{10} \quad \text{So we can find 30\% by dividing by 10, then multiplying by 3. } 70 \div 10 = 7 \quad 7 \times 3 = 21$$

Area, Perimeter and Volume

- Shapes with the same area
- Area and Perimeter

Statistics

- Line graphs
- Dual bar charts
- Read and interpret pie charts
- Pie charts with percentages
- Draw pie charts
- The mean



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- Build numbers beyond 10
- Verbal counting to 20
- Build numbers to 20 and continue patterns (putting numbers in order)

11121314151617181920

21222324252627282930

4

10

four tenths

0.4

3