

# Mathematics at Grayshott

Year 2- Maths



*Hints and Tips for helping your child with maths at home:*

## Learning the important number facts:

The following games can be played at home with minimal resources to keep those important number facts fresh in your child's mind!



### Ping Pong

This is a great game for learning number bonds or number facts, for example,

number bonds to 100. Start off by saying 'ping' and your child replies with 'pong.' keep repeating this in order to build up a rhythm and then replace the 'ping' with a number e.g. 11. Once you say 60, your child should reply with 40. Then start again with ping, before replacing it with another number.

### If this is the answer.....

.....what is the question? Give children a number and say 'This is my answer, what is the question?' For example, you could say 'my answer is 50.' Your child will need to think of potential questions e.g.  $51 - 1$ ,  $45 + 5$ .

### Interactive Games

[www.topmarks.co.uk](http://www.topmarks.co.uk) – This website has a whole range of games for your child to play which are suitable for both tablet and desk-top computers.

## Around the house

- Talk about time. For example, get them to work out what time you need to leave the house to get to school on time.
- Cooking. Measure ingredients and set the timer together. Get them to work out how much more food will you need if extra people are coming for dinner.
- Talk about the shape and size of objects. Look online for interesting facts, like tallest and shortest people, or biggest and smallest buildings etc.
- When you are sharing food like pizza or cake, ask your child to help you share it equally between the number of people eating.
- Solve maths problems at home. For example, ask them how many apples to buy at the shop and why, or how long will it take you to get to a friend's house if you go to the library on the way.
- Collect information and create a tally chart, for example to find out the family's favourite animal or fruit etc.
- Make patterns with objects, colouring pencils, paint or Play-Dough, and build structures with Lego or boxes.

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Year 2 Objectives



## Place Value

- Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward.
- Recognise the place value of each digit in a two-digit number (tens, ones).
- Identify, represent and estimate numbers using different representations, including the number line.
- Compare and order numbers from 0 up to 100; use  $<$ ,  $>$  and  $=$  signs.
- Read and write numbers to at least 100 in numerals and in words.
- Use place value and number facts to solve problems.

## Addition and Subtraction:

- Solve problems with addition and subtraction using concrete objects and pictorial representations applying their increasing knowledge of mental and written methods.
- Recall and use addition and subtraction facts to 20 fluently, and use related facts up to 100.
- Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a two-digit number and 1s, a two-digit number and 10s, 2 two-digit numbers, adding 3 one-digit numbers.
- Show that addition of 2 numbers can be done in any order (commutative) and subtraction of 1 number from another cannot.
- Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.

## Number - multiplication and division

- Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables.
- Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals ( $=$ ) signs.
- Show that multiplication of 2 numbers can be done in any order (commutative) and division of 1 number by another cannot.
- Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts.

## Number - fractions

- Recognise, find, name and write fractions  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$ ,  $\frac{3}{4}$ , and of a length, shape, set of objects or quantity.
- Write simple fractions, for example  $\frac{1}{2}$  of 6 = 3 and recognise the equivalence of  $\frac{2}{4}$  and  $\frac{1}{2}$ .

## Measurement

- Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature ( $^{\circ}\text{C}$ ); capacity (litres/ml) to the nearest appropriate unit.
- Compare and order lengths, mass, volume/capacity and record the results using  $>$ ,  $<$  and  $=$ .
- Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.
- Find different combinations of coins that equal the same amounts of money.
- Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.
- Compare and sequence intervals of time.
- Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.
- Know the number of minutes in an hour and the number of hours in a day.

## Geometry - properties of shapes

- Identify and describe the properties of 2-D shapes, including the number of sides, and line symmetry in a vertical line.
- Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces.
- Identify 2-D shapes on the surface of 3-D shapes, [for example, a circle on a cylinder and a triangle on a pyramid].
- Compare and sort common 2-D and 3-D shapes and everyday objects.

## Geometry - position and direction

- Order and arrange combinations of mathematical objects in patterns and sequences.
- Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise).

## Statistics

- Interpret and construct simple pictograms, tally charts, block diagrams and tables.
- Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity.
- Ask and answer questions about totalling and comparing categorical data.

# Mathematics at Grayshott



## End of year Maths Expectations for Year 2

This booklet contains:

- National Curriculum objectives for year 2 children in maths;
- Important number facts that children need to know by the of year 2;
- Hints and tips for helping your child at home.

# Mathematics at Grayshott

Year 2 - Number Facts



*In order to meet age related expectations, your child will need to know the following number facts:*

### Measure

- 100p = £1 and  $\frac{1}{2}$  of £1 = 50p
- 100 cm = 1m
- Whole hour = 60 minutes
- $\frac{1}{2}$  an hour = 30 minutes
- $\frac{1}{4}$  of an hour = 15 minutes
- $\frac{3}{4}$  of an hour = 45 minutes
- There are 24 hours in a day.
- Able to recite all the months in a year in the correct order.

### Place Value

- Know the sequence of counting in 7 multiples of 3.

### Multiplication and Division

- Know the 2, 5 and 10 times table and the related division facts.
- Be able to recognise odd and even numbers.

### Addition and subtraction

- **Secure all number facts in the year 1 curriculum (see year 1 booklet)**
- Focus on inverse operations. For example - I know that  $13 + 4 = 17$  therefore .....  
 $17 - 4 = 13$  and  $17 - 13 = 4$ .
- Know number bonds to 100 using multiples of 10 using related number bond to 10 facts.
- For example - If I know that  $1 + 9 = 10$ , then I also know that  $10 + 90 = 100$ .

### Fractions

- $\frac{1}{3} + \frac{1}{3} + \frac{1}{3} = 1$  whole
- $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{3}{4}$
- $1 \text{ whole} - \frac{1}{4} = \frac{3}{4}$
- $\frac{2}{4} = \frac{1}{2}$
- Able to say  $\frac{1}{2}$  of all even numbers to 20 . **For example - A half of 14 is 7.**