



**Hiltingbury Junior School**

**YEAR 6**

Autumn Term  
2017/2018

During the Autumn Term, Year 6 will start by celebrating reading; enticing the children to read, read read! We study the Harry Potter series which links with our dance unit as well. As part of our studies, we specifically and letters of complaints as well as fantasy stories. We also look at Shakespeare's Macbeth, in particular the witches poem as well as a balanced argument about who is to blame for the death of King Duncan. Alfred Noyes' the Highwayman is a wonderful poem which allows the children to be creative and use ambition to understand the complex story. As part of our topic, we will be writing newspaper reports about 'dangerous geography'; enjoying and creating poetry, appreciating Shakespeare and using Charles Dicken's 'A Christmas Carol' as a stimulus for some creative writing in the run up to Christmas.

***In particular the children will learn about: -***

- ▯ Writing in complete accurate sentences
- ▯ Using a wide range of correct punctuation
- ▯ Word categories (noun, adjective, adverb...)
- ▯ Key features of a variety of text types
- ▯ Different forms of poetry
- ▯ The format of fiction and nonfiction texts
- ▯ Expanding their vocabulary
- ▯ The language of persuasion
- ▯ Linking paragraphs and creating flow in their writing
- ▯ Planning, editing and revising their work

Examples of work produced during this part of the curriculum:-

- ▯ A geography website on the theme of 'dangerous geography'
- ▯ A newspaper report also on the theme of 'dangerous geography'
- ▯ Posters on their favourite books and authors
- ▯ A fantasy story following on from our immersive trip to the Warner Bros Harry Potter Studios
- ▯ Discursive writing based on Macbeth

The children have regular independent reading opportunities as well as daily group reading activities which include reading and discussing texts, expressing and justifying their opinions and preferences.

Children have opportunities to develop speaking and listening skills through a variety of activities, including drama in the context of English and other areas of the curriculum.

Handwriting skills are taught and practised using cursive handwriting style. The children have the opportunity to advance through our Master Scribe handwriting journey. On reaching scribe level, the children are given a handwriting pen to write with. Children achieving master scribe level will be awarded a fountain pen in their house colour.

Children will be revising spelling rules throughout the term; children will be required to take home ten words a week to learn and each child has a home spelling book where their spellings are recorded. Children will be tested weekly. Homework spellings are also on the Year 6 website.

## Mathematics

Every child will take part in a daily mathematics lesson and will spend time on a range of activities and tasks, including mental maths and group work. While much of the time the class will work as one group on the same topic, this will be interactive with children explaining to each other and their teacher, what they are doing and how they are solving calculations.

During the maths lesson children will have the opportunity to work in groups and learn from each other as well as solving problems on their own. At least once a week, children may be taught in groups of similar attainment to investigate mathematical concepts in greater detail.

Throughout Year 6 your child will be tackling these mathematical skills:

- Multiply and divide decimals mentally by 10 or 100, and integers by 1000, and explain the effect.
- Use the vocabulary of estimation and approximation, rounding an integer to the nearest 10, 100 or 1000.
- Find the difference between a positive and a negative integer, or two negative integers, in a context such as temperature or the number line, and order a set of positive and negative integers.
- Recognise and extend number sequences, such as the sequence of square numbers, or the sequence of triangular numbers 1, 3, 6, 10, 15...
- Count on in steps of 0.1, 0.2, 0.25, 0.5..., and then back.
- Make general statements about odd or even numbers, including the outcome of products.
- Recognise multiples up to  $10 \times 10$ . Know and apply simple tests of divisibility. Find simple common multiples.
- Recognise squares of numbers to at least  $12 \times 12$ .
- Recognise prime numbers to at least 20.
- Factorise numbers to 100 into prime factors.
- Change a fraction such as  $\frac{33}{8}$  to the equivalent mixed number 4 and  $\frac{1}{8}$ , and vice versa.
- Recognise relationships between fractions: for example, that  $\frac{1}{10}$  is ten times  $\frac{1}{100}$ , and  $\frac{1}{16}$  is half of  $\frac{1}{8}$ .
- Reduce a fraction to its simplest form by cancelling common factors in the numerator and denominator.
- Order fractions such as  $\frac{2}{3}$ ,  $\frac{3}{4}$  and  $\frac{5}{6}$  by converting them to fractions with a common denominator.
- Use a fraction as an 'operator' to find fractions, including tenths and hundredths, of numbers or quantities (e.g.  $\frac{5}{8}$  of 32,  $\frac{7}{10}$  of 40,  $\frac{9}{100}$  of 400 centimetres).
- Solve simple problems involving ratio and proportion.
- Use decimal notation for tenths and hundredths in calculations, and tenths, hundredths and thousandths when recording measurements.
- Round a number with two decimal places to the nearest tenth or to the nearest whole number.
- Recognise the equivalence between the decimal and fraction forms of one half, one quarter, three quarters, one eighth... and tenths, hundredths and thousandths (e.g.  $\frac{700}{1000} = \frac{70}{100} = \frac{7}{10} = 0.7$ ).
- Understand percentage as the number of parts in every 100. Express simple fractions such as one half, one quarter, three quarters, one third, two thirds..., and tenths and hundredths, as percentages (e.g. know that  $\frac{1}{3} = 33\frac{1}{3}\%$ ).
- Find simple percentages of small whole-number quantities (e.g. find 10% of £500, then 20%, 40% and 80% by doubling).
- Mental calculation strategies (+ and -) consolidating all strategies from previous years
- Use known number facts and place value to consolidate mental addition/subtraction (e.g.  $470 + 380$ ,  $810 - 380$ ,  $7.4 + 9.8$ ,  $9.2 - 8.6$ ).
- Use informal pencil and paper methods to support, record or explain additions and subtractions.
- Extend written methods to column addition and subtraction of numbers involving decimals.

- Understand and use the relationships between the four operations, and the principles (not the names) of the arithmetic laws. Use brackets.
- Express a quotient as a fraction or as a decimal rounded to one decimal place. Divide £.p by a two-digit number to give £.p.
- Round up or down after division, depending on the context.
- Rapid recall of multiplication and division facts
- Consolidate knowing by heart: multiplication facts up to  $10 \times 10$ .
- Derive quickly:
  - division facts corresponding to tables up to  $10 \times 10$ ;
  - squares of multiples of 10 to 100 (e.g.  $60 \times 60$ );
  - doubles of two-digit numbers (e.g.  $3.8 \times 2$ ,  $0.76 \times 2$ );
  - doubles of multiples of 10 to 1000 (e.g.  $670 \times 2$ );
  - doubles of multiples of 100 to 10000 (e.g.  $6500 \times 2$ );
  - and the corresponding halves.
- Mental calculation strategies ( $\times$  and  $\div$ )
- Use informal pencil and paper methods to support, record or explain multiplications and divisions.
  - Extend written methods to:
    - multiplication of ThHTU  $\times$  U (short multiplication);
    - short multiplication of numbers involving decimals;
    - long multiplication of a three-digit by a two-digit integer;
    - short division of TU or HTU by U (mixed-number answer);
    - division of HTU by TU (long division, whole-number answer);
    - short division of numbers involving decimals.
- Develop calculator skills and use a calculator effectively. Checking results of calculations
- Reasoning and generalising about numbers or shapes
- Explain methods and reasoning, orally and in writing.
- Solve mathematical problems or puzzles, recognise and explain patterns and relationships, generalise and predict. Suggest extensions asking 'What if...?'
- Develop from explaining a generalised relationship in words to expressing it in a formula using letters as symbols (e.g. the cost of  $n$  articles at 15p each).
- Problems involving 'real life', money or measures
- Identify and use appropriate operations (including combinations of operations) to solve word problems involving numbers and quantities based on 'real life', money or measures (including time), using one or more steps, including converting pounds to foreign currency, or vice versa, and calculating percentages such as VAT. Explain methods and reasoning.
- Use, read and write standard metric units (km, m, cm, mm, kg, g, l, ml, cl), including their abbreviations, and relationships between them. Convert smaller to larger units (e.g. m to km, cm or mm to m, g to kg, ml to l) and vice versa. Know imperial units (mile, pint, gallon, lb, oz). Know rough equivalents of lb and kg, oz and g, miles and km, litres and pints or gallons.
- Record estimates and readings from scales to a suitable degree of accuracy.
- Calculate the perimeter and area of simple compound shapes that can be split into rectangles.
- Appreciate different times around the world.
- Describe and visualise properties of solid shapes such as parallel or perpendicular faces or edges.
- Classify quadrilaterals, using criteria such as parallel sides, equal angles, equal sides...
- Make shapes with increasing accuracy. Visualise 3-D shapes from 2-D drawings and identify different nets for a closed cube.
- Recognise where a shape will be after reflection:
- Recognise where a shape will be after two translations.
- Read and plot co-ordinates in all four quadrants.
- Recognise and estimate angles. Use a protractor to measure and draw acute and obtuse angles to the nearest degree. Check that the sum of the angles of a triangle is  $180^\circ$ : for example, by measuring or

paper folding. Calculate angles in a triangle or around a point. Recognise where a shape will be after a rotation through  $90^\circ$  about one of its vertices.

- ▮ Use the language associated with probability to discuss events, including those with equally likely outcomes.
- ▮ Solve a problem by representing, extracting and interpreting data in tables, graphs, charts and diagrams, including those generated by a computer, for example: line graphs (e.g. for distance/time, for a multiplication table, a conversion graph, a graph of pairs of numbers adding to 8); frequency tables and bar charts with grouped discrete data (e.g. test marks 0–5, 6–10, 11–15...).
- ▮ Find the mode and range of a set of data. Begin to find the median and mean of a set of data.

## Science

Science is taught weekly in half termly units. During the Autumn term we will be learning about Light and Electricity.

### Light:

In Year 6, spring term, we will be exploring the way that light behaves, including identifying light sources, reflection and shadows. The children will talk about what happens and make predictions. Pupils will get opportunities to work scientifically, for example possibly deciding where to place rear-view mirrors on cars or maybe designing and making a periscope and using the idea that light appears to travel in straight lines to explain how it works. They could even investigate the relationship between light sources, objects and shadows by using shadow puppets – we will allow the children to help shape their learning with their own suggestions for experiments and activities. They could extend their experience of light by looking a range of phenomena including rainbows, colours on soap bubbles, objects looking bent in water and coloured filters (they do not need to explain why these phenomena occur).

### Electricity:

During this unit children will identify and name parts of a simple electric series circuit, explain that short circuits may make wires heat up, that fuses are safety devices triggered through short circuits; and explain the effect of changing the voltage of a battery

## Dangerous Geography!

Initially, the children will identify the position and significance of latitude, longitude, Equator, Northern Hemisphere, Southern Hemisphere, the Tropics of Cancer and Capricorn, Arctic and Antarctic Circle, the Prime/Greenwich Meridian and time zones (including day and night). They will describe and understand key aspects of physical geography, including: tectonic plates, volcanoes and earthquakes.

During the unit the children will be making use of maps, atlases, globes and digital/computer mapping to locate countries and describe features studied.

In particular, activities will focus on volcanoes: identifying how they are formed, occurrences and the human and physical effects.

## Art and Design

Pupils shall continue to be taught to develop their techniques, including their control and use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design. Every child will be encouraged to use their sketchbook to record observations and use them to review and revisit ideas. Themes that will be explored in the autumn include:

- ▯ Cubism and use of shape
- ▯ Pencil and sketching techniques

## Design and Technology

Through a variety of creative and practical activities, pupils will be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. In the autumn term, the children will be making links with our work in art and science by researching and designing lamps.

## Computing

Initially the children will be creating their own websites using google apps, alongside constant consideration of eSafety. In addition to text and images, inserting html code and considering what makes a good website, we will be learning how to respect copyright online. Later we will be manipulating data to reinforce mathematical concepts in a practical and meaningful way. The children will also be given the opportunity to design in 3D, linking with Design and Technology. Throughout the term children will be given the chance to explore alternative presentation tools such as prezzi.

## Physical Education

The children will continue to develop a broad range of skills in PE and games lessons. They should develop an understanding of how to improve in different physical activities and sports and learn how to evaluate and recognise their own success.

In our games lessons the children will be studying basketball and orienteering to enable them to become physically confident in a way that supports their health and fitness. Games lessons are once a week. We also have PE in the hall once a week.

The units of work are: -

- Harry Potter Dance
- Badminton

For all these activities children must bring to school and wear the appropriate kit. For your information lessons occur on these days: -

### **Indoor PE – Tuesday**

**Outdoor Games – Wednesday** (tracksuit bottoms can be worn during colder months and a warm fleece)

PE is an important part of the curriculum therefore if they are unable to take part, a letter or conversation with parent is required. Please ensure they have necessary kit. Should a child forget their kit three times within a half term, a letter will be sent home.

## Music

Pupils' understanding and enjoyment of music is developed through activities that bring together performing, composing, listening and appraising. Children will undertake these activities within different units of work, which focus on a variety of musical skills.

During the autumn term, children will be studying and creating their own Leitmotif. We study Russian composer, Sergei Prokofiev and the story of Peter and the wolf.

## Religious Education

- ▮ **Identity** – contextualising the concept of identity within religious practice and explore diversity of practice and belief. The children produce a shield outlining areas of their identity.
- ▮ **Interpretation** – discussing whether everyone sees a situation in the same way, personal interpretation as well as comparing different biblical accounts of the nativity. In particular, we look at the bible stories of Matthew 1 and Luke 2 The birth of Jesus.

## PDL (Personal Development Learning)

Year six is an important year for the children; their final year in primary school, growing into their characters and, of course, SAT's. PDL sessions are an important part of ensuring that the children feel safe and valued and are able to approach adults in school. Circle time may also take place in addition to these lessons.

- ▮ **Rights, responsibilities and the law** – ranging from democracy and voting to classroom rules.
- ▮ **Emigration Immigration and Stereotyping** – discussions around what it means to be British, part of the Commonwealth as well as key concepts and issues concerning immigration.

## French

The children will be studying the following in French this term:

- ▮ a revision of Greetings and basic phrases
- ▮ the alphabet and French phonemes
- ▮ The story of 'Le petit chaperon rouge' (Little Red Riding Hood)

## Visits/Visitors

This autumn, we will be visiting the Warner Bros Harry Potter Studios as part of our 'fantasy genre' in English. There we attend a workshop teaching the children how an idea or book is 'pitched' to producers in order to create a film.