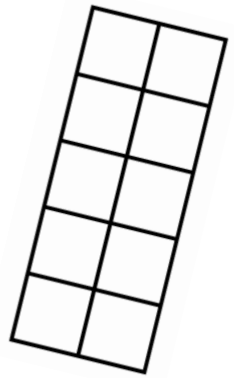
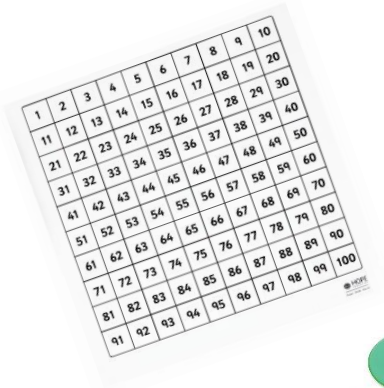
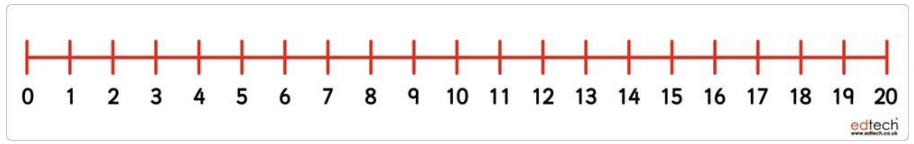
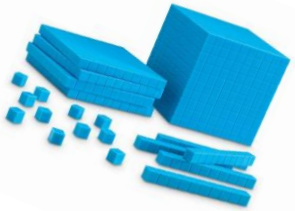
Summerhill Infant School

Maths









Coverage and progression – Reception

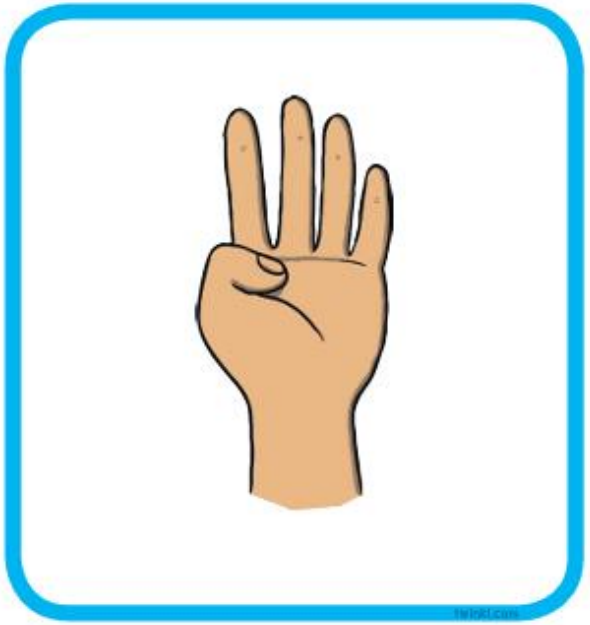
Mastering number

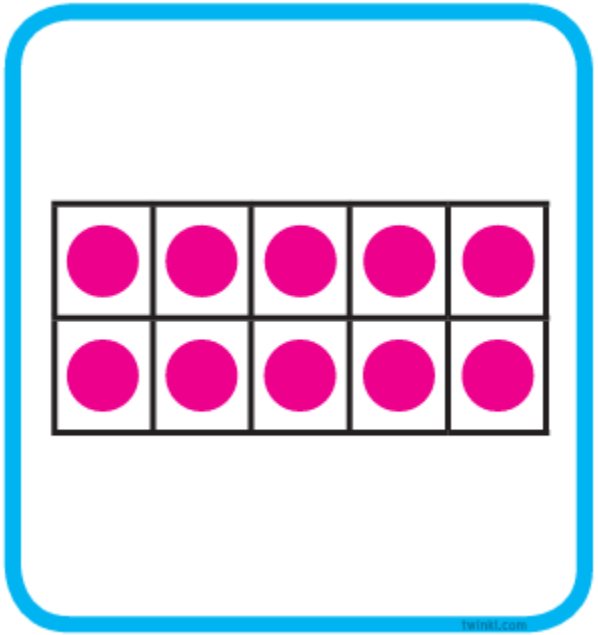
- Fluency in number facts
- Number sense

Term 1	Term 2	Term 3
Pupils will build on previous experiences of number from their home and nursery environments, and further develop their subitising and counting skills. They will explore the composition of numbers within 5. They will begin to compare sets of objects and use the language of comparison. **Pupils will:** • identify when a set can be subitised and when counting is needed • subitise different arrangements, both unstructured and structured, including using the Hungarian number frame • make different arrangements of numbers within 5 and talk about what they can see, to develop their conceptual subitising skills • spot smaller numbers 'hiding' inside larger numbers	Pupils will continue to develop their subitising and counting skills and explore the composition of numbers within and beyond 5. They will begin to identify when two sets are equal or unequal and connect two equal groups to doubles. They will begin to connect quantities to numerals. **Pupils will:** • continue to develop their subitising skills for numbers within and beyond 5, and increasingly connect quantities to numerals • begin to identify missing parts for numbers within 5 • explore the structure of the numbers 6 and 7 as '5 and a bit' and connect this to finger patterns and the Hungarian number frame • focus on equal and unequal groups when comparing numbers	Pupils will consolidate their counting skills, counting to larger numbers and developing a wider range of counting strategies. They will secure knowledge of number facts through varied practice. **Pupils will:** • continue to develop their counting skills, counting larger sets as well as counting actions and sounds • explore a range of representations of numbers, including the 10-frame, and see how doubles can be arranged in a 10-frame • compare quantities and numbers, including sets of objects which have different attributes • continue to develop a sense of magnitude, e.g. knowing that 8 is quite a lot more than 2, but 4 is only a little bit more than 2
• connect quantities and numbers to finger patterns and explore different ways of representing numbers on their fingers • hear and join in with the counting sequence, and connect this to the 'staircase' pattern of the counting numbers, seeing that each number is made of one more than the previous number • develop counting skills and knowledge, including: that the last number in the count tells us 'how many' (cardinality); to be accurate in counting, each thing must be counted once and once only and in any order; the need for 1:1 correspondence; understanding that anything can be counted, including actions and sounds • compare sets of objects by matching • begin to develop the language of 'whole' when talking about objects which have parts	• understand that two equal groups can be called a 'double' and connect this to finger patterns • sort odd and even numbers according to their 'shape' • continue to develop their understanding of the counting sequence and link cardinality and ordinality through the 'staircase' pattern • order numbers and play track games • join in with verbal counts beyond 20, hearing the repeated pattern within the counting numbers	• begin to generalise about 'one more than' and 'one less than' numbers within 10 • continue to identify when sets can be subitised and when counting is necessary • develop conceptual subitising skills including when using a rekenrek

Subitising

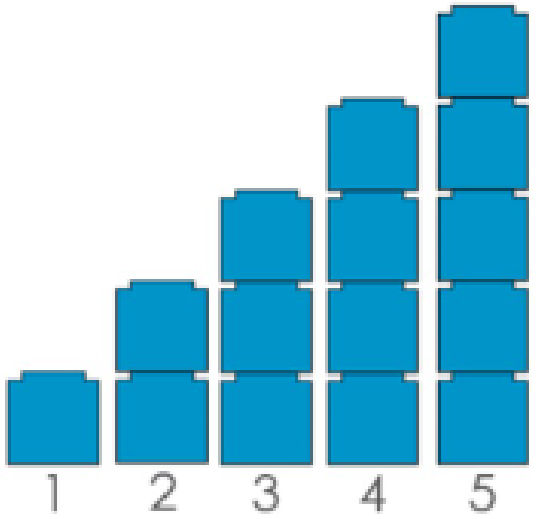
Looking at a group of objects and knowing how many there are without having to count each one individually.

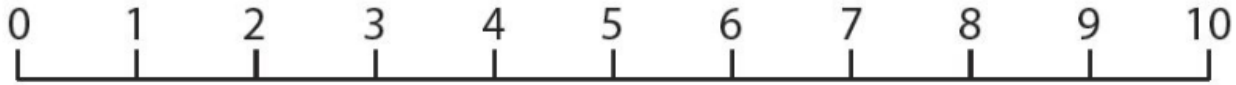




Ordinality

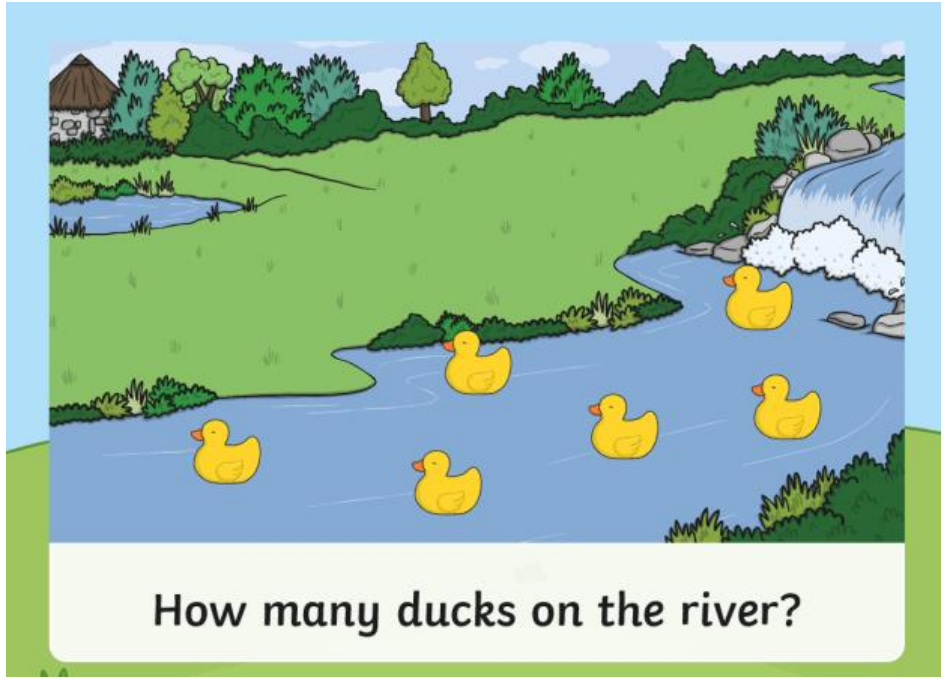
Ordinality refers to the capacity to place numbers in sequence, for example, to know that 4 comes before 5 and after 3 in the sequence of natural numbers (where they fit in the linear number system).





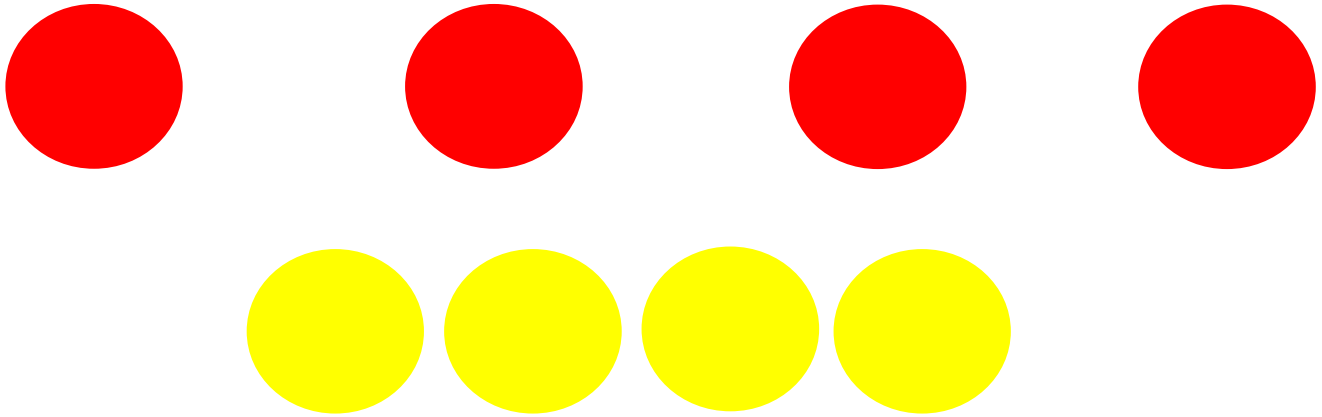
Cardinality

The cardinality of a group or set tells us how many items are in it. We use them to describe the number of real objects. They are whole numbers from one upwards.



Conservation

A quantity does not change if things are rearranged (so long as none have been added or taken away).



Coverage and progression – Year 1

Primary Stars

Year 1 – Yearly Overview – Autumn (2022 onwards)

		Week 1 – 5 (BLOCK 1)	Week 6 – 10 (BLOCK 2)	Week 11 (BLOCK 3)	Week 12
		Number: Place Value (within 10)	**Number: Addition and Subtraction (within 10)**	**Geometry: Shape**	**Consolidation**
White Rose Maths Small Steps		• Sort objects. • Count objects. • Count objects from a larger group. • Represent objects. • Recognise numbers as words. • Count on from any number within 10. • Count one more. • Count backwards within 10 . • Count one less. • Compare groups by matching. • Fewer, more, same. • Less than, greater than, equal to. • Compare numbers. • Order objects and numbers. • The number line.	• Introduce parts and wholes. • Part-whole model. • Write number sentences. • Fact families – Addition facts. • Number bonds within 10. • Systematic methods for number bonds within 10. • Number bonds to 10. • Addition: Add together. • Addition: Add more. • Addition problems. • Find a part. • Subtraction: Find a part. • Fact families – 8 facts. • Subtraction: Take away/ cross out (how many left?). • Take away (how many left?). • Subtraction on a number line. • Add or subtract 1 or 2.	• Recognise & name 3D shapes. • Sort 3D shapes. • Recognise & name 2D shapes. • Sort 2D shapes. • Patterns with 3D & 2D shapes.	All
National Curriculum Link		• Count to ten, forwards and backwards, beginning with 0 or 1, or from any given number. • Count, read and write numbers to 10 in numerals and words. • Given a number, identify one more or one less. • Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.	• Represent and use number bonds and related subtraction facts within 10. • Read, write and interpret mathematical statements involving addition (+), subtraction (-) and equals (=) signs. • Add and subtract one digit numbers to 10, including zero. • Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations and missing number problems.	• Recognise and name common 2-D shapes, including: (e.g. rectangles (including squares), circles and triangles). • Recognise and name common 3-D shapes, including: (e.g. cuboids (including cubes), pyramids and spheres).	All
TAF Statements onwards	WT	• Read and write numbers in numerals (to 10).	• Add and subtract (one digit numbers) explaining their method verbally in pictures or using apparatus. • Recall at least four of the six number bonds for 10 and reason about associated facts.	• Name some common 2D and 3D shapes from a group of shapes or from pictures of the shapes and describe some of their properties.	All
	WA	• Read scales in divisions (of ones).	• Recall all the number bonds to and within 10. and use these to reason with.	• Name and describe properties of 2D and 3D shapes.	
	GD	• Read scales where not all numbers on the scale are given and estimate points in between. • Solve unfamiliar word problems that involves more than one step. Use reasoning about numbers and relationships to solve more complex problems and explain their thinking.	• Use reasoning about numbers and relationships to solve more complex problems and explain their thinking. • Solve unfamiliar word problems that involves more than one step.	• Describe the similarities and differences of 2D and 3D shapes, using their properties.	

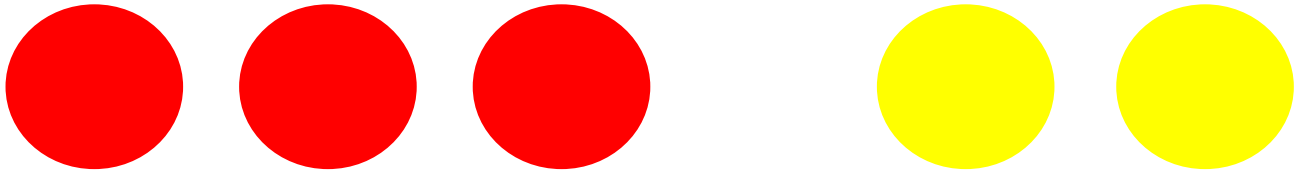
Coverage and progression – Year 2

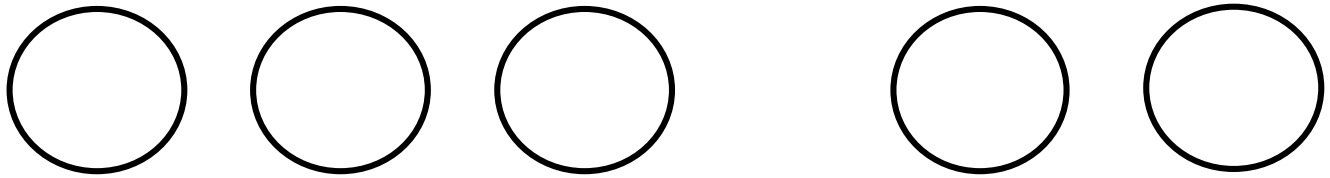
Primary Stars

Year 2 – Yearly Overview – Autumn (2022 onwards)

		Week 1 – 4 (BLOCK 1)	Week 5 – 9 (BLOCK 2)	Week 10 – 12 (BLOCK 3)
		Number: Place Value (within 100)	**Number: Addition and Subtraction (within 100)**	**Geometry: Properties of Shape**
White Rose Maths Small Steps		• Numbers to 20. • Count objects to 100 by making 10s. • Recognise tens and ones. • Use a place value chart. • Partition numbers to 100. • Write numbers to 100 in words. • Flexibly partition to 100. • Write numbers to 100 in expanded form. • 10s on the number line to 100. • 10s and 1s on the number line to 100. • Estimate numbers on a number line. Compare objects. • Compare numbers. • Order objects and numbers. • Count in 2s, 5s & 10s. • Count in 3s.	• Bonds to 10. • Fact families – Addition and subtraction bonds to 20. • Related facts. • Bonds to 100 (tens). • Add and subtract 1s. • Add by making 10. • Add three 1-digit numbers. • Add to the next 10. • Add across a 10. • Subtract across 10. • Subtract from a 10. • Subtract a 1-digit number from a 2-digit number – across a 10. • 10 more and 10 less. • Add and subtract 10s. • Add two 2-digit numbers – not across a 10. • Add two 2-digit numbers – across a 10. • Subtract two 2-digit numbers – not across a 10. • Subtract two 2-digit numbers – across a 10. • Mixed addition and subtraction. • Compare number sentences. • Missing number problems.	• Recognise 2D and 3D shapes. • Count sides on 2D shapes. • Count vertices on 2D shapes. • Draw 2D shapes. • Lines of symmetry. • Use lines of symmetry to complete shapes. • Sort 2D shapes. • Count faces on 3D shapes. • Count edges on 3D shapes. • Count vertices on 3D shapes. • Sort 3D shapes. • Make patterns with 2D & 3D shapes.
National Curriculum Link		• Read and write numbers to at least 100 in numerals and in words. • 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. • Use place value and number facts to solve problems. • Count in steps of 2, 3 and 5 from 0, and in tens 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 two-digit number and ones; a two-digit number and tens; two two-digit numbers; adding three one-digit numbers. • Show that the addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot. • Solve problems with addition and subtraction: using concrete objects and pictorial representations, including those involving numbers, quantities and measures; applying their increasing knowledge of mental and written methods. • Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and solve missing number problems.	• 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.
TAF Statements 2019 onwards	WT	• Read and write numbers in numerals up to 100. • Partition a two-digit number into tens and ones and demonstrate and understanding of place value, though they may use structured resources to support them.	• Add and subtract (one digit numbers) explaining their method verbally in pictures or using apparatus. • Recall at least four of the six number bonds for 10 and reason about associated facts.	• Name some common 2D and 3D shapes from a group of shapes or from pictures of the shapes and describe some of their properties.
	WA	• Read scales in divisions of ones, twos, fives and tens. • Partition two digit numbers into different combinations of tens and ones, explaining their thinking verbally, in pictures or using apparatus.	• Recall all the number bonds to and within 10. and use these to reason with and calculate bonds to and within 20, recognising other associated additive relationships.	• Name and describe properties of 2D and 3D shapes, including number of sides, vertices, edges, faces and lines of symmetry.
	GD	• Read scales where not all numbers on the scale are given and estimate points in between. Use reasoning about numbers and relationships to solve more complex problems and explain their thinking. • Solve unfamiliar word problems that involves more than one step.	• Use reasoning about numbers and relationships to solve more complex problems and explain their thinking. • Solve unfamiliar word problems that involves more than one step.	• Describe the similarities and differences of 2D and 3D shapes, using their properties. • Solve unfamiliar word problems that involves more than one step.

CPA approach

Concrete 

Pictorial 

Abstract 3 + 2 = 5

Why?

- Allows pupils to comprehend mathematical processes at a deeper level and apply this understanding to their reasoning skills.
- Provides pupils with a firm point of reference to ground their understanding – they are more able to make independent links, observations and predictions.

Resource station

Fluency

Reasoning

Problem solving

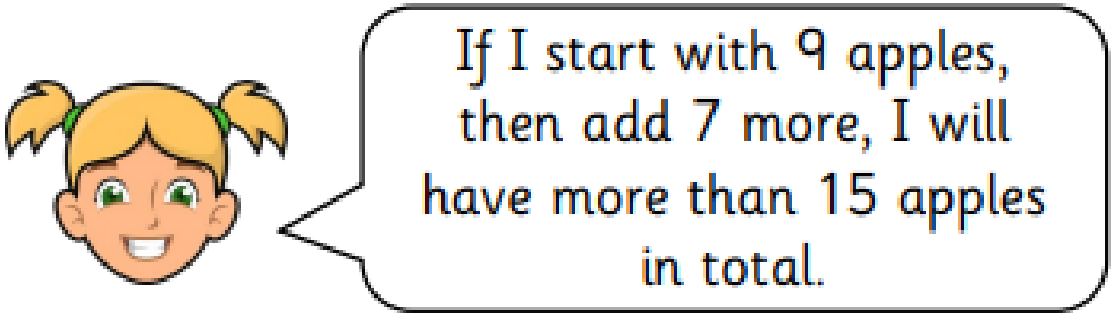
Fluency

Addition and subtraction (within 10)

1 Use equipment to help you complete the addition grid.

+	1	4	2	0	5	3
2						
4						
1						
3						
5						

Reasoning

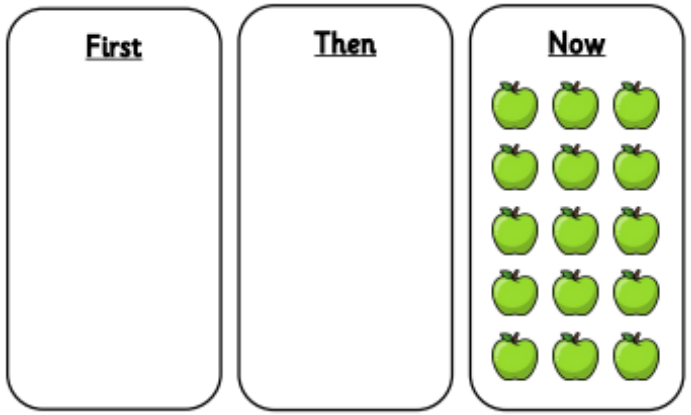


Is Kat correct? _____.

Explain how you know.

Problem solving

Complete the addition story below.



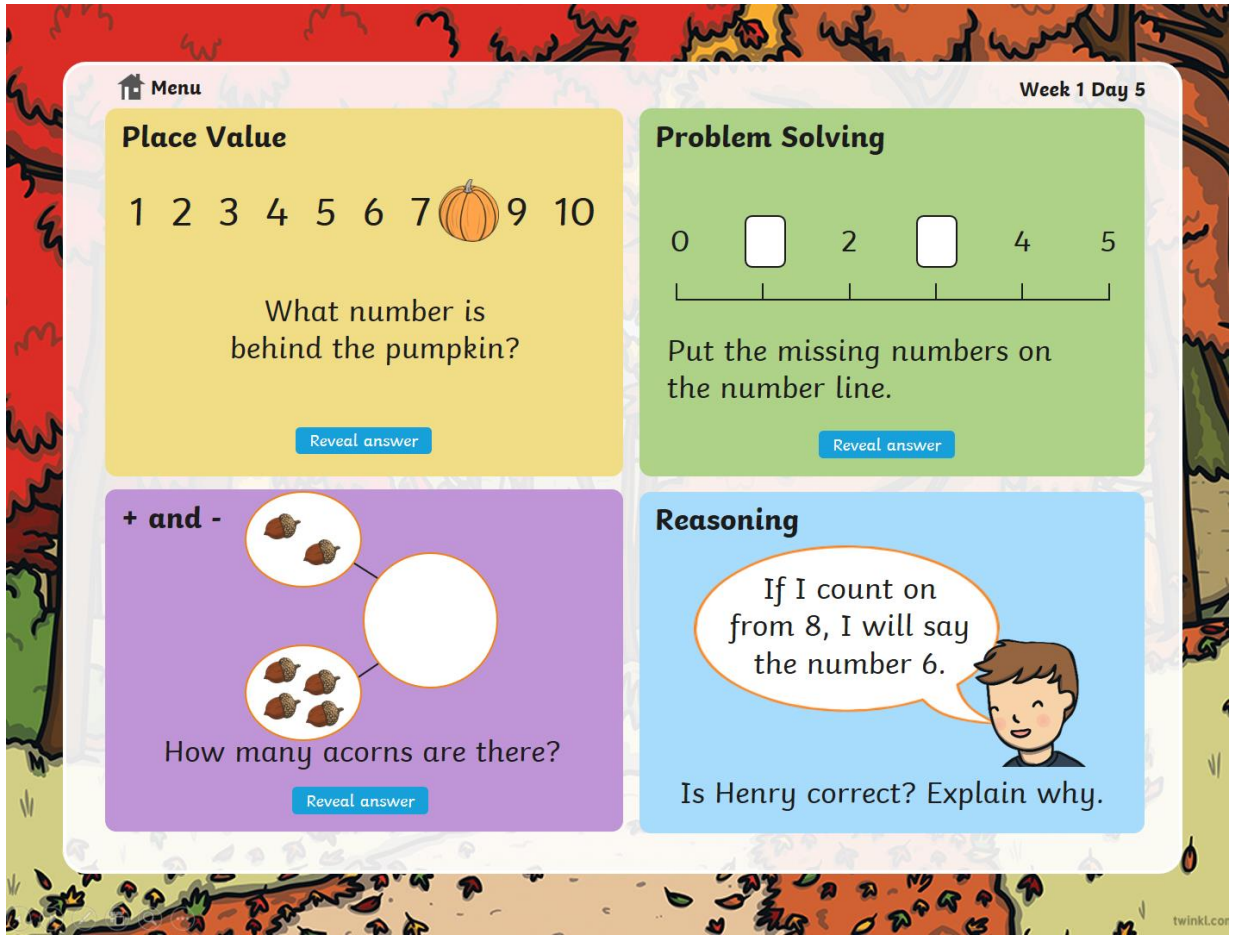
First there were _____ _____.

Then ____ more were added.

Now there are _____ _____.

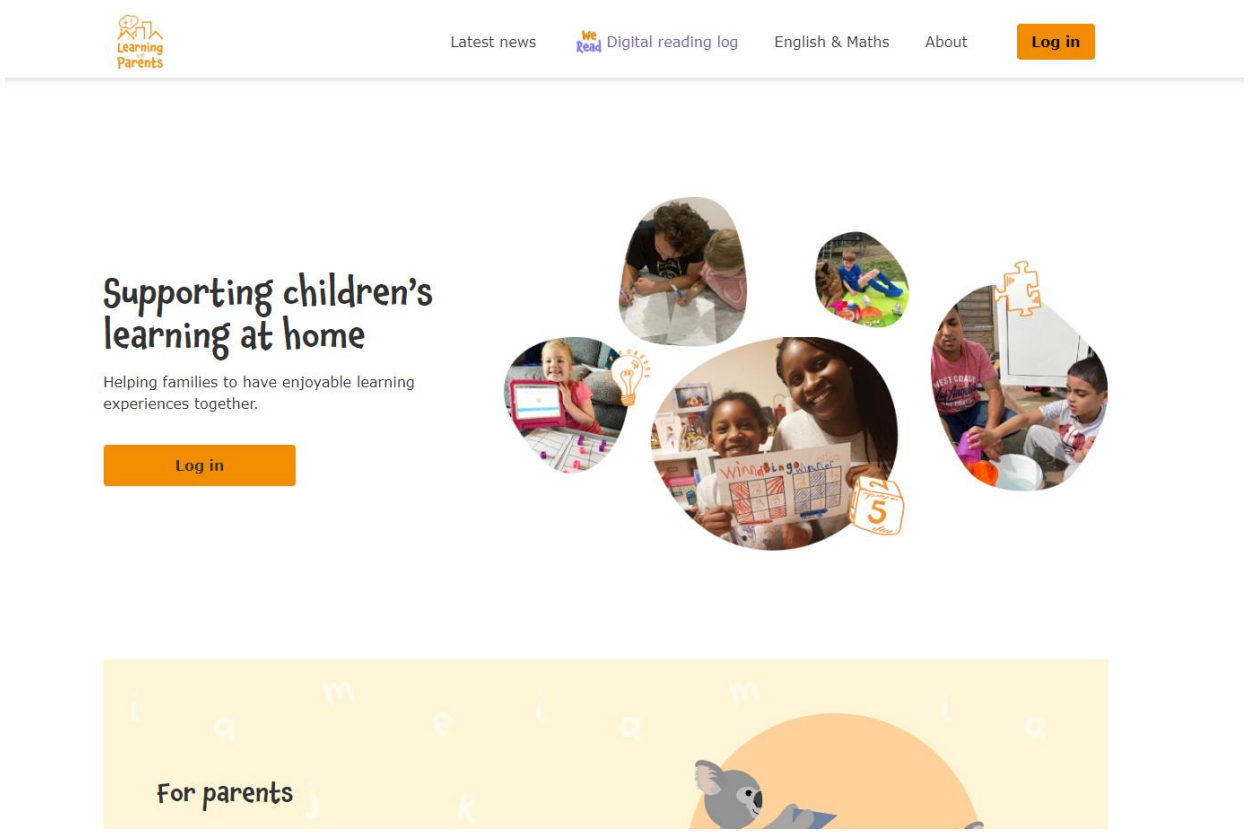
_____ + _____ = _____.

Retrieval


Menu
Week 1 Day 5
Place Value
1 2 3 4 5 6 7 9 10
What number is behind the pumpkin?
Reveal answer
Problem Solving
0 2 4 5
Put the missing numbers on the number line.
Reveal answer
+ and -
How many acorns are there?
Reveal answer
Reasoning
If I count on from 8, I will say the number 6.
Is Henry correct? Explain why.

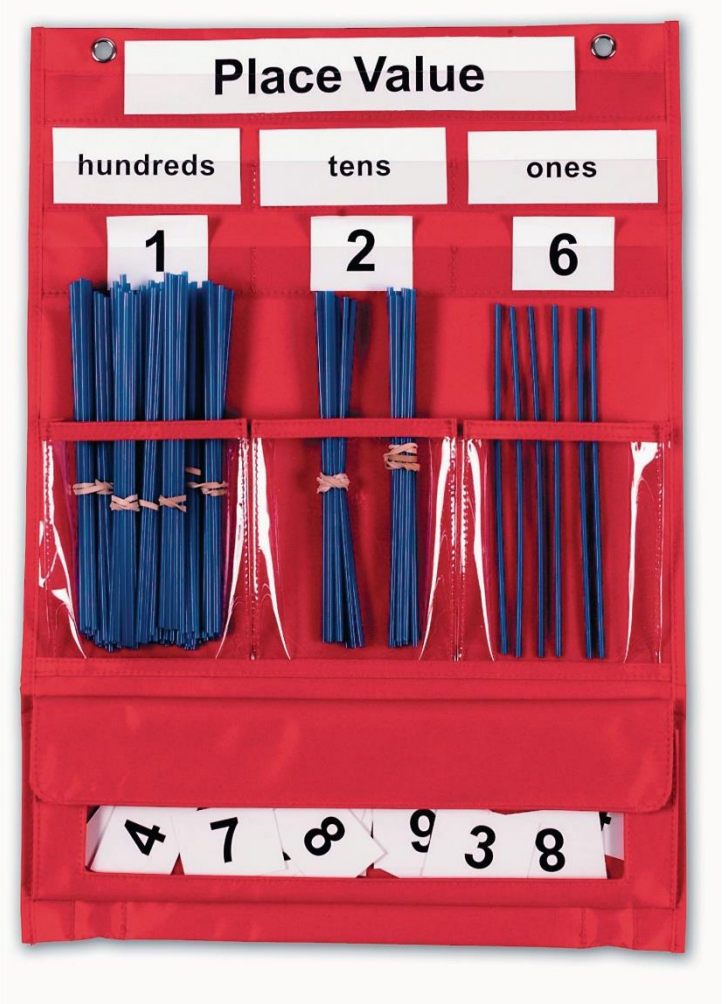
Home Learning

Learning with parents



100 day celebrations

Wednesday 21st February



Our Website

SUMMERHILL INFANT SCHOOL

Select Language

Keyword...

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Art

Maths

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