

## Your child in Year 3

We want all of our children to develop excellent fluency, reasoning and problem solving skills so they become well rounded mathematicians.

Maths is taught as a discrete subject but is further developed through a range of opportunities and experiences across the curriculum. We would also encourage children to develop these skills at home so it important that families talk to their children about their learning in maths using vocabulary which is appropriate to Year 3.

At Thorns, we are developing a curriculum approach that is underpinned by Chris Quigley Essentials; in this way we aim to develop mastery and depth of learning, rather than a tick list approach. For this reason, you will notice that expectations for children look the same in years 1 & 2, years 3 & 4 and years 5 & 6. this is deliberate and does not mean that children do the same things in each of the two years, it simply means that thy will have opportunities to revisit learning and in this way develop it further.

### Essential characteristics of mathematicians:

- *An understanding of the important concepts and an ability to make connections within mathematicians.*
- *A broad range of skills in using and applying mathematics.*
- *Fluent knowledge and recall of number facts and the number system.*
- *The ability to show initiative in solving problems in a wide range of contexts, including the new or unusual.*
- *The ability to think independently and to persevere when faced with challenges, showing a confidence of success.*
- *The ability to embrace the value of learning from mistakes and false starts.*
- *The ability to reason, generalise and make sense of solutions.*
- *Fluency in performing written and mental calculations and mathematical techniques.*
- *A wide range of mathematical vocabulary.*
- *A commitment to and passion for the subject.*

The children will regularly be given opportunities to progress towards proficiency in the following objectives:

### Essential learning objectives

- To understand the properties of shapes
- To describe position, direction and movement
- To use measures
- To use statistics
- To use algebra

### Essentials for progress: Milestone 2

*To understand the properties of shapes.*

- *Make 2D and 3D shapes, describing them with vocabulary including polygon, non-polygon and polyhedron.*
- *Identify horizontal, vertical and perpendicular, parallel and curved lines.*
- *Use a compass to draw circles and arcs within a given radius.*
- *Identify lines of symmetry in 2D shapes presented in different orientations.*
- *Compare and classify geometric shapes based on their properties and sizes.*
- *Identify acute and obtuse angles and compare the assize of different angles.*
- *Draw circles of a given radius or diameter.*

*To describe position, direction and movement.*

- *Recognise angles as a property of shape and as an amount of rotation.*
- *Identify right angles, recognise that 2 right angles make a half turn and 4 make a whole turn.*
- *Identify angles that are greater than a right angle.*
- *Describe positions and movements between positions on a 2D grid using coordinates in the first quadrant.*
- *Plot specified points and draw sides to complete a given polygon.*
- *Recognise a symmetric figure and complete it with respect to a given line of symmetry.*

*To use measures.*

- *Recognise and use full names and abbreviations for metric measures.*
- *Measure, compare and subtract lengths (m/cm/mm); mass (g/kg; volume/capacity (l/ml) and time (h/min/sec).*
- *Tell and write the time from an analogue clock, including using Roman numerals, and 12 and 24 hour digital clocks.*
- *Estimate and read time to the minute.*
- *Calculate using time.*
- *Know the numbers of seconds in a minute and the number of days in a month, year and leap year.*
- *Add and subtract amounts of money using both £ and p.*
- *Convert between different units of measure (e.g. kg-g).*
- *Measure and calculate the perimeter of a rectangle where measurements are given in cm and m.*
- *Find the areas of squares, rectangles and related composite shapes.*
- *Read and convert time between analogue and digital 12 and 24 hour clocks.*
- *Estimate, compare and calculate different measures, including money in £ and p.*

*To use statistics*

- *Interpret and use 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, pictograms and tables.*
- *Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.*
- *Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.*

*To use algebra*

- *Solve addition and subtraction, multiplication and division problems that involve missing numbers.*

In school, we will ensure that we take every opportunity to encourage the children to develop as mathematicians.

**Essential opportunities - Key Stage 2**

- *Use the properties of shapes and angles in increasingly complex and practical contexts, including in construction and engineering contexts.*
- *Describe position, direction and movement in increasingly precise ways.*
- *Use and apply measures to increasingly complex contexts.*
- *Gather, organise and interrogate data.*
- *Understand the practical value of using algebra.*

***Please speak to your child's teacher if you have any questions or would like further help or advice.***

# Thorns Primary School

## Information for Parents: **SHAPE SPACE and MEASURES**

### YEAR 3



Thorns Primary School

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**Please keep this reference guide safe as it gives you an overview of the curriculum coverage for your child's year group.**