



ORLEANS PRIMARY SCHOOL



Year 4

Summer 1 Curriculum Overview

2018

SCIENCE



Electricity

This unit builds on children's previous practical experience of making circuits and extends their understanding of circuits, conductors and insulators and the need for a complete circuit in order for a device to work. They will create a simple series circuit both with and without a switch and explain how a switch turns the electric current on and off. They are introduced to ways in which they can vary the current in a circuit and accurately record their findings in a table. They will explain the role of protons, neutrons and electrons in generating an electric current. They will know how electrons move in a complete and an incomplete circuit and explain why some materials conduct electrical currents and others don't.

PSHE Taking More Control & Growing Up

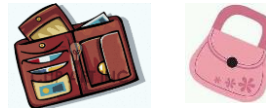
We will continue this unit, helping children to make informed choices and understand what might influence these choices. They will understand persuasive language, threats and pressure from others and learn to express their feeling in a positive way. During this final term, children will also explore the human life cycle and describe the changes that happen as we grow up. They will identify some basic facts about puberty, discussing male and female body parts using agreed words. They will also learn how puberty is linked to reproduction.

TRIPS & VISTORS

Drama Hut in for WWII: Tuesday 8th May – this is a school-based drama workshop.
Bletchley Park: Monday 21st^h May - linked to our topic on WWII in History.

D.T. Money Containers

In this unit children learn how textiles containers *e.g. purses, wallets and belt bags* are designed for different purposes and different users. They design patterns/templates, and join and reinforce fabrics. Children develop their designing skills when evaluating products and use this information to generate their own ideas and identify design criteria. They communicate their early ideas through modelling with paper or inexpensive fabric, and use decorative techniques *e.g. dyeing and embroidery*.



P.E. Our two sports for this term are **Badminton** and **Athletics**. Wednesday and Friday will be our P.E. days. In athletics we will be focusing on throwing skills, running for speed, jumping for distance and finishing the unit with plenty of competition!



In badminton we will learn the skills and rules involved with serving and game play as a whole. We will develop skills to perform a rally, looking at the various strokes and also competitive techniques used to defend and attack.

HISTORY Battle of Britain

We learn about the Second World War in Europe and why the Battle of Britain was such a significant turning point in British History. We study the timeline of events such as the outbreak of the war, the Battle of Britain, the heroic rescue at Dunkirk, the Blitz, the D-Day landings, the liberation of the concentration camps and the celebrations of VE Day. We research the lives of the ordinary people who faced the Blitz and had to deal with rationing and evacuation. We also explore the inspiring stories and achievements of significant people such as Alan Turing, Anne Frank and Winston Churchill.



Computing

Kodu - Programming

Children will design and write a program/game to achieve certain goals. They will detect and correct errors in programs and solve problems by decomposing them into smaller parts.

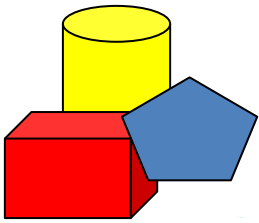
RE

Children will learn about **Judaism** by exploring Jewish celebrations. They will learn about Passover, Sukkot, Purim, Hanukkah and Rosh Hashanah, and how each of these festivals reveals and explains Jewish beliefs and teachings.

MUSIC

Children will focus on composition using notated score. Children will use picture/sound stimuli and tuned/untuned instruments. They will showcase a class performance of current and topic related pieces.





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MATHS

Division

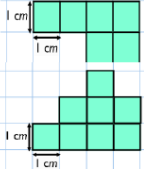
- We will be spending the first week focusing on division which has been carried over from last term.

Area

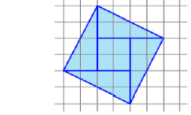
Children are introduced to area for the first time. They will understand that area is how much space is taken up by a 2D shape or surface. Once children have recognised that area is measured in squares, they use the strategy of counting the number of squares in a shape to measure and compare the areas of rectilinear shapes. Children are introduced to the notation cm².

- Children compare the area of rectilinear shapes** where the same size square has been used. Children will be able to use < and > with the value of the area to compare shapes.
- Children then move on to finding area by using the strategy of **length x width**.

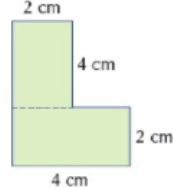
Work out the area of these shapes.
The shape is made of ___ squares.
The area of the shape is ___ square centimetres or ___ cm².
The shape is made of ___ squares.
The area of the shape is ___ square centimetres or ___ cm².



Work out the area of this shape.



Cut out the triangles and squares to make a new shape.
Can you make a rectangle?
Can you make a different rectangle?



Fractions

- Children explore fractions in different representations, for example, fractions of shapes, quantities and fractions on a number line.
- They explore and recap on the meaning of numerator and denominator, non-unit and unit fractions.

Equivalent fractions

- Children use strip diagrams to investigate and record equivalent fractions. They start by comparing two fractions before moving on finding more than one equivalent fraction on a fraction wall.

How many fractions that are equivalent to one half can you see on the fraction wall?
Can you draw any extra rows to show other equivalent fractions?



How many equivalent fractions can you see in this picture?

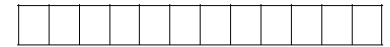


- Children continue to understand **equivalences** through diagrams. They move onto using proportional reasoning to find equivalent fractions. Attention is drawn to the method of multiplying the numerators and denominators by the same number to ensure that fractions are equivalent.

Fractions greater than 1

Children use manipulatives and diagrams to show that a fraction can be split into wholes and parts. They focus on how many equal parts make a whole dependent on the number of equal parts altogether. This learning will lead on to Year 5 where children learn about improper fractions and mixed numbers.

Using the diagram, complete the fractions.



$$\frac{1}{4} = \frac{\square}{12} \quad \frac{1}{6} = \frac{3}{6} \quad \frac{3}{4} = \frac{\square}{8} \quad \frac{5}{12} = \frac{\square}{24}$$



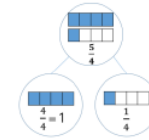
Using the pie chart, complete the equivalent fractions.

$$\frac{1}{3} = \frac{\square}{6} = \frac{\square}{12} = \frac{\square}{24}$$

Complete the part whole models and sentences.

There are quarters altogether.

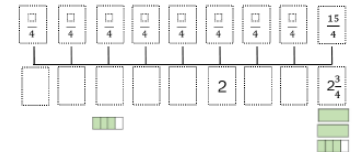
quarters = whole and quarter.



- er line and start to make connections between improper and mixed numbers. They use cubes and bar models to represent fractions greater than a whole. This will support children when adding and subtracting fractions greater than a whole.

- Children use practical equipment and pictorial representations to add two or more fractions. They explore using a number line to add fractions where they can add on from a given fraction. They could also explore adding fractions more efficiently by using known facts or number bonds to help them e.g.

Complete the number line.

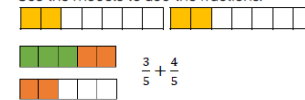


Can you complete bar models to represent each fraction?

$$\frac{5}{9} + \frac{7}{9} + \frac{5}{9} = \frac{10}{9} + \frac{7}{9} = \frac{17}{9}$$

Take two identical strips of paper. Fold your paper into quarters. Can you use the strips to solve:
 $\frac{1}{4} + \frac{1}{4}$ $\frac{1}{4} + \frac{1}{4} + \frac{1}{4}$ $\frac{3}{4} + \frac{3}{4}$ $\frac{\square}{4} + \frac{\square}{4} = \frac{7}{4}$
what other fractions can you make and add?

Use the models to add the fractions:



$$\frac{3}{5} + \frac{4}{5}$$

• **Subtract 2 fractions**

Children use practical equipment and pictorial representations to subtract fractions. They explore using a number line to subtract fractions. They will also explore partitioning fractions to help subtract more efficiently by using known facts or number bonds to help them e.g.

$$\frac{12}{9} - \frac{7}{9} = \frac{12}{9} - \frac{2}{9} - \frac{5}{9} = \frac{5}{9} \quad \frac{9}{9} = 1, \frac{18}{9} = 2 \text{ etc.}$$

Rachel uses the number line to solve $\frac{17}{11} - \frac{9}{11}$



Use a number line to solve:

$$\frac{16}{13} - \frac{9}{13} \quad \frac{16}{9} - \frac{9}{9} \quad \frac{16}{7} - \frac{9}{7} \quad \frac{16}{16} - \frac{9}{16}$$

Whole	Unit Fraction	Non-unit Fraction
The whole is 24	$\frac{1}{6}$ of 24 = ____	$\frac{5}{6}$ of 24 = ____
The whole is ____	$\frac{1}{3}$ of ____ = 30	$\frac{2}{3}$ of ____ = ____
The whole is ____	$\frac{1}{5}$ of ____ = 30	$\frac{3}{5}$ of ____ = ____
The whole is 4.5 l	$\frac{1}{10}$ of ____ = ____	$\frac{7}{10}$ of ____ = ____

- **Subtract fractions from a whole amount.** Children need to understand the relationship between the whole number and the denominator. For example,
- **Fractions of a quantity.** Children build on their understanding from Year 3 that the denominator tells us how many equal parts a whole has been split into and the numerator tells us how many equal parts of the whole there are. They use concrete and pictorial representations to find fractions of a quantity. They link bar modelling to the abstract method in order to understand why the method works.
- **Solve more complex problems for fractions of an amount.** Children continue to use practical equipment and pictorial representations to help them work out what the whole is when a fraction is given. Children continue to only use proper fractions within this step.

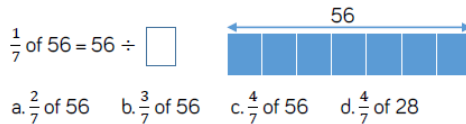


The school kitchen needs to buy carrots for lunch. A large bag has 200 carrots and a medium bag has $\frac{3}{5}$ of a large bag. The school cook says,

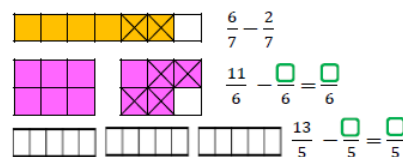
I need 150 carrots so I will have to buy a large bag.

Is he correct? Explain your reasoning.

Use a bar model to help you represent and find:



Use the bar models to subtract the fractions.



ENGLISH



Non-Fiction: Recount/Newspaper Reports Focus Text: *Incredible Sports*

In this unit, children explore the Big Question: What is the world's most incredible sport? They will read the interactive eBook, finding information and distinguishing between fact and opinion. They will identify features of journalistic reports and explore the way language is used in media. They will compare different types of newspaper reports and also read and listen to a sports commentary. They will summarise and evaluate texts, expressing their own views on different reports. They end by answering the Big Question, planning and writing their own newspaper report.

Focusing on grammar, children will learn to use:

- Comparative and superlative phrases
- Multi-clause sentences



Science Fiction Focus Text: *The Iron Man*

The children start by listening to *The Iron Man*, asking and answering questions and making predictions. They look at the author's use of powerful language to capture our imaginations, including similes. They revise their knowledge of speech marks, composing a conversation, and focus on the character Hogarth's feelings to write diary entries in role. For the final writing task, they create their own imaginary creature, thinking of similes and powerful noun phrases to describe it, and write a story about what happens when it encounters humans.

Focusing on grammar, children will learn to use:

- Noun phrases
- Punctuate direct speech