



# Key Stage 1

## Year 2

# Maths is everywhere!

We have created a mathematics booklet to show you some of the things that your child should be able to do by the end of Year 2. In St Pius X Year 2, follow the Power Maths scheme of learning.

Every lesson starts with a **Discover** task to get children to solve a problem that aims to generate curiosity. During this section children may use manipulatives to help them understand the maths and explain their method. The next stage encourages children to **Share** the methods they have tried to solve the problem in **Discover**. We only learn when we are thinking! So in the **Thinking Together** section Power Maths takes the approach “I do, we do, you do”, as children apply the knowledge they have just learned in a series of problems that continue to encourage thinking throughout. Children are then ready for **Practice**, where children get to apply their learning independently.

It is very important for children at this stage of their learning to use objects to support them in their learning and to talk about maths whenever they can. What we really want is for our children to see that maths is everywhere!

Below are some key areas of learning that your child will focus on this year to help them prepare for their next stage in their learning. We have also included some fun activities that you could do together. What we really want is for our children to see that maths is everywhere! Two fantastic apps to support learning of maths are Times Table Rock Stars (TTRS) and Sumdog, which school have purchased and your child has a login for—we have produced an information page on both of these apps for you to read.

**By the end of Year 2, most children should be able to...**

- Identify, represent and estimate numbers using different representations, including the number line
- Compare and order numbers from 0 up to 100; use and = signs
- Count in steps of 2, 3, and 5 from 0, and in 10s from any number, forward and backward
- Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100
- Add and subtract numbers using concrete objects, pictorial representations, and mentally, including: a 2-digit number and 1s
- Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals (=) signs
- Recognise, find, name and write fractions  $\frac{1}{3}$ ,  $\frac{1}{4}$ ,  $\frac{2}{4}$  and  $\frac{3}{4}$  of a length, shape, set of objects or quantity
- Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line
- Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces
- Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change
- 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, using rulers, scales, thermometers and measuring vessels
- 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

## Board Games

Make a board like this. The numbers are arranged differently from usual, but the games will still work if you use a normal snakes and ladders board.

Roll a dice twice. Add the two numbers.

Move along that number of spaces. Before you move, you must work out what number you will land on.

If you are wrong, you don't move!

The first to the end of the board wins. For a change, you could roll the dice and move backwards. Or you could roll the dice once, then move the number that goes with your dice number to make 10, e.g. throw a 3, move 7.



## How heavy?

You will need some kitchen scales that can weigh things in kilograms.

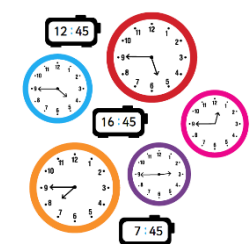
- ◆ Ask your child to find something that weighs close to 1 kilogram.
- ◆ Can they find something that weighs exactly 1 kilogram?
- ◆ Find some things that weigh about half a kilogram.



## What time is it?

- ◆ Look at analogue and digital clocks throughout the day and talk about the time.
- ◆ How long till we go out?
- ◆ What time will we come back?

How many minutes will that be?



## Dicey coins

For this game you need a dice and about twenty 10p coins.

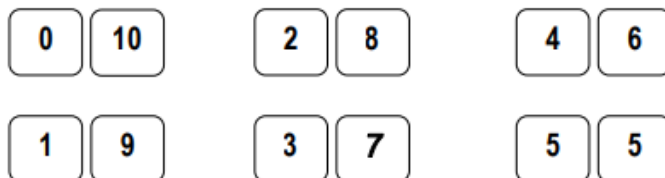
- ◆ Take turns to roll the dice and take that number of 10p coins.
- ◆ Guess how much money this is. Then count aloud in tens to check, e.g. saying ten, twenty, thirty, forty...
- ◆ If you do this correctly you keep one of the 10p pieces.
- ◆ First person to collect £1 wins.
- ◆ Don't forget to give the coins back!



## Speedy pairs to 10

Make a set of 12 cards showing the numbers 0 to 10, but with two 5s. If you wish, you could use playing cards.

- .. Shuffle the cards and give them to your child.
- .. Time how long it takes to find all the pairs to 10.



Repeat later in the week. See if you can beat your time!

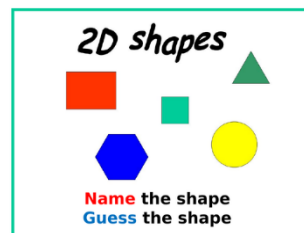
## Guess my shape

Think of a 2-D shape (triangle, circle, rectangle, square, pentagon or hexagon). Ask your child to ask questions to try and guess what it is.

You can only answer Yes or No. For example, your child could ask: Does it have 3 sides? or: Are its sides straight?

See if he can guess your shape using fewer than five questions.

Now ask them to choose a shape so you can ask questions.



## Shopping maths

After you have been shopping, choose 6 different items each costing less than £1. Make a price label for each one, e.g. 39p, 78p. Shuffle the labels. Then ask your child to do one or more of these.

Place the labels in order, starting with the lowest.

Say which price is an odd number and which is an even number.

Add 9p to each price in their head.

Take 20p from each price in their head.

Say which coins to use to pay exactly for each item.

Choose any two of the items, and find their total cost. Which coins will they need to make this amount?

Work out the change from £1 for each item.



## ***Pasta subtraction***

*For this game you need a dice and some dried pasta, buttons or objects like this.*

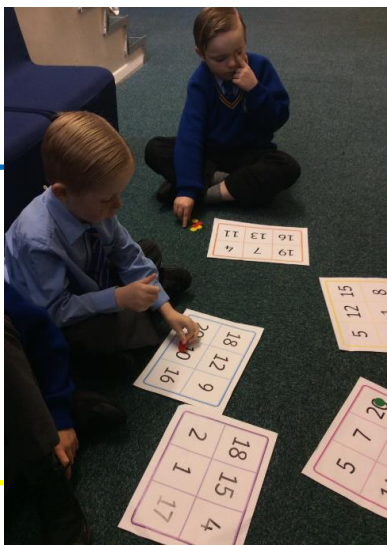
*Start with a pile of pasta in the middle. Count them.*

*Throw a dice. Say how many pieces of pasta will be left if you subtract that number.*

*Then take the pieces of pasta away and check if you were right!*

*Keep playing.*

*The person to take the last piece wins!*



## ***Circle trios***

*Draw four circles each on your piece of paper. Write four numbers between 3 and 18, one in each circle. E.g. 12, 16, 8, 17*

*Take turns to roll a dice three times and add the three numbers.*

*If the total is one of the numbers in your circles then you may cross it out.*

*The first to cross out all four circles wins.*

