

Mathematics Learning Journey 2020-21

Nursery

Mathematics

AUTUMN

We will develop our **Mathematics** knowledge through the **school's Mathematics** scheme.

1

Key learning this half term:

- **Counting** objects - specifically animals and body parts.
- Recognising **numbers** on the **number line**.
- Practice **number formation** by **tracing numbers** using a **variety of materials**.
- **Grouping** objects into **colours**.
- Recognising **shapes**.



Mathematics

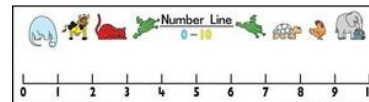
SPRING

We will develop our **Mathematics** knowledge through the **school's Mathematics** scheme.

1

Key learning this half term:

- Use a number line to demonstrate '**jumping back**', **one more** and **equal to**.
- Recognise and sort **2D shapes** into **groups**.
- **Count** different **objects** and recognise numbers in **different environments**.
- Practise **number formation**.
- Develop our understanding of **positional language**.



Mathematics

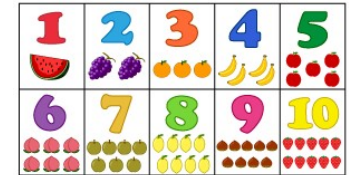
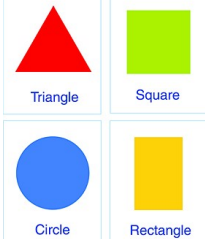
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We will develop our **Mathematics** knowledge through the **school's Mathematics** scheme.

1

Key learning this half term:

- **Count** from **0 -20**.
- Recognise and **write numerals 0 -10**.
- **Order numerals** on a **number line** and begin to learn the **value** of each **number**.
- Learn about **2D shapes** and their **properties**.



Mathematics

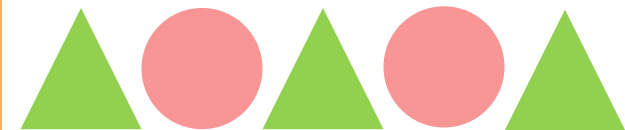
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2

Key learning this half term:

- Recognising **2D shapes** and creating **patterns**.
- Describing **position** using the correct **positional language**.
- Count a **number of objects** and correctly recognise and write the **corresponding numeral**.
- Begin to correctly **order objects** in **size order**.



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2

Key learning this half term:

- Recognise **patterns**, **copy** and **continue** an existing pattern and **create** our own.
- Describe **pictures** in books and **objects** in our **environment** using **mathematical language**. Eg. **Shapes** and **numbers**.
- Apply **positional language**. Eg. **under**, **inside**, **next to**, **above**, **in between**.
- **Count** and **match** a **number of objects** to the **correct numeral**.
- Practise number formation.



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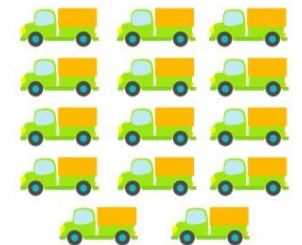
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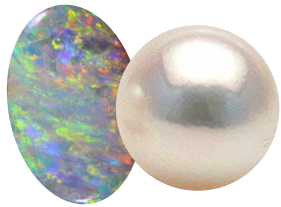
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2

Key learning this half term:

- **Count**, **recognise** and **order numerals** from **1 - 20**.
- Continue to learn the **value** of each **number**.
- Begin to **recognise two dimensional shapes** and describe their **properties**.





Mathematics Learning Journey 2020-21

Reception

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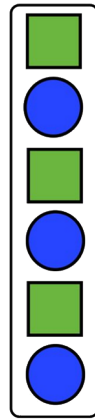
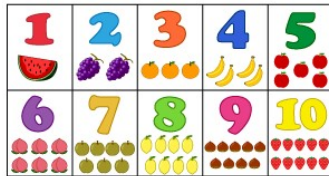
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1

Key learning this half term:

- **Number recognition.**
- **Counting** objects.
- **Matching, pairing, grouping, sorting and ordering** by size.
- **Colour, size and shape patterns.**



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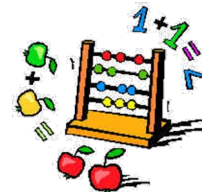
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1

Key learning this half term:

- Numbers **within fifteen**.
- Develop understanding of the **value, quantity and order of numbers**.
- **Addition and Subtraction** within ten.
- Continue to **develop and apply knowledge** from previous terms including; **Shape, time, calendar, patterns and positional language**.



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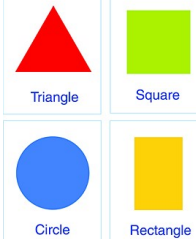
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1

Key learning this half term:

- Learn to count reliably within **20**.
- Explore the **components of numbers within 20**.
- Apply our number sense when **problem solving, addition and subtraction**.
- Explore **shape and pattern**.
- Remember the names of both **2D and 3D shapes**.
- Discuss the **properties** of both **2D and 3D shapes**.



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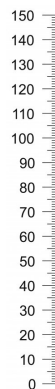
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2

Key learning this half term:

- Numbers within **six**.
- **Measure**.
- Concept of **zero**.
- **3D Shapes**.
- **Positional language**.
- **Calendar and time**.



sphere



cube



cylinder

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2

Key learning this half term:

- Numbers **within twenty**.
- Develop understanding of **one less and one more**.
- **Grouping and sharing numbers**.
- **Addition and Subtraction** within ten.
- Continue to **develop and apply knowledge** from previous terms including; **Shape, time, calendar, patterns, positional language and addition/subtraction within ten**.



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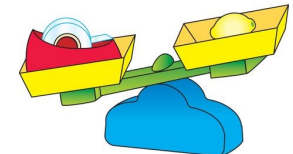
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2

Key learning this half term:

- Compare and describe **capacities, volumes, weights and lengths**.
- Depth of numbers **within twenty**.
- Explore **strategies and representations**.
- Apply knowledge of all **concepts** in their surrounding environment.
- Recognise and extend a **pattern**.
- Numbers **beyond twenty**.
- Recognise, compare and say **numbers to fifty** in order.
- **One more and one less**.





Mathematics Learning Journey 2020-21

Year 1

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1

Key learning this half term:

- We will develop our **Mathematics knowledge** through the **Mathematics Mastery Programme**.
- Explore **addition (+)**, **subtraction (-)** and **equal to (=)** signs.
- Apply our knowledge of **number bonds** to solve **addition** and **subtraction problems** confidently.



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1

Key learning this half term:

- Focus on numbers up to **forty** and use **place value** to recognise these numbers.
- Use **addition** and **subtraction vocabulary**.
- Use concrete and **pictorial representations**.
- Learn to tell the **time** with focus on **o'clock** and **half past**.
- Consolidate knowledge of the **days** of the **week**, **months** of the **year**, charting the **weather** and **properties** of **2D** and **3D shapes** during weekly **Mathematics Meetings**.



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1

Key learning this half term:

- **Apply numbers 50 to 100** and beyond.
- **Count on** from a given number in **1s, 2s, 5s** and **10s**.
- Recognising **place value**.
- **Add** and **subtract within 100** by representing and using **number bonds**.
- **Read, write, interpret** and solve **one-step addition** and **subtraction problems**.
- Recognise **coins** and **notes**.



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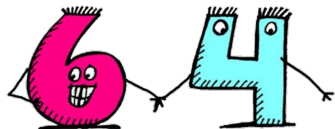
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2

Key learning this half term:

- Develop our **arithmetic skills** and **times tables** knowledge.
- Use **place value** to recognize, **order** and **compare** numbers up to **20**.
- Create **patterns** using numbers within 20.
- Apply knowledge of **number bonds** to solve **addition** and **subtraction problems**.



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2

Key learning this half term:

- **Adding** and **subtracting** within **fifty, 50**.
- Recognise, find and name a **half** and a **quarter** of an **object, shape** or **quantity**.
- Solve **one step problems** involving **halves** and **quarters**.
- Know that **halving** is the **inverse** of **doubling**.
- Learn **odd numbers** and **even numbers**.
- Know that **odd numbers** cannot be **divided** equally.
- Use **non-standard units** to **measure** items.
- Compare, describe and solve **practical problems** involving **measurements**.



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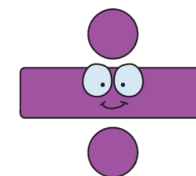
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2

Key learning this half term:

- **Multiplication** and **division**
- Solve **one-step problems** using **concrete** and **pictorial representations** and **arrays**.
- Measures: **capacity** and **volume**
- Compare, describe, measure, record and solve **practical problems**.





Mathematics Learning Journey 2020-21

Year 2

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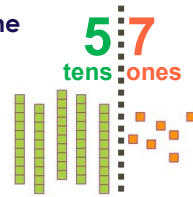
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1

Key learning this half term:

- Explore **two-digit numbers** by **grouping** them by their **tens**. 10, 15, 19, 34, 37, 39, 71, 76, 79.
- Identify **tens** and **ones** in a **two-digit number**.
- Explore **number patterns**.
- Understand the difference between an **odd number** and an **even number**.
- Read and write numbers to 100 (**one hundred**) in **words**.



fifty-seven

Mathematics

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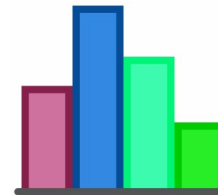
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1

Key learning this half term:

- Explore **three digit numbers**, (100-999).
- Learn about **multiplication** and **division**.
- Use **block graphs**, **tables** and **pictograms**.
- **Estimating** and **measuring** the **weights** of different objects and measurements of **time**.
- Apply our **times tables knowledge** to find **multiples** of different numbers
- Find **halves** and **quarters** of numbers and different **shapes**.



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1

Key learning this half term:

- Improve **arithmetic skills** and **times tables knowledge**.
- **Add** and **subtract one-digit** and **two-digit** numbers.
- Solve **multiplication** and **division problems**.
- Apply **materials**, **arrays**, **repeated addition**, **mental methods**, and **multiplication/division facts** to solve **mathematical problems**.
- Learn about **liquid volume** and use **standard units** to **measure volume** and **capacity**.
- Use **place value knowledge** to order **volumes**, **capacities** and **reading scales**.
- Recognise and write **fractions** e.g. 1/3, 2/4, 3/4, 2/3.
- Use **shapes** and **division/sharing** to understand and solve **equivalent fraction problems**.



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2

Key learning this half term:

- **Compare** and **order** numbers up to **100**.
- Use **greater than** (>), **less than** (<) and **equal to** (=) symbols.
- Recall and use **addition** and **subtraction** facts to 20 fluently.
- Use addition to check the **accuracy** of our subtraction.
- **Measure** and **draw lines** to the nearest **centimeter (cm)**.
- Explore the properties of a variety of **shapes**.
- **Estimate time** and check using a **timer**.
- Tell the time at **o'clock** or **half past** the hour.



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2

Key learning this half term:

- Improve **arithmetic skills** and **times tables knowledge**.
- Apply '**sharing**' to solve **division sums** and different **word problems**.
- Learn **doubles** of bigger numbers.
- Find **halves** and **quarters** of a set of **objects** and **quantities** and **shapes**.
- Use **analogue** and **digital** to tell the times at **o'clock**, **half past**, **quarter past** and **quarter to**.
- Round **numbers** up or down, using **greater than** and less than.
- **Addition** of more than two numbers together.



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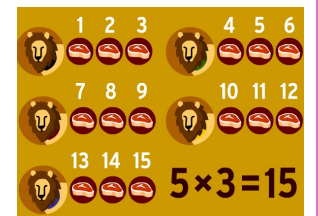
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2

Key learning this half term:

- Explore **calculation strategies**.
- **Add/subtract** numbers mentally and using **formal written methods**.
- **Multiply/divide** by 3 and 4.
- Recall and use facts for the 3 and 4 **times tables**.
- Calculate **mathematical statements**.
- Solve problems using **concrete**, **pictorial**, **written** and **mental methods**.





Mathematics Learning Journey 2020-21

Year 3

Mathematics

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1

Key learning this half term:

- **Solve** number and practical problems with increasingly large numbers.
- **Calculate** and **estimate** numbers with up to 4 **digits** using formal written methods.
- Solve **two-step problems**, deciding on appropriate **methods**.



Mathematics

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We will develop our **Mathematics knowledge** through the **Mathematics Mastery Programme**.



1

Key learning this half term:

- **Compare, order, add** and **subtract fractions** with **common denominators**.
- Solve problems using **complex addition** and **subtraction**.
- Use **bar charts, pictograms** and **tables**.
- Apply knowledge of **multiplication facts** and corresponding **division facts**.
- Apply **practical** and **informal written methods** to multiply and divide **two-digit numbers**.
- Identify **right angles**.
- Draw and **measure** straight lines in **centimetre, (cm.)**



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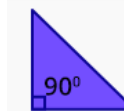
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1

Key learning this half term:

- Solve **one-step** and **two-step problems** involving **numbers, money** or **measures** and **time**.
- Apply **mathematical knowledge** to correctly choose and carry out **appropriate calculations**.
- Recall **multiplication facts** for the **2, 3, 4, 5, 6, 8** and **10 times tables** and the corresponding **division facts**.
- Use knowledge of **number operations** and **corresponding inverses**, including **doubling** and **halving**, to **estimate** and **check calculations**.
- **Describe, visualise, classify, draw** and make both **2D shapes** and **3D solids**.
- Draw **right angles** and identify them in **2D shapes**.
- **Compare angles** with a **right angle** and recognise that a **straight line** is equivalent to **two right angles**.



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2

Key learning this half term:

- **Compare** and **order** numbers up to 1000.
- Find 10 or 100 **more** or **less** than a given number.
- Tell the **time** on both **digital** and **analogue** clocks.
- **Record** and **compare** time in terms of **seconds, minutes, hours** and **o'clock** using **am/pm**.
- **Add** and **subtract** amounts of **money** to give change, using both **pounds (£)** and **pence (p)**.
- Recognise, find and write **fractions**.
- **Measure, compare, add** and **subtract lengths** (m/cm/mm); **mass** (kg/g) and **volume** (l/ml).



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2

Key learning this half term:

- Recognise and **measure** a variety of **shapes**.
- Use **mirrors** to draw **shapes** with a **reflective line of symmetry**.
- Apply **vocabulary** relevant to **position, direction** and **movement** to describe **movement** on a **grid**.
- Use **written methods** to record, support and explain **two-digit** and **three-digit numbers problems**.
- Apply **practical** and **informal written methods** to **multiplication** and **division** of **two-digit numbers**.
- Find **unit fractions** of **numbers** and **quantities**, e.g. find **one half (1/2)**, **one third (1/3)**, of 12 litres.
- Practice **multiplication facts** for the **2, 3, 4, 5, 6, 8** and



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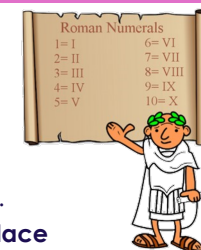
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2

Key learning this half term:

- Secure **multiplication** and **division**.
- Recall and use **multiplication/division facts** for 6 and 8 **times table**.
- Count in **multiples** of 6 and 8.
- Calculate **mathematical statements**.
- Explore **calculation strategies** and **place value**.
- **Add/subtract** numbers mentally.
- Find 10, 100, 1000 **more than** a given number;
- **Order** and **compare** beyond 1000.
- **Round** any number to nearest 10, 100, 1000.
- Learn **Roman Numerals** up to 50 (L).





Mathematics Learning Journey 2020-21

Year 4

Mathematics

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1

Key learning this half term:

- **Solve** number and practical problems with increasingly large numbers.
- **Calculate** and **estimate** numbers with up to 4 **digits** using formal written methods.
- Solve **two-step problems**, deciding on appropriate **methods**.

Ten Thousands (T Th)	Thousands (Th)	Hundreds (H)	Tens (T)	Ones (O)
1	3	5	4	8

Mathematics

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We will develop our **Mathematics knowledge** through the **Mathematics Mastery Programme**.



1

Key learning this half term:

- Multiplying **two-digit** and **three-digit** numbers by a **one-digit** number using **formal written method**.
- Solve problems involving **fractions**.
- Calculate **area** and **perimeter** of **rectangles** and **triangles**.
- Calculate a **missing side measurements** of a **square** using the **area**.
- Identify and **order by size**, **acute** and **obtuse angles**.
- Describe **positions** on a **2D grid** as **coordinates**.
- Solve problems using information presented in **bar charts**, **pictograms**, **tables** and simple **line graphs**.



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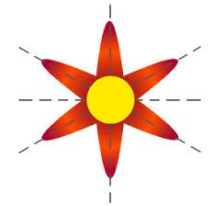
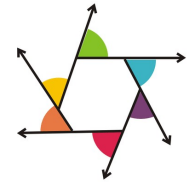
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1

Key learning this half term:

- **Convert units** of measure.
- Select appropriate **units of measure**.
- Use **strategies** to **investigate problems** including: **trial and improvement**, **organising** using **lists** and **tables**, **working systematically**.
- **Compare** and **classify geometric shapes** based on **properties** and **sizes**.
- Identify **acute** and **obtuse angles** and compare and **order angles** up to **two right angles** by **size**.
- Identify **lines of symmetry**.



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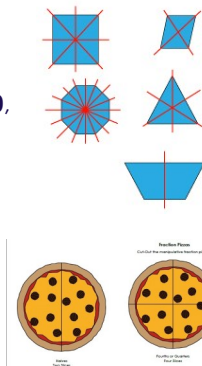
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2

Key learning this half term:

- Improving **mental arithmetic** skills and **times table** knowledge.
- **Order** and **compare** numbers **beyond 1000**.
- **Multiply** and **divide mentally**, by **10**, **100** and **1000**.
- Recognise the **equivalence** between **decimal** and **fraction** forms.
- Use **diagrams** to identify **equivalent fractions**.
- Tell the **time** using **analogue** and **digital clocks**.
- Recognise **lines of symmetry** in **2-D shapes**.



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2

Key learning this half term:

- **Solve problems** involving **multiplication** and **addition**.
- Apply the **distributive law** to **multiply two-digit numbers** by a **one-digit number**.
- Solve **integer scaling problems** and **correspondence problems**.
- Find the effect of **dividing a one or two-digit number** by **ten** and one **hundred**.
- Identify the **value of digits** in an answer as **ones**, **tenths** and **hundredths**.
- **Estimate**, **compare** and **calculate** different measures, including **money** in **pounds (£)**, and **pence (p)**.
- Improve **reasoning** skills, **mental arithmetic** skills and **times-tables** knowledge.



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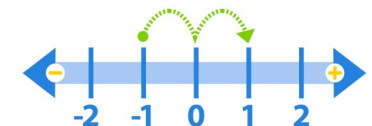
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2

Key learning this half term:

- **Position** and **direction**.
- Describe **positions** and **movements** and plot specified **points** and **lines** on a **2-D grid**.
- **Reasoning** with **patterns** and **sequences**
- Read **Roman Numerals** and understand a brief history of the **number system**.
- Recognise and use **square numbers** and their notation.
- Understand **negative numbers** to -100.
- Identify **3-D shapes** from **2-D representations**.





Mathematics Learning Journey 2020-21

Year 5

Mathematics

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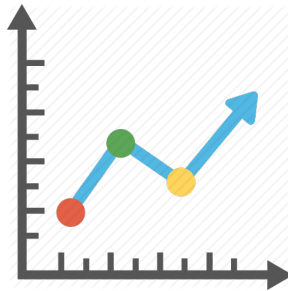
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1

Key learning this half term:

- Reasoning with large whole numbers and integers.
- Integer addition and Subtraction.
- Line graphs and time tables.



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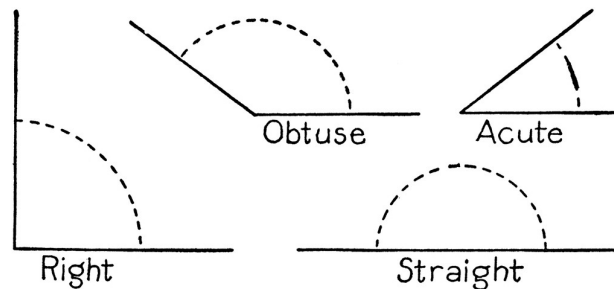
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1

Key learning this half term:

- Fractions and Decimals.
- Angles.



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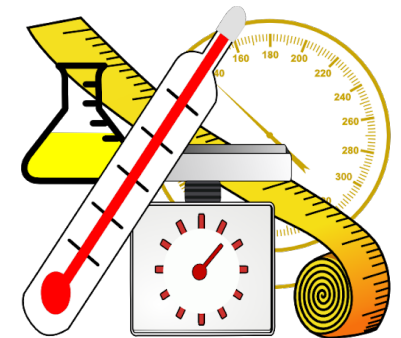
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1

Key learning this half term:

- Converting units of measure.
- Calculating with whole numbers and decimals.



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AUTUMN

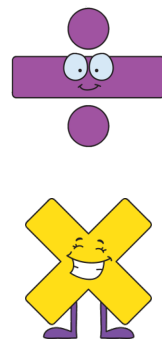
We will develop our **Mathematics knowledge** through the **Mathematics Mastery Programme**.



2

Key learning this half term:

- Multiplication and Division.
- Perimeter and area.



Mathematics

SPRING

We will develop our **Mathematics knowledge** through the **Mathematics Mastery Programme**.



2

Key learning this half term:

- Fractions, decimals and Percentages .
- Transformations.
- Solve problems which require knowing **percentage** and **decimal equivalents** of 12, 14, 15, 25, 45, and **fraction** and **decimal equivalents** of percentages that are multiples of 10 and 25
- Solve problems involving number up to **three decimal places**.



Mathematics

SUMMER

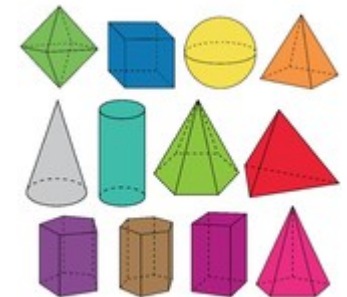
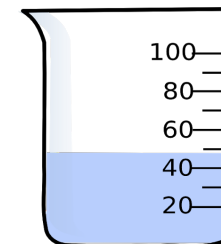
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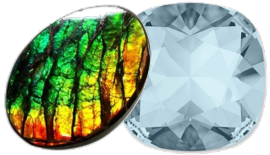


2

Key learning this half term:

- 2D and 3D Shapes.
- Volume.
- Problem Solving.





Mathematics Learning Journey 2020-21

Year 6

Mathematics

AUTUMN

We will develop our **Mathematics** knowledge through the **school's Mathematics** scheme.

1

Key learning this half term:

- Develop our understanding of the **number system** and **place value** for numbers up to **seven-digits**.
- Consolidate our knowledge of a range of strategies for **addition** and **subtraction**, including formal written methods.
- Explore strategies for **multiplication** including **formal written methods**.
- Solving a range of **mathematical problems** including those with **remainders**.



Mathematics

SPRING

We will develop our **Mathematics** knowledge through the **school's Mathematics** scheme.

1

Key learning this half term:

- Calculation of **percentages** of **whole numbers** or **measures**. For example **15% of 360**.
- **Equivalences** between **simple fractions, decimals** and **percentages**, in a variety of contexts.
- **Coordinates, rotation, reflection** and **translation**.
- **Data handling, pie charts, line** and **bar graphs, calendars** and **timetables**.
- **3D shapes, properties** and **nets** of **solid shapes**.
- Calculating the **area** and **perimeter** of **regular** and **compound shapes**.



Mathematics

SUMMER

We will develop our **Mathematics** knowledge through the **school's Mathematics** scheme.

1

Key learning this half term:

- Revision and preparation for SATs.
- **Time:** telling the time, differences in time, reading bus and train timetables, TV schedules, cooking times, 12hr and 24hr clocks etc.
- **Measurement:** estimating, measuring length, units, area, perimeter, capacity/volume, mass/weight, temperature (positive/negative), angles etc.
- **Money:** shopping bills, change, tickets etc.
- Working out **fractions** and **percentages** of quantities.



Mathematics

AUTUMN

We will develop our **Mathematics** knowledge through the **school's Mathematics** scheme.

2

Key learning this half term:

- Apply all **four operations** to solve word problems.
- Interpret, construct **pie charts** and **line graphs**, apply these to **solve problems**.
- Use **negative numbers** in context, and calculate **intervals across zero** e.g. **temperature**.
- Apply efficient written method of **long multiplication** and **long division** to multiply **four-digit** and **two-digit whole numbers**.
- Interpret division **remainders** as whole number remainders, **fractions**, or by **rounding**, as appropriate.
- Identify common **factors**, common **multiples** and **prime numbers**.



Mathematics

SPRING

We will develop our **Mathematics** knowledge through the **school's Mathematics** scheme.

2

Key learning this half term:

- Discuss the importance of **preparation** for **SATs**.
- Calculate of **percentages** of **whole numbers** or **measures** such as **15% of 360**.
- Recall and use **equivalences** between **simple fractions, decimals** and **percentages**.
- Practice use of **coordinates**, which also includes **rotation, reflection** and **translation**.
- **Data Handling** with focus on **pie charts, line graphs** and **bar graphs, calendars** and **timetables**.
- Explore all **properties** and **nets** of **3D shapes**.
- Calculating **area** and **perimeter** of **regular shapes** and **compound shapes**.
- **Revise** key **concepts** and **strategies** using **Mathletics**.

Mathematics

SUMMER

We will develop our **Mathematics** knowledge through the **school's Mathematics** scheme.

2

Key learning this half term:

- **Revise skills** learnt throughout the **KS2 curriculum**.
- **Apply skills** to a variety of **different contexts** and across the wider curriculum.
- Discover areas of the **KS3 curriculum** in preparation for **secondary school** transition.
- Using **Mathletics** to revise key mathematical concepts and strategies. www.uk.mathletics.com/signin/
- Continue to practise times table knowledge using **Times Tables Rockstars** with an aim to increasing speed and accuracy when answering. www.ttrockstars.com/

