



# Orleans Primary School

## Year 5 Autumn 1 Overview



### Science

#### Properties of Materials

In this unit of work, we will be exploring the properties of everyday materials and reversible and irreversible changes to them. The children will determine the hardness/transparency of different materials and link this to their uses. They will investigate the thermal and electrical conductivity of different materials and link this to their uses. Finally, they will demonstrate, identify and describe reversible and irreversible changes.

### Computing

#### Online Safety

We will be discussing how to use the internet and the dangers online. We will discuss the usage of strong passwords, understand that bullying can occur online and recognise when health and wellbeing are being affected in either a positive or a negative way through online use.

### RE

#### How do religious people decide how to solve dilemmas?

The objectives are to understand what a dilemma is through; the teachings of Pirkei Avot in Judaism; the Letter to the Thessalonians in Christianity, and the Buddhist story of the Wise Elephant King. The children will understand how religious principles provide guidance on resolving dilemmas.

#### HOME LEARNING:

SET ON TUESDAYS

IN ON MONDAYS

### PE

Remember to wear your PE kit to school. We will be improving our netball skills as well as our dance skills. PE is on **Wednesday and Friday.**

### Music

Children will be learning about One More Round and Rhythm Is Gonna Get You using: pitch, chords, percussion and body percussion. Children will also be learning to identify the duration of notes using the treble clef.

### Art

#### Sculpture: Installation Art

In this topic, they will Show that they understand what installation art means and justify their opinions of installation artworks. The children will create an installation plan, model or space. They will describe how their space conveys a particular message or theme.

### READING

Children should read for a minimum of **15 mins** at home every night. We do encourage them to read to an adult so they can practice reading aloud.

### French

We will be learning the French alphabet letter names for spelling names and key vocabulary and places, as well as accurate reading, pronunciation and spelling of 13 key French sounds.

### PSHE

#### Families and Relationships

In this topic, they will describe what qualities a good friend should have and that friendships have normal 'ups and downs'. They will understand what marriage is and know that it is a choice people make. They will develop an understanding that we all have a range of attributes that make us who we are and we should be proud of these.

### KIRFs

To help develop children's fluency in mathematics, we ask them to learn Key Instant Recall Facts (KIRFs) each half term.

#### **This term's KIRF is:**

- I know number bonds to 10 and 1.

### Geography

#### What is a River?

This term, we will be using the skills that we acquired at Hooke Court on rivers, to build and extend our expertise. We will learn about tributaries, estuaries and streams. We will also expand our understanding of the water cycle and how it affects our lives, alongside improving our map reading skills.

## English

This term we will be looking at a Modern Novel: Floodland by Marcus Sedgwick.

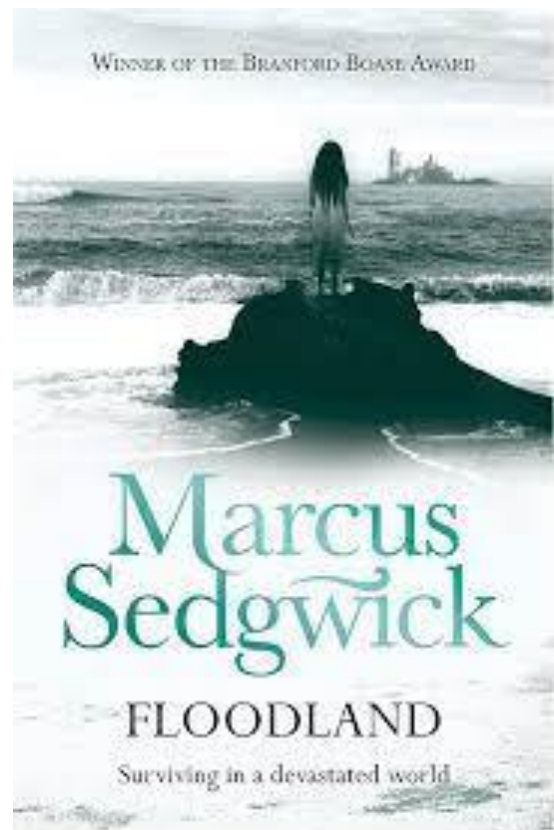
Set in an all too believable near future when many parts of England are submerged in water and people drift into gangs, divided due to the scarcity of resources, especially food. Zoe has been left behind on an island, which used to be the city of Norwich and discovers a boat, which she wants to use to try to find her parents. She has to cope with human cruelties and frailties but the story ends on a note of hope. This is an exciting story, which raises some key questions: How would people cope? How would they respond? What would happen to individuals, families, societies?

### Overall aims of this teaching sequence:

- To engage children with a story with which they will empathise
- To explore themes and issues, and develop and sustain ideas through discussion
- To develop creative responses to the text through drama, storytelling and artwork
- To write in role in order to explore and develop empathy for characters
- To write with confidence for real purposes and audiences

Throughout this book, we will develop a range of skills with the children and will produce several pieces of written work, including:

- Letter writing
- Writing in role
- Poetry
- Persuasive speeches
- Free writing opportunities
- Cross curricular writing opportunities



# Maths

## Reasoning with large whole number

- L1 = To identify the value of each digit in a 5-digit number
- L5 = To identify the value of each digit in a 6-digit number

Pupils represent 5-digit numbers in a variety of ways including with place value counters and in words. Using Dienes to build and imagine representations of larger integers supports understanding of the magnitude and relationships between these values. Pupils identify the value of each digit and write the sum of its place value parts. They will extend their understanding of the number system and place value to 6-digit whole numbers, finding 1, 10, 100, 1,000 and 10,000 more or less.

The number is \_\_\_\_\_

The digit \_\_\_\_ has a value of 20.

The digit \_\_\_\_ represents four hundreds.

The digit 3 has a value of \_\_\_\_\_

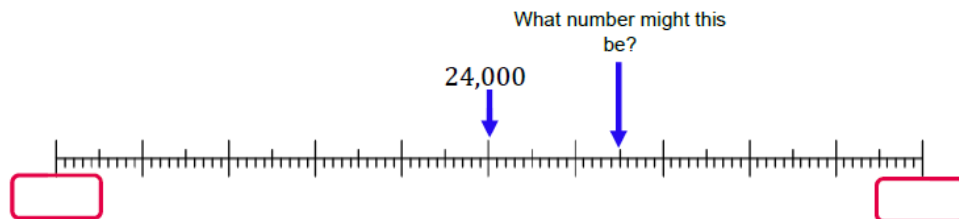
There is a place holder in the \_\_\_\_\_ place.

\_\_\_\_\_ = \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ + 20

Ten thousands	Thousands	Hundreds	Tens	Ones
10,000 10,000 10,000	1,000 1,000	100 100 100	10 10	

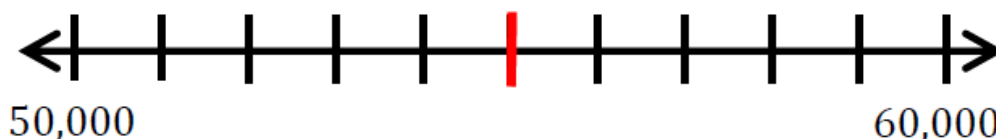
- L2 = To compare 5-digit numbers
- L3 = To order and compare 5-digit numbers
- L6 = To compare and order 6-digit numbers
- L7 = To order and compare 6-digit numbers

Pupils generate 5- and 6-digit numbers before comparing and ordering. Number lines are used to position numbers and identify other values based on their relative position, developing pupils' number sense.



- L4 = To round 5-digit numbers to the nearest 100, 1,000 or 10,000
- L8 = To round 6-digit numbers to the nearest 1,000, 10,000 or 100,000
- L9 = To practise rounding skills

Pupils round 5-digit numbers by identifying the multiples either side, applying this in context. Pupils continue to develop their understanding of rounding by extending this to 6-digit numbers. A deeper understanding of rounding is developed through exploration of numbers which round to the same multiples of a power of ten. Opportunities are provided for pupils to solve problems involving rounding.



- L10 = To read Roman numerals to 1,000 (M) and compare them to our number system

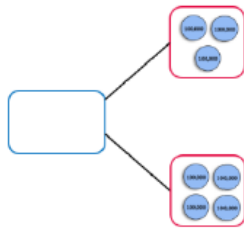
The Roman numerals system is similar to our number system in some ways and different in others. It is not a base ten system and dedicating time to comparing this structure can deepen understanding of our base ten system. Pupils are challenged to create concrete representations that can be used to represent Roman numerals in order to calculate.



### Addition and Subtraction

- L1 = Use and explain adding and subtracting strategies
- L2 = Add and subtract multiples of 10, 100, 1,000, 10,000 and 100,000

The unit starts by exploring calculation strategies for addition and subtraction of 2-digit and 3-digit numbers. This is an opportunity to review strategies from previous years with a strong focus on clearly explaining, using equipment, sketches and jottings, to demonstrate the understanding. There is a focus on using known facts to calculate with large numbers, supporting pupils to realise how much they can do with number bonds to 20, and highlighting the importance of being fluent in the recall of these facts.

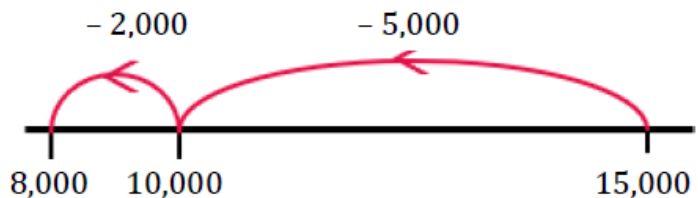


#### Use known facts

$$15 - 7 = 8$$

$$15,000 - 7,000 = 8,000$$

#### 'Make ten' (subtract to the next multiple of ten)

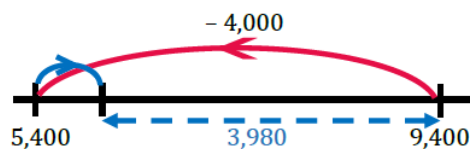


- L3 = Add and subtract using a round and adjust strategy
- L4 = Use a range of partitioning strategies to add and subtract
- L5 = Use rounding to estimate calculations

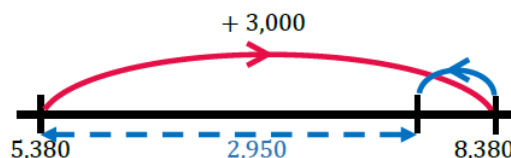
We will review calculation strategies that pupils know from previous years and extend these for use with large whole numbers. A variety of manipulatives and models are suggested to visualise the structure of these strategies to support understanding and accuracy. We make clear links to the previous unit and provides an important purpose for rounding in order to estimate and check accuracy of a calculation.

#### Round and adjust

$$9,400 - 3,980 =$$







$$5,380 + 2,950 =$$



- L6 = Use column addition to calculate with large whole numbers
- L7 = Use column subtraction to calculate with large whole numbers
- L8 = Use column methods

Formal written methods of addition and subtraction are the focus of the next sequence of lessons. Pupils have used these methods in Year 4 and now extend to work with 5-digit and 6-digit numbers as well as adding more than two numbers. Place value counters are used alongside the written method as a tool for explaining how the procedure works and focusing attention on what is happening as each step is carried out. We will support pupils to develop the habit of deciding when to use a written method and when a different method may be more efficient.

Thousands	Hundreds	Tens	Ones
		 	
			

		5	2	7	3
+			5	4	1

- L9 = Use a range of mental strategies while problem solving

The final lesson provides a context for pupils to complete lots of calculations. This is an opportunity to bring together the experiences so far in the year to solve multi-step problems. A variety of calculation strategies should be encouraged.

