



**Branfil**  
Primary School

# Welcome to the Year 2 Maths Workshop





## In this workshop we will:

- Discuss the Year 2 maths curriculum
- Schemes of work - White Rose and Power Maths
- How we teach maths in Year 2
- Resources and manipulatives we can recommend
- Ways to support your child at home
- TTRS
- Give you a chance to practice the activities with your children



## Year 2 Maths Curriculum - Towards expected

### Working towards the expected standard

The pupil can:

- read and write numbers in numerals up to 100
- partition a two-digit number into tens and ones to demonstrate an understanding of place value, though they may use structured resources<sup>1</sup> to support them
- add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required, explaining their method verbally, in pictures or using apparatus (e.g.  $23 + 5$ ;  $46 + 20$ ;  $16 - 5$ ;  $88 - 30$ )
- recall at least four of the six<sup>2</sup> number bonds for 10 and reason about associated facts (e.g.  $6 + 4 = 10$ , therefore  $4 + 6 = 10$  and  $10 - 6 = 4$ )
- count in twos, fives and tens from 0 and use this to solve problems
- know the value of different coins
- name some common 2-D and 3-D shapes from a group of shapes or from pictures of the shapes and describe some of their properties (e.g. triangles, rectangles, squares, circles, cuboids, cubes, pyramids and spheres).



## Year 2 Maths Curriculum - Age Related

### Working at the expected standard

The pupil can:

- read scales\* in divisions of ones, twos, fives and tens
- partition any two-digit number into different combinations of tens and ones, explaining their thinking verbally, in pictures or using apparatus
- add and subtract any 2 two-digit numbers using an efficient strategy, explaining their method verbally, in pictures or using apparatus (e.g.  $48 + 35$ ;  $72 - 17$ )
- recall all number bonds to and within 10 and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships (e.g. If  $7 + 3 = 10$ , then  $17 + 3 = 20$ ; if  $7 - 3 = 4$ , then  $17 - 3 = 14$ ; leading to if  $14 + 3 = 17$ , then  $3 + 14 = 17$ ,  $17 - 14 = 3$  and  $17 - 3 = 14$ )
- recall multiplication and division facts for 2, 5 and 10 and use them to solve simple problems, demonstrating an understanding of commutativity as necessary
- identify  $\frac{1}{4}$ ,  $\frac{1}{3}$ ,  $\frac{1}{2}$ ,  $\frac{2}{4}$ ,  $\frac{3}{4}$  of a number or shape, and know that all parts must be equal parts of the whole
- use different coins to make the same amount
- read the time on a clock to the nearest 15 minutes
- name and describe properties of 2-D and 3-D shapes, including number of sides, vertices, edges, faces and lines of symmetry.



## Year 2 Maths Curriculum - Greater Depth

### Working at greater depth

The pupil can:

- read scales\* where not all numbers on the scale are given and estimate points in between
- recall and use multiplication and division facts for 2, 5 and 10 and make deductions outside known multiplication facts
- use reasoning about numbers and relationships to solve more complex problems and explain their thinking (e.g.  $29 + 17 = 15 + 4 + \square$ ; 'together Jack and Sam have £14. Jack has £2 more than Sam. How much money does Sam have?' etc.)
- solve unfamiliar word problems that involve more than one step (e.g. 'which has the most biscuits, 4 packets of biscuits with 5 in each packet or 3 packets of biscuits with 10 in each packet?')
- read the time on a clock to the nearest 5 minutes
- describe similarities and differences of 2-D and 3-D shapes, using their properties (e.g. that two different 2-D shapes both have only one line of symmetry; that a cube and a cuboid have the same number of edges, faces and vertices, but different dimensions).



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## Maths Scheme - White Rose

We follow schemes of work from year 1 onwards, such as White Rose Maths and Power Maths. We use a selection of statements, questions and ideas from these schemes to help us plan engaging, exciting lessons for your children. As well as that, we add additional challenges and more concrete resources for practice.

<https://whiterosemaths.com/>



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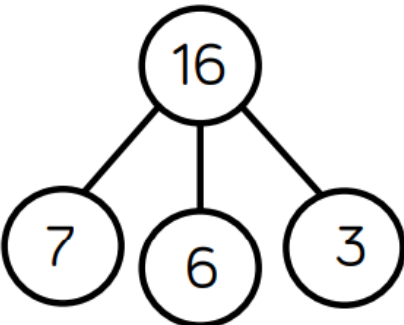
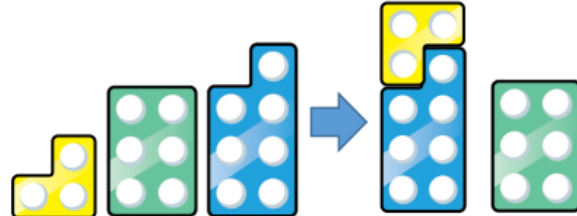
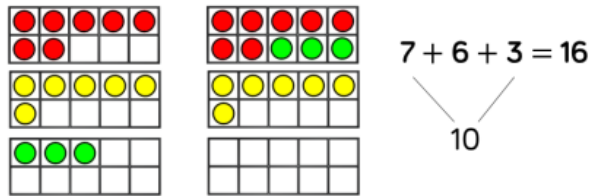
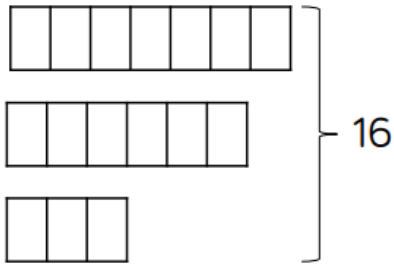
## Maths in Year 2

When working with children we introduce them to different concrete resources (the resources on the tables) then we move them onto pictorial ways of working, such as recording in a pictorial way and then abstract, for example writing a numbers.





## Branfil's School Calculation policy

Skill: Add three 1-digit numbers	Year: 2
  <p><math>7 + 6 + 3 = 16</math></p>  	<p>When adding three 1-digit numbers, children should be encouraged to look for number bonds to 10 or doubles to add the numbers more efficiently.</p> <p>This supports children in their understanding of commutativity.</p> <p>Manipulatives that highlight number bonds to 10 are effective when adding three 1-digit numbers.</p>





## Branfil's School Calculation policy

Skill: Subtract 1 and 2-digit numbers to 20	Year: 1/2
<p><math>14 - 6 = 8</math></p>	<p>In Year 1, subtracting one-digit numbers that cross 10, is done by counting back, using objects, number tracks and number lines. From Year 2, children should be encouraged to find the number bond to 10 when partitioning the subtracted number. Ten frames, number shapes and number lines are particularly useful for this.</p>

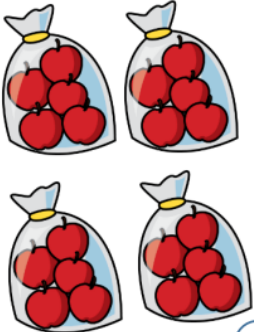

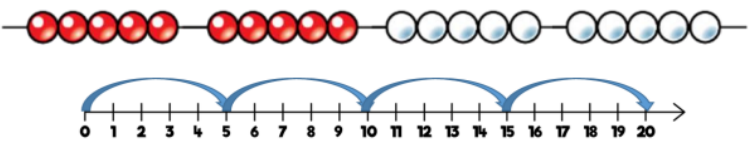
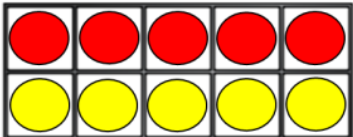
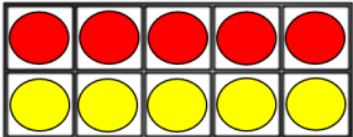
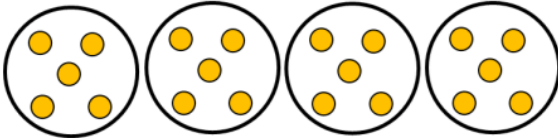
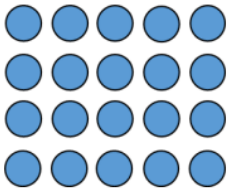


## Branfil's School Calculation policy

Skill	Year	Representations and models	
Recall and use multiplication and division facts for the 2-times table	2	Bar model Number shapes Counters Money	Ten frames Bead strings Number lines Everyday objects
Recall and use multiplication and division facts for the 5-times table	2	Bar model Number shapes Counters Money	Ten frames Bead strings Number lines Everyday objects
Recall and use multiplication and division facts for the 10-times table	2	Hundred square Number shapes Counters Money	Ten frames Bead strings Number lines Base 10



## Branfil's School Calculation policy

Skill: Solve 1-step problems using multiplication	Year: 1/2
   <p data-bbox="492 849 1139 992">One bag holds 5 apples. How many apples do 4 bags hold?</p>     $5 + 5 + 5 + 5 = 20$ $4 \times 5 = 20$ $5 \times 4 = 20$	<p data-bbox="1371 556 1690 721">Children represent multiplication as repeated addition in many different ways.</p> <p data-bbox="1371 771 1690 1071">In Year 1, children use concrete and pictorial representations to solve problems. They are not expected to record multiplication formally.</p> <p data-bbox="1371 1120 1690 1242">In Year 2, children are introduced to the multiplication symbol.</p>



## What does a Maths lesson look like in Year 2?

### Flashback 4

Year 2 | Week 10 | Day 4

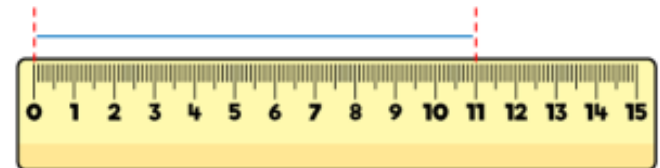
- 1) What is the mass of the object?



- 2) The mass of the cookie is  g.



- 3) How long is the line?



- 4) Draw money to show £7



## What does a Maths lesson look like in Year 2?

L.O to use our knowledge of the four operations to answer questions about mass



- 1 a) Work out the mass of the car and the train.

 g g

- b) How much heavier is the train than the car?

 g

- c) What is the total mass of the car and the train?

 g

- 2 a) What is the mass of 4 grapes?

 g

- b) What is the mass of 2 strawberries?

 g

What do you notice?

- 3 The mass of the cube is 30 g.



What is the mass of the sphere?

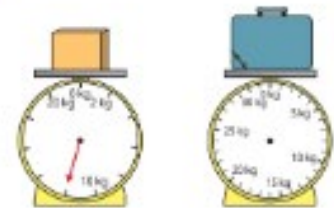
 g

- 4 The cat is 12 kg **lighter** than the dog.



Draw an arrow to show the mass of the cat.

- 5 The suitcase is 17 kg **heavier** than the box.



Draw an arrow to show the mass of the suitcase.



## What does a Maths lesson look like in Year 2?

22



### 1 Challenge

3a. Amir and Ruby are trying to find the total mass. Who is correct? Explain why.



Amir

I will add 50 g and 30 g together to find the total.



Ruby

I will subtract 30 g from 50 g to find the total.



### 2 Challenge

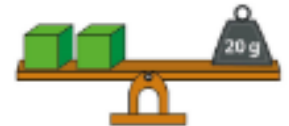
2b. Find the mass of each shape.

The cuboid has a mass of 20 g.  
The mass of the pyramid is double the mass of the cuboid and the cylinder combined.  
The cylinder is 8 g lighter than the pyramid.

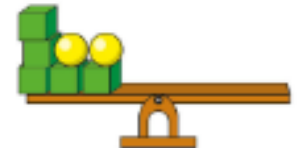


### 3 Challenge

These scales are balanced.



Draw weights to balance these scales.



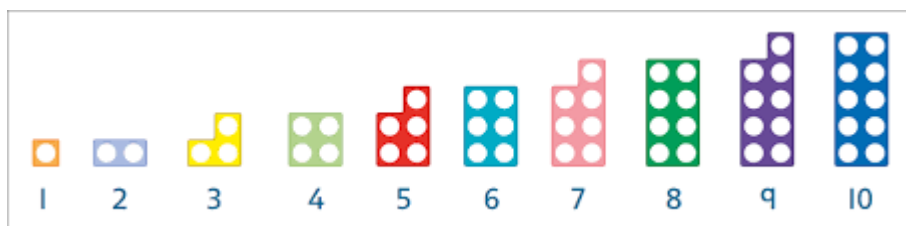




## Resources and manipulatives we recommend:

- Multilink
- Number track
- Counters
- Dice
- Rulers
- Number lines
- Numicon
- Flashcards
- songs

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100







## How to support your child at home:

- Play times tables games - TTRS (more on the next slide...)
- Play mental maths games including counting in different amounts, forwards and backwards.
- Encourage opportunities for telling the time.
- Encourage opportunities for counting coins and money; finding amounts or calculating change when shopping.
- Look for examples of 2D and 3D shapes around the home.
- Identify, weigh or measure quantities and amounts in the kitchen or in recipes.
- Play games involving numbers or logic, such as dominoes or card games.



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## TTRS - Times table rockstars!

7th March - 10th March 2023

2 Holly

2 Cedar

2 Beech

14th March - 17th March 2023

2 Holly

2 Cedar

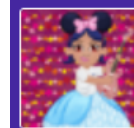
2 Beech

21st March - 24th March 2023

2 Holly

2 Cedar

2 Beech



**EMILY KNAPP**  
NEW ARTIST



Play in the studio  
to set your speed



5,620

Current coins



Profile



My Stats



Charts



Settings



Logout



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Now to put this in practice!





Can you complete these questions together...

$$22 + 22 =$$

$$30 + ? = 100$$

$$? = 19 - 5$$

$$17 - 5 =$$

$$20 \text{ divided by } 5 =$$

$$5 \times 2 =$$

$$34 + 33 =$$

$$64 + 12 =$$

$$10 + 20 + 30 =$$

How many tens in:

- 12

- 24

- 33

Now practice counting your 2s, 5s and 10s



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**Thank you**

All of the slides will be uploaded to both the school website and Google Classroom.

Year Two Team