### Year 6 Long Term Plan

#### Autumn 1
- **Duration:** 7 weeks and 2 days
- **Novel:** Artemis Fowl
- **Question:** Is all fair in love and war?
- **Outcome:** Fantasy story
- **Literacy Genres:** Descriptive writing / narrative
- **Maths:** Place value, addition and subtraction, multiplication, shape
- **History:** The Maya Civilisation
- **Science:** Evolution and inheritance
- **DT:** Product design – High rise structure (circuitry)
- **Computer:** Animation: Stop Motion animation movie
- **RE:** What difference does it make to believe in Ahimsa, Grace and/or Ummah?
- **MFL:** Spanish: Body Parts

#### Autumn 2
- **Duration:** 9 weeks
- **Novel:** Goodnight Mr. Tom
- **Question:** Is war ever the answer?
- **Outcome:** War poems, Argument text, biography
- **Literacy Genres:** Poetry / Argument
- **Maths:** BODMAS, algebra, Percentages, Ratio, measures, data handling
- **History:** WW2 / Anne Frank
- **Science:** Evolution and inheritance / Forces
- **Music:** Wartime music
- **PSHE:** Citizenship and SRE
- **Computing:** Presenting information: age appropriate skills relative to software (Word/PowerPoint/Excel)
- **RE:** Is it better to express your beliefs in arts and architecture or in charity and generosity?
- **MFL:** Spanish: Families

#### Spring 1
- **Duration:** 5 weeks and 4 days
- **Novel:** Trash
- **Question:** Should we develop the undeveloped world?
- **Outcome:** Travel brochure
- **Literacy Genres:** Persuasive writing
- **Maths:** Fractions, decimals and percentages
- **Geography:** Region – The Americas / The Rainforest
- **Science:** Light
- **DT:** Recipes and making food: South American dish and pastry
- **Art:** South American artist (Beatrice Milhaze)
- **PSHE:** Living in the wider world
- **Computing:** Programming: Developing an interactive game with multiple outcomes (Scratch)
- **RE:** What matters most to Christians and Humanists?
- **MFL:** Spanish: Families

#### Spring 2
- **Duration:** Soft Rain
- **Novel:**
- **Question:** What can we learn from mistakes of the past? (COLONISATION)
- **Outcome:** Journal
- **Literacy Genres:** Newspaper reports
- **Maths:** Addition, subtraction, measures and shape
- **History:** Native Americans
- **Science:** Circuits/Electricity
- **DT:** Weaving Dream catchers / Totem Poles
- **Music:** Performing and composing: raps to a specific beat
- **PSHE:** Going for glory/Globalisation and fair trade
- **Computing:** Google Sketchup: All functionalities
- **RE:** What matters most to Christians and Humanists?
- **MFL:** Spanish: Pets

#### Summer 1
- **Duration:** 3 weeks and 4 days
- **Novel:** Poetry
- **Question:** Where are the most extreme regions in the world?
- **Outcome:** Weather reports
- **Literacy Genres:** Script writing
- **Maths:** Multiplication and division, word problems
- **Geography:** Extreme weather
- **Science:** Changes that form new materials
- **DT:** Product design – High rise structure (circuitry)
- **PSHE:** Health and well-being/prejudices
- **Computing:** Recording and editing: Making a movie (Movie maker)
- **RE:** What do religions say to use when life gets hard?
- **MFL:** Spanish: Sports

#### Summer 2
- **Duration:** 6 weeks
- **Novel:** Production writing
- **Question:** Who did it better – Britain or America?
- **Outcome:** Production
- **Literacy Genres:** Play script
- **Maths:** Investigations
- **Geography:** The Seaside (costal changes)
- **Science:** All living things
- **Art:** Portraits – Banksy
- **Music:** History of music: modern (from Elgar) and comparing all previous periods of music studied
- **PSHE:** Relationships and changes
- **Computing:** Photography: Photos, with music displayed in Movie Maker and commentary
- **RE:** What do religions say to use when life gets hard?
- **MFL:** Spanish: Sentence composition and structure

### Autumn: Homework/Enrichment Ideas
- Norfolk residential
- Beaumanor Hall WW2 (Autumn 2)
- Spanish Culture Day

### Spring: Homework/Enrichment Ideas
- South American Day
- Food taster – South American food

### Summer: Homework/Enrichment Ideas
- Wellbeing day
- Synagogue trip
- LEAD Athletics Events
### Year 6  LTP

#### Key place value objectives:
- **Term 1: Addition/ Subtraction 6 weeks**
  - read, write, order and compare numbers up to 10 000 000 and determine the value of each digit
  - round any whole number to a required degree of accuracy
  - use negative numbers in context,
  - solve number and practical problems that involve all of the above.

- **Term 2: Multiplication/ Division 9 weeks**
  - multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication
  - divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context
  - divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context
  - perform mental calculations, including with mixed operations and large numbers
  - identify common factors, common multiples and prime numbers
  - order of operations to carry out calculations involving the four operations
  - solve problems involving addition, subtraction, multiplication and division
  - use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.

- **Term 3: Fractions 5 weeks**
  - multiply simple pairs of proper fractions, writing the answer in its simplest form (for example, $\frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$)
  - divide proper fractions by whole numbers (for example, $\frac{3}{4} \div 2 = \frac{3}{8}$)
  - associate a fraction with division and calculate decimal fraction equivalents (for example, 0.375 for a simple fraction (for example, $\frac{3}{8}$)
  - identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
  - recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

#### LTP

(Focus for starter activities. Objectives should underpin all mathematical skills.)

- **Term 1**
  - **Addition/ subtraction 6 weeks**
  - **Term 2**
  - **Multiplication/ Division 9 weeks**
  - **Term 3**
  - **Fractions 5 weeks**

#### Misconceptions
- use common factors to simplify fractions; use common multiples to express fractions in the same denomination
- compare and order fractions, including fractions $\times 1$
- add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions
- multiply simple pairs of proper fractions, writing the answer in its simplest form (for example, $4 \times 2 \times 8 \times 1$
- divide proper fractions by whole numbers (for example, $3 \div 2 = 6\ 1$
- associate a fraction with division and calculate decimal fraction equivalents (for example, 0.375 for a simple fraction (for example, $8\ 3$
- identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places
- recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.

#### Table

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>6 weeks</td>
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<tr>
<td>2</td>
<td>9 weeks</td>
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<tr>
<td>3</td>
<td>5 weeks</td>
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</table>
### Volume of Shapes
- Calculate the area of parallelograms and triangles.
- Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres (cm³) and cubic metres (m³), and extending to other units (for example, mm³ and km³).
- Interpret and construct pie charts and line graphs and use these to solve problems.
- Calculate and interpret the mean as an average.

### Misconceptions
- Unless a pupil has a good understanding of place value they will continue to make mistakes with column addition. Such errors are often dismissed as careless mistakes, when the pupil in fact has a fundamental weakness in their understanding. When adding with decimals such weaknesses are highlighted because of the ‘decimal point’.
- Subtractions involving zeros cannot be done. That calculations such as the following cannot be done:
  \[ 34 - 27 \]
  Pupils who cannot do these have not got a sufficient understanding of exchanging. Unless a pupil has a good understanding of place value they will continue to make mistakes with column subtraction. Such errors are often dismissed as careless mistakes, when the pupil in fact has a fundamental weakness in their understanding. When subtracting with decimals such weaknesses are highlighted because of the ‘decimal point’.
- Numbers with more digits are larger.
  - e.g. 23.456 is larger than 123.5.
- Children find it difficult to understand zero because it represents, for them, something that does not exist. Numbers which represent quantities less than zero also represent the non-existent for many children and so are likely to pose problems for many of them. When ordering, the concept of 0 being greater than −1 is difficult for children to understand.
- An over-reliance on inadequate mental skills.
- Incorrect identification of the operation(s) to be used.
- Inadequate extraction of important information. Pupils miss important information required to carry out the calculation(s).
- Incorrect identification of the operation(s) to be used.
- In a two-step operation, some pupils will be unsure of which operation to do first.

### Misconceptions
- Confusion between ‘area’ and ‘perimeter’.
  - This might cause pupils to add lengths rather than multiply them when attempting to calculate area.
  - The belief that when finding the perimeter of a compound shape, which has been split already, they should add the internal lengths.
  - Some textbooks label the lengths of certain sides and require the pupil to calculate the others. Pupils might mistakenly believe that they should only add labelled lengths.
- An over-reliance on inadequate mental skills.
- Incorrect identification of the operation(s) to be used.
- Inadequate extraction of important information. Pupils miss important information required to carry out the calculation(s).
- Incorrect identification of the operation(s) to be used.
- In a two-step operation, some pupils will be unsure of which operation to do first. Misconceptions arise because of confusion caused by different units of measurement.
- recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.
- describe positions on the full coordinate grid (all four quadrants) and draw and translate simple shapes on the coordinate plane, and reflect them in the axes.

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