Stone Hill School –Maths - Long Term Planner – 2018/2019

Please note: When planning work for pupils, we take pride in ensuring that our learning objectives match the needs of each child. Some pupils may be set work that is above or below this outline in order to personalise their learning (see teaching and learning policy).

Mastery: Pupils will be given the opportunity to fully embed their learning through problem solving, models and images, reasoning and creative tasks in all maths units. Some units might be lengthened or shortened by teachers to ensure that sufficient time is given for pupils to master concepts that they find particularly challenging.

Year 9

Autumn	Spring	Summer
Weeks 1 -3: Number and Place Value **Pupils will work towards extending their understanding of the number system up to 1000.** **Objectives include:** • Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number. • Recognise the place value of each digit in a three digit number (hundreds, tens, ones). • Identify, represent and estimate numbers using different representations. • Solve number problems and practical problems involving these ideas.	**Weeks 1 -3: Fractions** **Pupils will extend their understanding of fractions to include tenths. They will learn to recognise a wider range of equivalent fractions.** **Objectives include:** • Count up and down in tenths; recognise that tenths arise from dividing an object into 10 equal parts. • Recognise and show, using diagrams, equivalent fractions with small denominators. • Add and subtract fractions with the same denominator within one whole • Compare and order unit fractions, and fractions with the same denominators.	**Weeks 1 – 2: Measurement (mass, length and capacity)** **Pupils will solve practical problems involving measuring. They will begin to compare measures and calculate the perimeters of shapes.** **Objectives include:** • Measure, compare, add and subtract lengths (m/cm/mm); • Measure, compare, add and subtract mass (kg/g); • Measure, compare, add and subtract volume/capacity (l/ml). • Measure the perimeter of simple 2-D shapes.

Weeks 4-6: Addition and Subtraction	**Weeks 4-6: Measures (Time)**	**Weeks 3-4: Statistics.**
Pupils will use partitioning to add and subtract larger numbers mentally. They will progress to formal written methods. **Objectives include:** • Add and subtract tens or hundreds from a three digit number. • Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction. • Estimate the answer to a calculation and use inverse operations to check answers. • Solve problems, including missing number facts, place value, and more complex addition and subtraction.	**Pupils will work towards reading analogue clocks to the nearest minute, using 24 hour clocks and comparing the duration of events.** **Objectives include:** • Tell the time from 12 hour and 24 hour clocks. • Tell time to the nearest minute. • Know the number of seconds in a minute, the number of days in each month and the number of days in a year/leap year. • Calculate the duration of an event and solve problems involving measuring time.	**Pupils will apply their understanding of bar charts, pictograms and tables to present and interpret data.** **Objectives include:** • Interpret and present data using bar charts, pictograms and tables. • Solve one-step and two-step questions *[for example, 'How many more?' and 'How many fewer?']* using information presented in scaled bar charts and pictograms and tables.

Weeks 7-9 Multiplication and Division

Pupils will learn the 3, 4 and 8 multiplication tables. They will begin to multiply and divide larger numbers using their times tables to help them.

Objectives include:
- Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables
- Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using mental and progressing to formal written methods.
- Solve problems involving missing numbers and scaling.

Weeks 7-8: Measures (Money)

Pupils will learn to use money in practical situations to solve problems with a real life context.

Objectives include:
- Correct use pound and pence notation.
- Add and subtract pound and pence to solve real life problems, including finding change.

Weeks 5-9: Calculation Revisit

Pupils will review their work on calculation and solve problems in a range of real life situations (including money and measures).

Objectives include
- Recalling and using multiplication and division facts to solve problems.
- Adding and subtracting using mental and written strategies where appropriate.
- Solving problems using inverse relationships for addition/subtraction and multiplication/division.

Weeks 10-13: Geometry: Properties of Shapes	Weeks 9 – 10: Geometry: Angles	Weeks 10-12: Review of shape and fractions.
Pupils will conclude the term with a unit of work on 2D and 3D shapes. **Objectives include:** - Draw 2-D shapes and make 3-D shapes using modelling materials - Recognise 3-D shapes in different orientations and describe them. - Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.	**Pupils will begin to recognise angles as a part of 2D shapes. They will start to compare the size of angles in relation to a right angle.** **Objectives include:** - Recognise angles as a property of shape or a description of a turn. - Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; identify whether angles are greater than or less than a right angle.	**Pupils will revisit tricky concepts such as finding fractions of shapes and quantities.** **Objectives include:** - Recognising equivalent fractions - Solving problems involving fractions. - Solving problems involving perimeter.
Moderation: Number and Place Value.	**Moderation: Measurement.**	**Moderation: Calculation in a practical context.**