



Year 2

By Clive Davies

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ABOUT THE AUTHOR

Clive Davies, OBE is one of the founding Directors of Focus working with school both nationally and internationally. He draws on a vast experience, including work as a headteacher, Ofsted inspector, trainer and consultant.

Clive has a wealth of experience working with schools to analyse their current position and supporting leaders to construct purposeful and fit-for-purpose self-evaluation systems which impact on pupil outcomes. Over recent years, Clive has been focusing particularly on the development of an approach to leading and delivering the curriculum which ensures a high degree of engagement for children. This approach to the curriculum is being used in schools across England. He is one of the innovators for the learning challenge curriculum which has gained national acclaim for its success. Clive works in all areas of school improvement and works from early years through the secondary phase.

As a headteacher, Clive's school gained a National Curriculum Award and featured in the TES as one of three schools recognised for its quality practice. Awarded an OBE for Services to Education in 2009, he still works with schools on an advisory basis, and is a highly sought after key note speaker at conferences both nationally and internationally.

Clive has written a wide range of publications which have become known for their straight forward and useful style; helping school leaders focus on what is most important to making a difference, including the best-selling 'Raising Standards by Setting Targets'. Some of Clive's most recent and best selling publications are:

- Making Good Lessons Outstanding
- Maths Learning Challenge Curriculum: Pre and Post Learning Challenges
- Talk for Success
- Science Learning Challenge Curriculum
- History & Geography Learning Challenge Curriculum
- Leading the EYFS (co-authored with Sarah Quinn)
- Assessing Science and Non Core Subjects: In the new National Curriculum (Years 1 to 6)
- Focus on Maths (co-authored with Helen Rowland)
- Assessing without Levels
- Empowering Learners: A Focus on Learning Behaviours
- Step up to the Challenge Series
- Making Book Scrutiny more Meaningful

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Year 2: Overview of the year

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
1 Number and place value	1 Multiplication & Division	3 Number and place value	6 Measures Length and mass/weight	4 Number and place value (use statistics)	9 Measures Time
2 Number and place value	1 Statistics	4 Measures Capacity and Volume	3 Addition and subtraction	4 Addition and subtraction	4 Multiplication and division
1 Measures Length & mass/weight	1 Fraction,	2 Geometry 2D and 3D shape	2 Fractions	8 Measures Capacity & Volume/ Temperature	2 Statistics, including finding the difference
1 Addition and subtraction	2 Measures Money	5 Measures Money	3 Geometry Position and Direction.	3 Fractions	10 Measures Money
2 Addition and subtraction	3 Measures Time	2 Multiplication & Division	7 Measures Time	4 Geometry Position & Direction.	
1 Geometry 2D & 3D shape	Consolidate and assess	3 Multiplication & Division	Consolidate and assess	5 Geometry 2D & 3D shape	Consolidate and assess

YEAR 2 : AUTUMN 1: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
1 Number & Place Value	2 Number & Place Value	1 Measures Length and Weight	1 Addition and Subtraction	2 Addition and Subtraction	1 Geometry 2D and 3D shape
Count in steps of 2, 3 and 5 from 0, and in tens from any number, forward and backward.	Read and write numbers to at least 100 in numerals and in words.	Compare & order lengths, mass, & record the results using >, < and =.	Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.	Add and subtract numbers mentally, including: <ul style="list-style-type: none"> - 2-digit numbers & ones - 2-digit numbers & tens - two 2-digit numbers - adding three 1-digit numbers 	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 & faces.
<ul style="list-style-type: none"> ➤ Count in 10s from any number – forward to 100 ➤ Count in 2s from any number – forward to 50 ➤ Count in 2s from any number – forward to 100 ➤ Count in 5s from any number – forward to 50 ➤ Count in 5s from any number – forward to 100 ➤ Count in 10s from any number – backward to 0 ➤ Count in 2s from any number – backward to 0 ➤ Count in 5s from any number – backward to 0 ➤ Count in 3s to 30 ➤ Count in 3s to 60 ➤ Count in 3s to 90 	<ul style="list-style-type: none"> ➤ Read all numbers to 50 in words ➤ Write all numbers to 50 in words ➤ Read all numbers to 100 in words ➤ Write all numbers to 100 in words 	<ul style="list-style-type: none"> ➤ Order different lengths using cm and m ➤ Order different weights using g and kg ➤ Use the symbol < > = to compare two amounts of length and weight ➤ Record information using < > = 	<ul style="list-style-type: none"> ➤ Recall addition bonds to 20 based on instant recall. ➤ Recall subtraction facts to 20 based on instant recall. ➤ Know addition facts (multiples of 10) up to 100, e.g. 60+20=80 ➤ Know subtraction facts (multiples of 10) up to 100, e.g. 90-70=20 ➤ Explain how to use bonds to ten to derive other number facts. 	<p>Mentally:</p> <ul style="list-style-type: none"> ➤ Add any three 1-digit numbers ➤ Subtract any 1-digit number from a greater 1-digit number. ➤ Add a 2-digit number to 1-digit number ➤ Subtract a 1-digit number from a 2-digit number ➤ Add 10 to any 2-digit number ➤ Add any 10s number to a 2-digit number (up to 100) ➤ Subtract 10 from any 2-digit number ➤ Subtract any 10s number from a 2-digit number 	<ul style="list-style-type: none"> ➤ Identify 2D shapes by recognising number of edges and vertices (corners) they have ➤ Describe the properties of 2D shapes by describing number of edges and vertices (corners) they have ➤ Identify line of symmetry in simple shapes ➤ Make symmetrical patterns and shapes ➤ Identify 3D shapes by recognising number of edges, vertices & faces they have ➤ Describe 3D shapes by describing the number of edges, vertices & faces they have ➤ Use the terms edge, vertex/vertices and face accurately

Year 2: Autumn 1

Week 1: Number and Place Value

Count in steps of 2, 3, 5 and 10 from any number, forward and backwards.

Autumn 1: Week 1: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Autumn 1: Week 1

Objective 1

Count in steps of 2, 3, 5 and 10 from any number, forward and backwards.

Can you complete these sequences?

20, 30, 40

--	--

25, 20, 15

--	--

16, 14, 12

--	--

85, 80, 75

--	--

6, 9, 12

--	--

27, 22, 17

--	--

35, 38, 41










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120, 110, 100

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Autumn 1: Week 1: Practice and Consolidation

Number and Place Value 1: Count in steps of 2, 3, 5 and 10 from any number, forward and backward.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Count in 10s from any number – forward to 100 ➤ Count in 2s from any number – forward to 50 ➤ Count in 2s from any number – forward to 100 ➤ Count in 5s from any number – forward to 50 ➤ Count in 5s from any number – forward to 100 ➤ Count in 10s from any number – backward to 0 ➤ Count in 2s from any number – backward to 0 ➤ Count in 5s from any number – backward to 0 ➤ Count in 3s to 30 ➤ Count in 3s to 60 ➤ Count in 3s to 99 	<ul style="list-style-type: none"> • With the whole group, count in 10s to 100, forward and backward, with increasing speed. • Now do the same with counting in 2s, 3s and 5s. • Start from any number and see how quickly they can pick this up. • Link to any familiar number rhymes or songs involving number. • Link to times tables. • Talk about even and odd numbers in relation to counting in 2s. 	17, 27, 37  64, 54, 44 
		34, 36, 38  62, 60, 58 
		67, 72, 77  91, 86, 81 
		57, 60, 63  87, 84, 81 
		Now try this one 34, 44, 46, 56, 58, 68, 70 

Autumn 1: Week 1: Mastering this Objective –Deeper Understanding

Number and Place Value 1: Count in steps of 2, 3, 5 and 10 from any number, forward and backward.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:	
<ul style="list-style-type: none"> ➤ Count in 10s from any number – forward to 100 ➤ Count in 2s from any number – forward to 50 ➤ Count in 2s from any number – forward to 100 ➤ Count in 5s from any number – forward to 50 ➤ Count in 5s from any number – forward to 100 ➤ Count in 10s from any number – backward to 0 ➤ Count in 2s from any number – backward to 0 ➤ Count in 5s from any number – backward to 0 ➤ Count in 3s to 30 ➤ Count in 3s to 60 ➤ Count in 3s to 99 	<p>The larger number</p> <p>Consider these pairs: Put a circle around the larger number, then put a 2, 3, 5 or 10 next to the pair to show what the difference in the two numbers is.</p> <div> 28 and 30 55 and 53 18 and 23 76 and 66 47 and 44 18 and 23 </div>	<p>Moving up or down in 2s, 3s, 5s and 10s</p> <p>Write the next 4 numbers in these sequences:</p> <div> 14, 16, 18 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 72, 69, 66, <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 17, 22, 27, <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 33, 43, 53 <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> </div>
	<p>I start with 4, and I count on in 3s, I will say 13. Yes/ No</p> <p>I start with 7, and I count in 5s, I will say 19. Yes/ No</p> <p>I start with 9, and I count in 10s, I will say 39. Yes/ No</p> <p>I start with 8, and I count in 3s, I will say 31. Yes/ No</p>	<p>What is 2, 3, 5 or 10 more than:</p> <p>13, 17, 9, and 78</p> <p>What is 2, 3, 5 or 10 less than:</p> <p>34, 67, 12 and 45</p>

Autumn 1: Week 1: Working at greater depth

Number and Place Value 1: Count in steps of 2, 3, 5 and 10 from any number, forward and backward.

Teaching Sequence

- Count in 10s from any number – forward to 100
- Count in 2s from any number – forward to 50
- Count in 2s from any number – forward to 100
- Count in 5s from any number – forward to 50
- Count in 5s from any number – forward to 100
- Count in 10s from any number – backward to 0
- Count in 2s from any number – backward to 0
- Count in 5s from any number – backward to 0
- Count in 3s to 30
- Count in 3s to 60
- Count in 3s to 99

Activities for pupils working at greater depth:

If I count on in 3s from 16, show all the numbers in the sequence that are in the 30s.

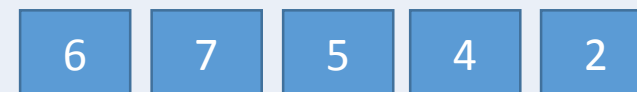
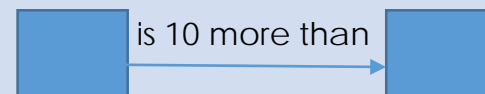
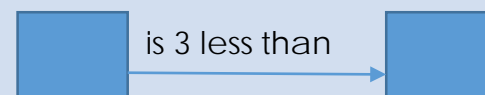
If I count on in 5s from 27, show all the numbers in the sequence that are in the 40s.

Henry thinks of a number. 5 less than his number is 16. What is his number?

Mohsin thinks of another number. 10 less than his number is 87. What is his number?

Ellie thinks of a number 3 less than her number is 34. What is her number?


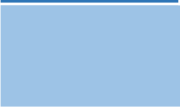



Complete these by using your own numbers.

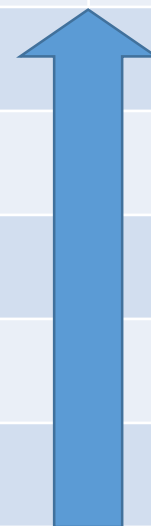


Make up 2, 2-digit numbers. Show two numbers that are more or less than 3 but less than 10 apart. Show two numbers that are more than 10 apart. Show two numbers that are more than 2 but less than 5 apart.

Autumn 1: Week 1: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Place Value 2: Count in steps of 2, 3, 5 and 10 from any number, forward and backward.		Me	My Teacher
	Can you identify a sequence which goes up or down in 2, 3, 5 or 10?		
	Can you count on or back in 3s from any number between 0 and 100?		
	Can you count on or back in 5s from any number between 0 and 100?		
	Can you count on or back in 2s from any number between 0 and 100?		
	Can you count on or back in 10s from any number between 0 and 100?		



Year 2: Autumn 1

Week 2: Number and Place Value

Read and write numbers to at least 100 in numerals and in words

Autumn 1: Week 2: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.



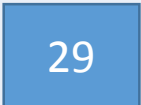

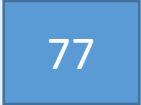
Name _____ Autumn 1 Week 2

Objective
Place Value **Read and write numbers to 100 in numerals and words**

<i>Can you write these numbers in numerals?</i>			<i>Can you write these numbers in words?</i>		
six			5		
thirteen			27		
twenty-four			47		
eighty-five			92		

Autumn 1: Week 2: Practice and Consolidation

Number and Place Value 2: Read and write numbers to at least 100 in numerals and in words

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none">➤ Read all numbers to 50 in words➤ Write all numbers to 50 in words➤ Read all numbers to 100 in words➤ Write all numbers to 100 in words	<ul style="list-style-type: none">• Pupils should respond quickly to cards with the tens numbers on them, ie, ten, twenty, thirty, etc.• Pupils should then respond rapidly to numbers such as twenty-one, fifty-two, etc.• Half the class are given numbers in words and the other half have numbers, in turn pupils stand up from one side and the person on the other with the corresponding number has to react as quickly as possible.	Write all the numbers 1 to 9 in words.
		Write all ten numbers from 10 to 100 in words.
		Write all numbers between 10 and 20 in words.
		Write all 5 numbers between 5 and 95 in words.
		Write these words as numbers: Eighteen  Twenty-four 
		Write these numbers in words  _____  _____  _____

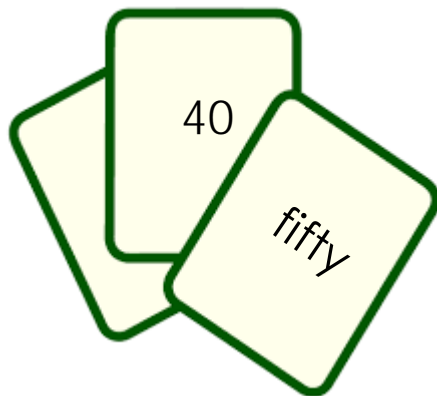
Autumn 1: Week 2: Mastering this Objective- Deeper Understanding

Number and Place Value 2: Read and write numbers to at least 100 in numerals and in words

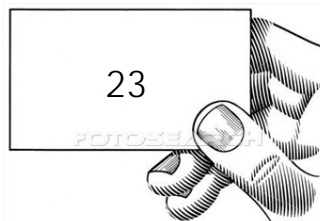
Teaching Sequence

If pupils have mastered this objective they will be able to complete these activities independently:

- Read all numbers to 50 in words
- Write all numbers to 50 in words
- Read all numbers to 100 in words
- Write all numbers to 100 in words



Play a simple game of snap with cards which have numerals and names between 20 and 50.



Take a set of cards with numbers written in words 25 to 50 and another set with numbers from 1 to 24. Take the number card away from the word card. Repeat as often as you can.

Look at the number.

Make up an addition or subtraction sentence which equals the number:

Eighteen _____

Forty-two _____

Thirty-one _____

Match the numbers to the names:

16 eighteen

36 fifty-two

52 thirty-six

18 thirty

30 sixteen

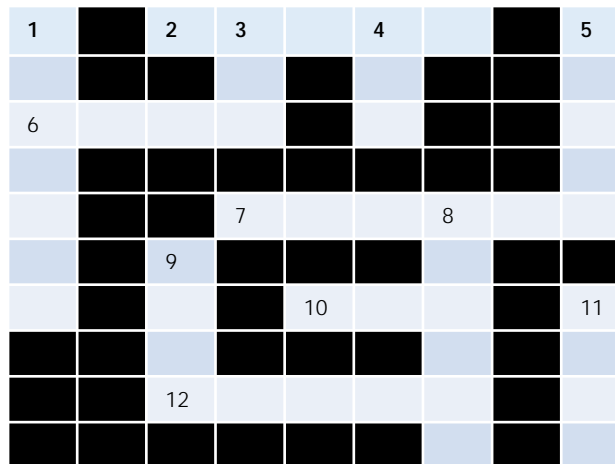
Autumn 1: Week 2: Working at greater depth

Number and Place Value 2: Read and write numbers to at least 100 in numerals and in words

Teaching Sequence

- Read all numbers to 50 in words
- Write all numbers to 50 in words
- Read all numbers to 100 in words
- Write all numbers to 100 in words

Activities for pupils working at greater depth:



Using the clues below complete the crossword using words in the answers.

Across

2. Before 41
6. 7 + two
7. Eighteen add 2
10. 2 lots of 5
12. 4 add four

Down

1. $75 + 25$
3. Before 2
4. After one
5. 6 lots of 10
8. 80 add ten
9. Half of 10
11. Between 3 and 5

Complete the following sequences:

thirty two; thirty-four; thirty-six;

Forty-four; forty-two, forty,

2, four, 6, eight, 10, _____

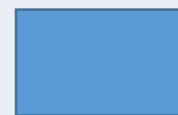
Hariz thinks of a number.

It is an odd number

It is between 30 and 34






The two digits are different numbers.

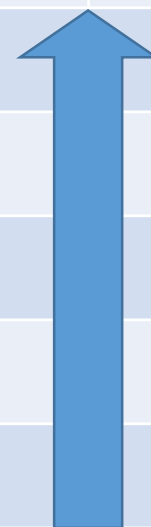
Write the number in numerals and in words.



Autumn 1: Week 2: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Place Value 2: Read and write numbers to at least 100 in numerals and in words		Me	My Teacher
	Can you match numbers and words between 0 and 100 rapidly?		
	Can you write all numbers between 50 and 100 accurately?		
	Can you write all numbers between 0 and 50 accurately?		
	Can you write all ten numbers between 10 and 100 in words and numbers?		
	Can you write all numbers between 0 and 10 in words and numbers?		



Year 2: Autumn 1

Week 3: Measures: Length and Weight

Compare and order lengths, mass, and record the results using $>$, $<$ and $=$.

Autumn 1: Week 3: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

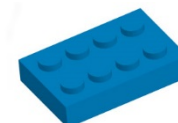
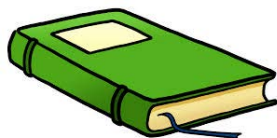
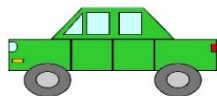
Autumn 1 Week 3

Objective
Measures

Compare and order lengths, mass, and record the results using $>$, $<$ and $=$.

Use the $>$, $<$ signs to show which of the two objects is **longer or taller**

Use the $>$, $<$ signs to show which of the two objects is **heavier**



Autumn 1: Week 3: Practice and Consolidation

Measures 1: Compare and order lengths, mass, and record the results using $>$, $<$ and $=$.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:				
<ul style="list-style-type: none">➤ Order different lengths using cm and m➤ Order different weights using g and kg➤ Use the symbol $< > =$ to compare two amounts of length and weight➤ Record information using $< > =$	<ul style="list-style-type: none">• Look at a one metre stick and consider items or objects that measure more or less than one metre.• Remind pupils of the term centimetre and that 100 cms. make a metre.• Hold a one Kg. weight and consider items or objects that weigh more or less than 1Kg.• Remind pupils of the term grams and that 1000 grams make a Kg.• Introduce pupils to the symbols $< >$.• Put them on large cards.• Get pupils to physically place the symbols $< >$ between objects of different weight and of different length.	Using a metre stick record anything that measures more than a metre and anything that measures less than a metre.				
		<table><tr><th>More than a metre</th><th>Less than a meter</th></tr><tr><td></td><td></td></tr></table>	More than a metre	Less than a meter		
		More than a metre	Less than a meter			
		Using a Kg weight record anything that weighs more or less than a Kg.				
		<table><tr><th>More than a Kg</th><th>Less than a Kg</th></tr><tr><td></td><td></td></tr></table>	More than a Kg	Less than a Kg		
		More than a Kg	Less than a Kg			
Using the symbols $>$, $<$ and $=$, compare the length of 2 items.						
Using the symbols $>$, $<$ and $=$, compare the weight of 2 items.						
Take any 5 items and set them out in order according to their length. Record your findings. Take any 5 items and set them out in order according to their weight. Record your findings.						
Recognise that $\frac{1}{2}$ a metre is also 50cms and that a $\frac{1}{4}$ of a metre is 25 cms. Similarly $\frac{1}{2}$ a Kg is 500gms and that $\frac{1}{4}$ of a Kg is 250gms.						

Autumn 1: Week 3: Mastering this Objective -Deeper Understanding

Measures 1: Compare and order lengths, mass, and record the results using $>$, $<$ and $=$.

Teaching Sequence

If pupils have mastered this objective they will be able to complete these activities independently:

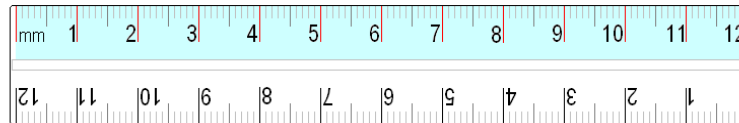
- Order different lengths using cm and m
- Order different weights using g and kg
- Use the symbol $< > =$ to compare two amounts of length and weight
- Record information using $< > =$



Using 1Kg, 500gms and 250gms weights and balance scales, find two objects that weigh (less than 2Kgs) and then record their weights. Set them out using one of the three signs: $>$, $<$, $=$.
Now, find two more objects and record accordingly.

Make a list of items you can find around the classroom that weigh less than 1Kg.

Make a list of items that you can find around the classroom that measure less than 1 metre.



Using a ruler, measure your pencil and a crayon. Record your findings and then set out your answer using one of these three signs $>$, $<$, $=$.
Now find two more objects for you to measure and compare.

Autumn 1: Week 3: Working at greater depth

Measures 1: Compare and order lengths, mass, and record the results using $>$, $<$ and $=$.

Teaching Sequence	Activities for pupils working at greater depth:	
<ul style="list-style-type: none"> ➤ Order different lengths using cm and m ➤ Order different weights using g and kg ➤ Use the symbol $< > =$ to compare two amounts of length and weight ➤ Record information using $< > =$ 	<p>Draw 2 lines that are 10cms apart and then record them accurately.</p>	<p>Make up a range of statements that include the symbols $< > =$. Each statement should focus on length or weight and compare two lengths or two weights:</p>
	<p>Find 2 items. One must weigh approximately 500g more than the other. Record your findings accurately using the symbol '$>$'.</p>	<p>Two have been done for you:</p> <p>Length Pencil $<$ Maths Book</p> <p>Weight Laptop $>$ Maths Book</p>
	<p>Look at the following pairs of measures, use $< > =$ to show which are more or less than the first. eg, 25cms $<$ 50cms.</p> <div style="display: flex; align-items: center; margin-top: 10px;"> <div style="margin-right: 10px;">1Kg</div> <div style="width: 20px; height: 20px; background-color: #0070C0; margin-right: 10px;"></div> <div>750g</div> </div> <div style="display: flex; align-items: center; margin-top: 5px;"> <div style="margin-right: 10px;">1metre</div> <div style="width: 20px; height: 20px; background-color: #0070C0; margin-right: 10px;"></div> <div>50cms</div> </div> <div style="display: flex; align-items: center; margin-top: 5px;"> <div style="margin-right: 10px;">$\frac{1}{2}$Kg</div> <div style="width: 20px; height: 20px; background-color: #0070C0; margin-right: 10px;"></div> <div>750g</div> </div> <div style="display: flex; align-items: center; margin-top: 5px;"> <div style="margin-right: 10px;">$\frac{1}{2}$metre</div> <div style="width: 20px; height: 20px; background-color: #0070C0; margin-right: 10px;"></div> <div>50cms</div> </div>	<p>Order 4 objects by weight and record your answer using the '$>$' sign.</p> <p>Order another 4 objects by length and record your answer using the '$<$' sign.</p> <p>Please note: for both of these the answers should appear in one line.</p>

Autumn 1: Week 3: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Measures 1: Compare and order lengths, mass, and record the results using $>$, $<$ and $=$.

Me

My
Teacher

Can you use the three signs $>$, $<$ and $=$ when recording your findings about weight and length?

Can you use the signs $>$, $<$ and $=$ accurately?

Do you know that the weight and mass are measured in kg and g?

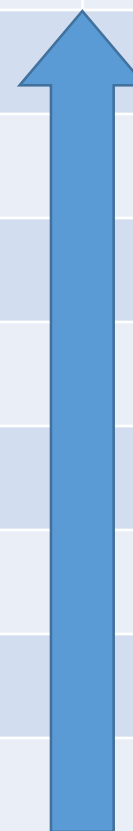
Can you estimate how much an item weighing 1Kg would be?

Do you know that weight and mass are measured in kg?

Do you know that lengths are measured in metres and cm?

Can you estimate how much 1 metre is?

Do you know that lengths are measured in metres?



Year 2: Autumn 1

Week 4: Addition and Subtraction

Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.

Autumn 1: Week 4: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Autumn 1: Week 4

Objective

Addition and
Subtraction

Recall and use addition and subtraction facts to 20 fluently and
derive and use related facts up to 100.

Can you work out these answers quickly?

$14 + 5$

If $3 + 5 = 8$
what is $30 + 50$?

$2 + 15$

If $7 + 2 = 9$
what is $70 + 20$?

$15 - 3$

If $5 + 2 = 7$
what is $50 + 20$?

$19 - 12$

If $6 + 4 = 10$
what is $60 + 40$?

Autumn 1: Week 4: Practice and Consolidation - Deeper Understanding

Addition and Subtraction 1: Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:																					
<ul style="list-style-type: none"> ➤ Recall addition bonds to 20 based on instant recall. ➤ Recall subtraction facts to 20 based on instant recall. ➤ Know addition facts (multiples of 10) up to 100, e.g. $60+20=80$ ➤ Know subtraction facts (multiples of 10) up to 100, e.g. $90-70=20$ ➤ Explain how to use bonds to ten to derive other number facts. 	<ul style="list-style-type: none"> • Practise rapid recall of all addition facts to 20. • Practise rapid recall of all subtraction facts to 20. • Practise rapid addition and subtraction of all tens numbers to 100. • Develop bonds to 20 to using numbers as tens, ie, if $3 + 2 = 5$, then $30 + 20 = 50$. • Similarly, if $6 - 2 = 4$, then $60 - 20 = 40$. 	<p>Timed exercises for additions and subtractions to 20 as outlined below:</p> <table> <tr> <td>$3 + 5 =$ <input type="text"/></td> <td>$7 - 5 =$ <input type="text"/></td> <td>$11 + 6 =$ <input type="text"/></td> </tr> <tr> <td>$9 + 6 =$ <input type="text"/></td> <td>$12 - 6 =$ <input type="text"/></td> <td>$9 + 9 =$ <input type="text"/></td> </tr> <tr> <td>$11 + 7 =$ <input type="text"/></td> <td>$18 - 7 =$ <input type="text"/></td> <td>$20 - 7 =$ <input type="text"/></td> </tr> </table> <p>Taking account of number bonds to 20, work out the following:</p> <table> <tr> <td>$20 + 40 =$ <input type="text"/></td> <td>$50 + 40 =$ <input type="text"/></td> <td>$70 + 20 =$ <input type="text"/></td> </tr> <tr> <td>$90 - 20 =$ <input type="text"/></td> <td>$80 - 30 =$ <input type="text"/></td> <td>$50 - 20 =$ <input type="text"/></td> </tr> </table> <p>Complete the following:</p> <table> <tr> <td>$5 + 3 =$ <input type="text"/></td> <td>$9 - 2 =$ <input type="text"/></td> <td>$7 + 5 =$ <input type="text"/></td> </tr> <tr> <td>$50 + 30 =$ <input type="text"/></td> <td>$90 - 20 =$ <input type="text"/></td> <td>$70 + 50 =$ <input type="text"/></td> </tr> </table>	$3 + 5 =$ <input type="text"/>	$7 - 5 =$ <input type="text"/>	$11 + 6 =$ <input type="text"/>	$9 + 6 =$ <input type="text"/>	$12 - 6 =$ <input type="text"/>	$9 + 9 =$ <input type="text"/>	$11 + 7 =$ <input type="text"/>	$18 - 7 =$ <input type="text"/>	$20 - 7 =$ <input type="text"/>	$20 + 40 =$ <input type="text"/>	$50 + 40 =$ <input type="text"/>	$70 + 20 =$ <input type="text"/>	$90 - 20 =$ <input type="text"/>	$80 - 30 =$ <input type="text"/>	$50 - 20 =$ <input type="text"/>	$5 + 3 =$ <input type="text"/>	$9 - 2 =$ <input type="text"/>	$7 + 5 =$ <input type="text"/>	$50 + 30 =$ <input type="text"/>	$90 - 20 =$ <input type="text"/>	$70 + 50 =$ <input type="text"/>
$3 + 5 =$ <input type="text"/>	$7 - 5 =$ <input type="text"/>	$11 + 6 =$ <input type="text"/>																					
$9 + 6 =$ <input type="text"/>	$12 - 6 =$ <input type="text"/>	$9 + 9 =$ <input type="text"/>																					
$11 + 7 =$ <input type="text"/>	$18 - 7 =$ <input type="text"/>	$20 - 7 =$ <input type="text"/>																					
$20 + 40 =$ <input type="text"/>	$50 + 40 =$ <input type="text"/>	$70 + 20 =$ <input type="text"/>																					
$90 - 20 =$ <input type="text"/>	$80 - 30 =$ <input type="text"/>	$50 - 20 =$ <input type="text"/>																					
$5 + 3 =$ <input type="text"/>	$9 - 2 =$ <input type="text"/>	$7 + 5 =$ <input type="text"/>																					
$50 + 30 =$ <input type="text"/>	$90 - 20 =$ <input type="text"/>	$70 + 50 =$ <input type="text"/>																					

Autumn 1: Week 4: Mastering this Objective

Addition and Subtraction 1: Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:																												
<ul style="list-style-type: none"> ➤ Recall addition bonds to 20 based on instant recall. ➤ Recall subtraction facts to 20 based on instant recall. ➤ Know addition facts (multiples of 10) up to 100, e.g. $60+20=80$ ➤ Know subtraction facts (multiples of 10) up to 100, e.g. $90-70=20$ ➤ Explain how to use bonds to ten to derive other number facts. 	<p>What is the same and what's different about these three sets of calculations?</p> <table> <tbody> <tr><td>$10 - 9 =$</td><td>$20 - 19 =$</td><td>$100 - 90 =$</td></tr> <tr><td>$10 - 8 =$</td><td>$20 - 18 =$</td><td>$100 - 80 =$</td></tr> <tr><td>$10 - 7 =$</td><td>$20 - 17 =$</td><td>$100 - 70 =$</td></tr> <tr><td>$10 - 6 =$</td><td>$20 - 16 =$</td><td>$100 - 60 =$</td></tr> <tr><td>$10 - 5 =$</td><td>$20 - 15 =$</td><td>$100 - 50 =$</td></tr> <tr><td>$10 - 4 =$</td><td>$20 - 14 =$</td><td>$100 - 40 =$</td></tr> <tr><td>$10 - 3 =$</td><td>$20 - 13 =$</td><td>$100 - 30 =$</td></tr> <tr><td>$10 - 2 =$</td><td>$20 - 12 =$</td><td>$100 - 20 =$</td></tr> <tr><td>$10 - 1 =$</td><td>$20 - 11 =$</td><td>$100 - 10 =$</td></tr> </tbody> </table> <p>In under 1 minute, complete the following:</p> <p>If $3 + 5 = 8$ how much will $30 + 50$ be? If $7 + 2 = 9$ how much will $70 + 20$ be? If $5 + 5 = 10$ how much will $50 + 50$ be? If $9 - 3 = 6$ how much will $90 - 30$ be? If $7 - 1 = 6$ how much will $70 - 10$ be? If $9 - 4 = 5$ how much will $90 - 40$ be? If $5 + 4 = 9$ how much will $50 + 40$ be? If $9 + 0 = 9$ how much will $90 + 0$ be?</p>	$10 - 9 =$	$20 - 19 =$	$100 - 90 =$	$10 - 8 =$	$20 - 18 =$	$100 - 80 =$	$10 - 7 =$	$20 - 17 =$	$100 - 70 =$	$10 - 6 =$	$20 - 16 =$	$100 - 60 =$	$10 - 5 =$	$20 - 15 =$	$100 - 50 =$	$10 - 4 =$	$20 - 14 =$	$100 - 40 =$	$10 - 3 =$	$20 - 13 =$	$100 - 30 =$	$10 - 2 =$	$20 - 12 =$	$100 - 20 =$	$10 - 1 =$	$20 - 11 =$	$100 - 10 =$	<p>Complete as many additions and subtractions as you can to match the number in the circle.</p> <div data-bbox="1304 592 1709 921"> </div> <p>Make up at least 10 sentences.</p> <p>Now do the same with the following numbers in the circle:</p> <p>12; 19; 15; 17; 13, 11.</p>
$10 - 9 =$	$20 - 19 =$	$100 - 90 =$																											
$10 - 8 =$	$20 - 18 =$	$100 - 80 =$																											
$10 - 7 =$	$20 - 17 =$	$100 - 70 =$																											
$10 - 6 =$	$20 - 16 =$	$100 - 60 =$																											
$10 - 5 =$	$20 - 15 =$	$100 - 50 =$																											
$10 - 4 =$	$20 - 14 =$	$100 - 40 =$																											
$10 - 3 =$	$20 - 13 =$	$100 - 30 =$																											
$10 - 2 =$	$20 - 12 =$	$100 - 20 =$																											
$10 - 1 =$	$20 - 11 =$	$100 - 10 =$																											

Autumn 1: Week 4: Working at greater depth

Addition and Subtraction 1: Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.

Teaching Sequence

- Recall addition bonds to 20 based on instant recall.
- Recall subtraction facts to 20 based on instant recall.
- Know addition facts (multiples of 10) up to 100, e.g. $60 + 20 = 80$
- Know subtraction facts (multiples of 10) up to 100, e.g. $90 - 70 = 20$
- Explain how to use bonds to ten to derive other number facts.

Activities for pupils working at greater depth:

Complete the following:

$$100 - \square = 10$$

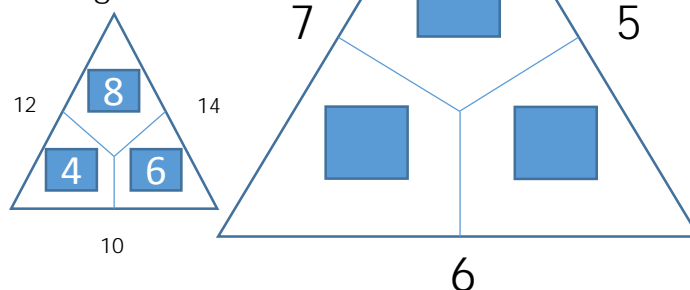
$$100 - \square = 20$$

$$100 - \square = 30$$

$$100 - \square = 40$$

Now, complete the number sentences until you have an answer of 100.

Look at the example from below and complete the larger triangle.



Find at least 5 different possibilities to complete each of these sentences:

$$\square + \square = 20$$

$$20 - \square = \square$$

$$\square - 5 = \square$$

Look at the following:

If $3 + 5 = 8$ how much will $30 + 50$ be?

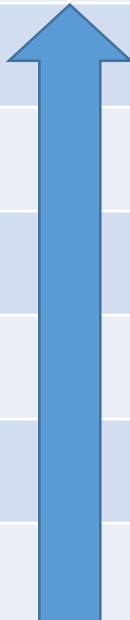
If $7 + 2 = 9$ how much will $70 + 20$ be?

Make up at least 5 more sentences. Give them to a friend to complete.

Autumn 1: Week 4: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Addition and Subtraction 1: Recall and use addition and subtraction facts to 20 fluently and derive and use related facts up to 100.		Me	My Teacher
	Can you link your subtraction number bonds to 20 to work out subtraction of tens numbers to 100?		
	Can you link your addition number bonds to 20 to work out additions of tens numbers to 100?		
	Can you rapidly subtract any tens numbers from another to 100?		
	Can you rapidly add any two tens numbers to 100?		
	Can you rapidly recall all your subtraction number bonds to 20?		
	Can you rapidly recall all your addition number bonds to 20?		



Year 2: Autumn 1

Week 5: Addition and Subtraction

Add and subtract numbers mentally, including:

- 2-digit numbers & ones
- 2-digit numbers & tens
- two 2-digit numbers
- adding three 1-digit

Autumn 1: Week 5: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Autumn 1: Week 5

Objective

Addition &
Subtraction 2

Add and subtract mentally: a two-digit number and ones, a two-digit number and tens, 2 two-digit numbers; and 3 one-digit numbers

Can you work these out?

$17 + 10$

$25 + 16$

$26 - 10$

$89 - 16$

$69 + 20$

$4 + 7 + 6$

$48 - 20$

$7 + 9 + 3$

Autumn 1: Week 5: Practice and Consolidation

Addition and Subtraction 2: Add and subtract numbers mentally, including:

- 2-digit numbers & ones; 2-digit numbers & tens
- two 2-digit numbers; adding three 1-digit

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
Mentally: ➤ Add any three 1-digit numbers ➤ Subtract any 1-digit number from a greater 1-digit number. ➤ Add a 2-digit number to 1-digit number ➤ Subtract a 1-digit number from a 2-digit number ➤ Add 10 to any 2-digit number ➤ Add any 10s number to a 2-digit number (up to 100) ➤ Subtract 10 from any 2-digit number ➤ Subtract any 10s number from a 2-digit number	<ul style="list-style-type: none"> Orally, get pupils to add 10 rapidly to any given number up to 20, then up to 50 and then up to 100. Orally, get pupils to add any one-digit number to any two-digit number to 20, then to 50 and then to 100. Orally, get pupils to subtract 10 rapidly from any given number up to 50 and then up to 100. Orally, get pupils to subtract any one-digit number from any two-digit number to 20, then to 50 and then to 100. Orally, get pupils to add any 10s number to any given number up to 50 and then up to 100. Orally, get pupils to subtract any 10s number from any given number up to 50 and then up to 100. 	Add 10 to the following numbers 16; 18; 34; 67; 76; 43; 54; 89. now record as follows: $23 + 10 = 33$ Now subtract 10 from each of the numbers and record like this: $23 - 10 = 13$
		Subtract 20 from the following numbers 46; 28; 34; 67; 76; 43; 54; 89. Record as above. Add 30 to the following numbers: 48; 67; 51; 25; 69
		Add the following one-digit numbers together: $5 + 8 + 7 =$ $6 + 4 + 9 =$ $2 + 7 + 9 =$ $9 + 8 + 9 =$
		<div> Now complete these: $24 + 7 =$ <input type="text"/> $36 + 8 =$ <input type="text"/> $18 + 7 =$ <input type="text"/> </div> <div> Now complete these: $16 + 14 =$ <input type="text"/> $17 + 13 =$ <input type="text"/> $18 + 12 =$ <input type="text"/> </div>

Autumn 1: Week 5: Mastering this Objective - Deeper Understanding

Addition and Subtraction 2: Add and subtract numbers mentally, including:

- 2-digit numbers & ones; 2-digit numbers & tens
- two 2-digit numbers; adding three 1-digit

Teaching Sequence

If pupils have mastered this objective they will be able to complete these activities independently:

Mentally:

- Add any three 1-digit numbers
- Subtract any 1-digit number from a greater 1-digit number.
- Add a 2-digit number to 1-digit number
- Subtract a 1-digit number from a 2-digit number
- Add 10 to any 2-digit number
- Add any 10s number to a 2-digit number (up to 100)
- Subtract 10 from any 2-digit number
- Subtract any 10s number from a 2-digit number

Complete the following calculations:

$$\square + \square + \square = 17$$

$$\square + \square + \square = 25$$

$$\square + \square + \square = 21$$

Throw the three dice and add the numbers together.
Now record your results like this:

$$3 + 4 + 5 = 12$$

Do this 5 times and check your results.



What do I need to add to or subtract from the following numbers so that the answer is 50?

23, 56, 82, 18, 45, 90, 27, 91, 45, 20.

Now use the same numbers but this time your answer should be 60.



Pick a pair of numbers.
Add them together.
Write the numbers and the answer.
Pick another pair and subtract them and write down the numbers and your answer.
Carry on adding or subtracting as many pairs as you can.

Autumn 1: Week 5: Working at greater depth

Addition and Subtraction 2: Add and subtract numbers mentally, including:

- 2-digit numbers & ones; 2-digit numbers & tens
- two 2-digit numbers; adding three 1-digit

Teaching Sequence

Activities for pupils working at greater depth:

Mentally:

- Add any three 1-digit numbers
- Subtract any 1-digit number from a greater 1-digit number.
- Add a 2-digit number to 1-digit number
- Subtract a 1-digit number from a 2-digit number
- Add 10 to any 2-digit number
- Add any 10s number to a 2-digit number (up to 100)
- Subtract 10 from any 2-digit number
- Subtract any 10s number from a 2-digit number

Find 5 different possibilities to complete each of these number sentences:

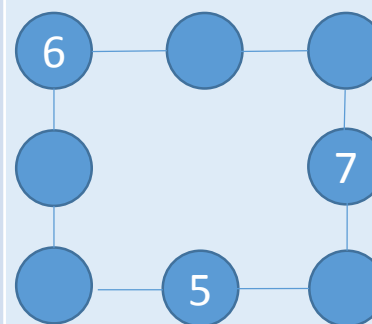
$$\boxed{} + \boxed{} = 40$$

$$30 - \boxed{} = \boxed{}$$

I think of a number and add 5.
The answer is 16.
What was my number?

I think of a number and I subtract 7. The answer is 25.
What was my number?

I think of a number and add 30.
The answer is 58.
What was my number?



Make each line add up to 20.

Then make up a similar puzzle for your friends.

There are 27 marbles in a jar.
Ahmed takes 9 and Helen takes 7.
How many marbles are left in the jar?
Record your answer.

On holiday in Greece it was 31 degrees during the day but 12 degrees cooler in the evening.
What was the temperature in the evening?

Harry has 56p.
He buys a cake for 9p and a chocolate bar for 15p. How much has he left?

Autumn 1: Week 5: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Addition and Subtraction 2: Add and subtract numbers mentally, including: 2-digit numbers & ones; 2-digit numbers & tens
- two 2-digit numbers; adding three 1-digit

Me

My
Teacher

Can you add a one-digit number to any two-digit number up to 50?

Can you add a one-digit number to any two-digit number up to 20?

Can you subtract a 10s number from any two digit numbers?

Can you add a 10s number to any one or two digit numbers?

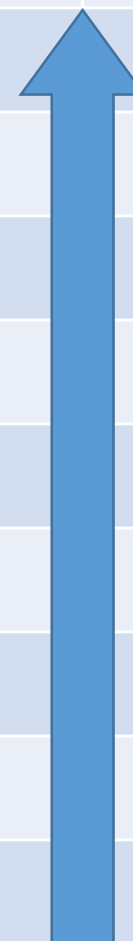
Can you add rapidly any 3 one-digit numbers?

Can you subtract 10 from any one or two digit numbers?

Can you add 10 to any one or two digit numbers?

Can you rapidly subtract one-digit number from another?

Can you rapidly add any 2 one-digit number together?



Year 2: Autumn 1

Week 6: Geometry

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.

Autumn 1: Week 6 Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

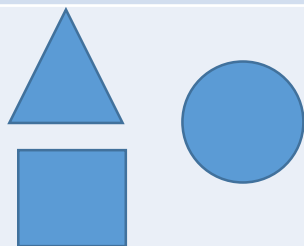
Name

Autumn 1: Week 6

Objective
Geometry

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 & faces.

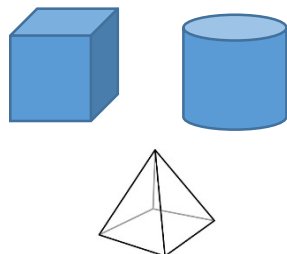
How many sides and vertices (corners) do the following shapes have?



Label the side and vertices on this triangle.



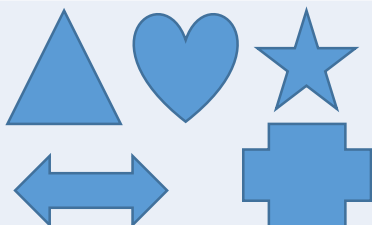
How many edges, faces and vertices (corners) do the following shapes have?



Label the edge, face and vertices on this cuboid.



Draw a line of symmetry for the following shapes.



Create a irregular shape that has at least one line of symmetry.

Autumn 1: Week 6: Practice and Consolidation

Geometry: 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.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:																																				
<ul style="list-style-type: none">➤ Identify 2D shapes by recognising number of edges and vertices (corners) they have➤ Describe the properties of 2D shapes by describing number of edges and vertices (corners) they have➤ Identify line of symmetry in simple shapes➤ Make symmetrical patterns and shapes➤ Identify 3D shapes by recognising number of edges, vertices & faces they have➤ Describe 3D shapes by describing the number of edges, vertices & faces they have➤ Use the terms edge, vertex/vertices and face accurately	<ul style="list-style-type: none">• Remind pupils of the correct terminologies to describe the properties of 2D shapes: sides (edges) and corners (vertices) by showing large shapes.• Use a 'feely bag' and describe 2D shapes by properties.• Now do the same with 3D shapes.• Ensure pupils are familiar with the terminologies associated with 3D shapes: edges, vertices and faces.• Ensure pupils understand the term symmetry and look for examples of items in the classroom that have a line of symmetry before looking at regular shapes.	<p>I have 3 sides, 3 vertices and one face. What am I?</p> <div></div> <p>I have 6 faces; 8 vertices and 12 edges. What am I?</p> <div></div> <p>I have 5 faces; 5 vertices and 8 edges. What am I?</p> <div></div> <div><p>Complete this table:</p><table><tr><th></th><th colspan="2">2D Shapes</th><th colspan="3">3D Shapes</th></tr><tr><th></th><th>sides</th><th>vertices</th><th>faces</th><th>vertices</th><th>edges</th></tr><tr><td>Triangle</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Cube</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Circle</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>Cylinder</td><td></td><td></td><td></td><td></td><td></td></tr></table></div>		2D Shapes		3D Shapes				sides	vertices	faces	vertices	edges	Triangle						Cube						Circle						Cylinder					
	2D Shapes		3D Shapes																																			
	sides	vertices	faces	vertices	edges																																	
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Autumn 1: Week 6: Mastering this Objective - Deeper Understanding

Geometry: 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.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:	
<ul style="list-style-type: none"> ➤ Identify 2D shapes by recognising number of edges and vertices (corners) they have ➤ Describe the properties of 2D shapes by describing number of edges and vertices (corners) they have ➤ Identify line of symmetry in simple shapes ➤ Make symmetrical patterns and shapes ➤ Identify 3D shapes by recognising number of edges, vertices & faces they have ➤ Describe 3D shapes by describing the number of edges, vertices & faces they have ➤ Use the terms edge, vertex/vertices and face accurately 	<p>A shape has straight sides and all its sides are the same length. Name 2 possible 2D shapes that fit this description.</p> <p>A 3D shape has 5 faces with four of them being identical. Name the shape.</p> <p>A 3D shape has four equal faces and two other faces that are equal to each other but different from the first four. What shape is it?</p>	<p>Draw a car, van or train that includes at least 1 square, 3 rectangles, 2 triangles and at least 4 circles.</p> <p>Now do the same but use 3D shapes: 1 cube; 4 cuboids; 2 square based pyramid and 4 spheres.</p> <p>Create a robot using 3D shapes. List the shapes that you have used.</p>
	<p>Always, sometimes, never?</p> <p>Is it always, sometimes or never true that when you fold a rectangle in half you will get a square? Circle your answer.</p> <p>always sometimes never</p> <p>Is it always, sometimes or never true that when you fold a square in half you get a rectangle? Circle your answer.</p> <p>always sometimes never</p>	<p>Symmetry</p> <p>Draw 2 different shapes: one that has one line of symmetry and one that has at least two lines of symmetry.</p> <p>Find flags of different nations that have lines of symmetry.</p>

Autumn 1: Week 6: Working at greater depth

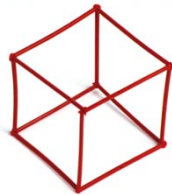
Geometry: Identify and describe the properties of 2D shapes, including the number of sides and line symmetry in a vertical line.

Identify and describe the properties of 3D shapes, including the number of edges, vertices and faces.

Teaching Sequence

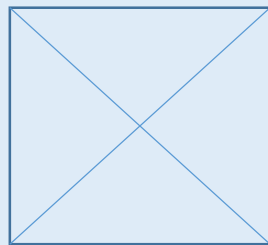
Activities for pupils working at greater depth:

- Identify 2D shapes by recognising number of edges and vertices (corners) they have
- Describe the properties of 2D shapes by describing number of edges and vertices (corners) they have
- Identify line of symmetry in simple shapes
- Make symmetrical patterns and shapes
- Identify 3D shapes by recognising number of edges, vertices & faces they have
- Describe 3D shapes by describing the number of edges, vertices & faces they have
- Use the terms edge, vertex/vertices and face accurately



Look at the cube made from straws with a small ball of clay on each vertex. This requires 12 straws and 8 balls of clay.

What could you build with 6 straws and 4 balls of clay?
What could you build with 4 long straws; 8 short straws and 8 balls of clay?



Cut a square into 4 in the way shown. Re-arrange the pieces to make other shapes.

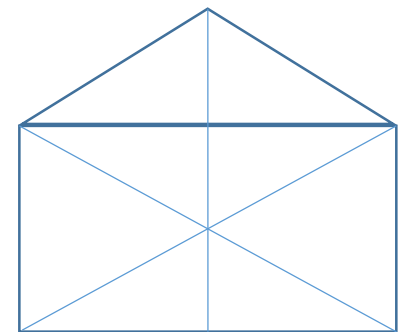
Describe the properties of the new shapes you have made using correct terminology.

Symmetry

Challenge your partner to create as few shapes that have a number of lines of symmetry.

The main challenge is to create as few shapes as possible but they will have at least 10 lines of symmetry in total.

Sam is trying to describe this picture to his friend on the phone. How could he describe it, so his friend can draw it herself? Test this with a friend.



Now make up some more.

Autumn 1: Week 6: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Geometry: 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.

Me

My
Teacher

Objective: Can you identify and describe properties of 2D and 3D shapes (sides, lines of symmetry)?

Can you identify simple 3-D shapes according to sides, vertices, faces, etc.?

Can you identify 2-D shapes according to sides and number of vertices, etc.?

Can you make up your own symmetrical shapes?

Can you identify a line of symmetry in simple shapes?

Objective: Can you identify and describe properties of 3D shapes (edges, vertices and faces)?

Do you use the terms 'vertices' and 'faces' when describing 3D shapes?

Can you identify simple 3D shapes according to sides, right angles, edges, faces, etc.?

YEAR 2 : AUTUMN 2: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
1 Multiplication & Division	1 Statistics	1 Fractions	2 Measures Money	3 Measures Time	Consolidate and Assess
Recall and use multiplication and division facts for the 2, 5 and 10 tables, including recognising odd and even numbers	Interpret and construct: <ul style="list-style-type: none"> - pictograms - tally charts - block diagrams - simple tables 	Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ of a length, shape, set of objects, or quantity.	Recognise & use symbols for pounds (£) and pence (p); combine amounts to make a particular value.	Tell & write the time to quarter past/to the hour & draw the hands on a clock face to show these times.	Start this week by revising the learning covered in the Autumn term so as to ensure pupils are fluent and secure with their basic skills.
<ul style="list-style-type: none"> ➤ Count in 2s; forward and backward. ➤ Recite the x2 table up to x12, without error. ➤ Answer any calculation involving x2, out of order. ➤ Know that 2×4 is the same as 4×2 etc. ➤ Answer any calculation involving $\div 2$, out of order. ➤ Count in 5s; forward and backward. ➤ Recite the x5 table up to x12, without error. ➤ Answer any calculation involving x5, out of order. ➤ Know that $x4$ is the same as 4×5 etc. ➤ Answer any calculation involving $\div 5$, out of order. ➤ Count in 10s; forward and backward. ➤ Recite the x10 table up to x12, without error. ➤ Answer any calculation involving x10, out of order. ➤ Know that 4×10 is the same as 10×4 etc. ➤ Answer any calculation involving $\div 10$, out of order. 	<ul style="list-style-type: none"> ➤ Read information contained within a simple pictogram. ➤ Read information contained within a simple tally chart. ➤ Read information contained within a block diagram. ➤ Read information contained within a simple table. ➤ Construct a simple table to show information collected (total less than 20). ➤ Construct a pictogram to show information collected (total less than 20). ➤ Construct a tally chart to show information collected (total less than 20). ➤ Construct a block diagram to show information collected (total less than 20). 	<ul style="list-style-type: none"> ➤ Know what $\frac{1}{2}$ means and use and write the term 'half' and $\frac{1}{2}$ interchangeably. ➤ Know what $\frac{1}{4}$ means and use and write the term 'quarter and $\frac{1}{4}$ interchangeably. ➤ Know what $\frac{3}{4}$ means and use and write the term 'three-quarters' and $\frac{3}{4}$ interchangeably. ➤ Know what $\frac{1}{3}$ means and use and write the term 'third' and '$\frac{1}{3}$' interchangeably. ➤ Find $\frac{1}{4}$ of a shape or length. ➤ Find $\frac{1}{3}$ of a shape or length. ➤ Find $\frac{2}{4}$ or $\frac{1}{2}$ of a shape or length. ➤ Find $\frac{3}{4}$ of a shape or length. ➤ Calculate $\frac{1}{3}$ of a number that is divisible by 3. ➤ Calculate $\frac{1}{4}$ of a number that is divisible by 4. ➤ Calculate $\frac{1}{2}$ of a given number that is divisible by 2. ➤ Calculate $\frac{3}{4}$ of a number that is divisible by 4. 	<ul style="list-style-type: none"> ➤ Use the symbols £ and p to represent amounts of money. ➤ Make given amounts up to £5 using coin combinations. ➤ Find different ways of making the same amount. 	<ul style="list-style-type: none"> ➤ Tell quarter past times. ➤ Tell quarter to times. ➤ Draw hands on clock to show quarter past times. ➤ Draw hands on clock to show quarter to times. 	<p>Use a simple assessment process to check on pupils' confidence and consistency in using the learning outlined in the Autumn term.</p> <p>Analyse the results and use information to help focus the intervention sessions, as needed, for the following term.</p>

Year 2: Autumn 2

Week 1: Multiplication and Division

Recall and use multiplication and division facts for the 2, 5 and 10 tables, including recognising odd and even numbers.

Autumn 2: Week 1: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Autumn 2 Week 1

Objective
Multiplication
& Division

Recall and use multiplication and division facts for the 2, 5 and 10 tables, including recognising odd and even numbers.

5×5

How many 2s in 16?

7×10

How many 5s in 30?

10×2

How many 10s in 70?

8×2

Circle all the odd numbers:

12 17 52 72 19 23 92

Autumn 2: Week 1: Practice and Consolidation

Multiplication & Division : Recall and use multiplication and division facts for the 2, 5 and 10 tables, including recognising odd and even numbers.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:										
<ul style="list-style-type: none">➤ Count in 2s; forward and backward.➤ Recite the x2 table up to x12, without error.➤ Answer any calculation involving x2, out of order.➤ Know that 2x4 is the same as 4x2 etc.➤ Answer any calculation involving ÷2, out of order.➤ Count in 5s; forward and backward.➤ Recite the x5 table up to x12, without error.➤ Answer any calculation involving x5, out of order.➤ Know that x4 is the same as 4x5 etc.➤ Answer any calculation involving ÷5, out of order.➤ Count in 10s; forward and backward.➤ Recite the x10 table up to x12, without error.➤ Answer any calculation involving x10, out of order.➤ Know that 4x10 is the same as 10x4 etc.➤ Answer any calculation involving ÷10, out of order.	<ul style="list-style-type: none">• Chanting number patterns as a group together before moving on to formally chant the 2, 5 and 10 times tables.• Individual questions related to the 2, 5 and 10 times tables, out of order, eg, what is 3x5; what is 6x5, etc.• Working on inverses, eg, how many 2s in 12?; how many 5s in 25.• Work at increasing the speed with which pupils respond to the times tables.• Emphasise the difference between odd and even numbers.	<p>Continue these sequences:</p> <p>6....8....10....12.... <input type="text"/> <input type="text"/> <input type="text"/></p> <p>72...67...62...57... <input type="text"/> ... <input type="text"/> ... <input type="text"/></p> <p>93....83....73.... <input type="text"/> <input type="text"/> <input type="text"/></p> <p>Complete the following:</p> <table><tr><td>10 x 5 =</td><td>24 ÷ 2 =</td></tr><tr><td>3 x 10 =</td><td>45 ÷ 5 =</td></tr><tr><td>7 x 5 =</td><td>30 ÷ 10 =</td></tr><tr><td>8 x 10 =</td><td>60 ÷ 5 =</td></tr><tr><td>9 x 5 =</td><td>80 ÷ 10 =</td></tr></table> <p>How rapidly can you chant your tables?</p> <p>With a partner chant the 2x tables up to 12 x 2 = 24 as rapidly as you can whilst your partner times you.</p> <p>Now swap places with your partner.</p> <p>Now do the same with the x5 and x10 tables.</p> <p>Circle all the odd numbers below:</p> <p>34 57 76 83 91 90 61 77 126 123</p>	10 x 5 =	24 ÷ 2 =	3 x 10 =	45 ÷ 5 =	7 x 5 =	30 ÷ 10 =	8 x 10 =	60 ÷ 5 =	9 x 5 =	80 ÷ 10 =
10 x 5 =	24 ÷ 2 =											
3 x 10 =	45 ÷ 5 =											
7 x 5 =	30 ÷ 10 =											
8 x 10 =	60 ÷ 5 =											
9 x 5 =	80 ÷ 10 =											

Autumn 2: Week 1: Mastering this Objective - Deeper Understanding

Multiplication & Division : Recall and use multiplication and division facts for the 2, 5 and 10 tables, including recognising odd and even numbers.

Teaching Sequence

- Count in 2s; forward and backward.
- Recite the x2 table up to x12, without error.
- Answer any calculation involving x2, out of order.
- Know that 2×4 is the same as 4×2 etc.
- Answer any calculation involving $\div 2$, out of order.
- Count in 5s; forward and backward.
- Recite the x5 table up to x12, without error.
- Answer any calculation involving x5, out of order.
- Know that $x4$ is the same as 4×5 etc.
- Answer any calculation involving $\div 5$, out of order.
- Count in 10s; forward and backward.
- Recite the x10 table up to x12, without error.
- Answer any calculation involving x10, out of order.
- Know that 4×10 is the same as 10×4 etc.
- Answer any calculation involving $\div 10$, out of order.

If pupils have mastered this objective they will be able to complete these activities independently:

Christmas Party

The school has a Christmas party. Everyone has to pay 5p to go to the party. How much money could have been collected?
Tick all possible answers.

75p	82p	58p	90p
-----	-----	-----	-----

Which person has most sweets?

Tarra has 5 packets of sweets with 10 in each one.
Hamid has 3 packets with 20 in each.
Lucy has 10 packets with 4 in each.

has most sweets.



Paint Shop

At a paint shop there are 3 different sizes of paint pots.

A big pot costs 20p each, a medium size pot costs 15p each and a small pot costs 10p each.

If I buy 2 big pots, 5 medium size pots and 10 small pots then how much money will I spend?

Sweets come in bags of 5.

Sam wants to buy 25 sweets altogether. How many bags does he need to buy?



What if he wanted to buy 35?

What would happen if he wanted to buy 23?

Autumn 2: Week 1: Working at greater depth

Multiplication & Division : Recall and use multiplication and division facts for the 2, 5 and 10 tables, including recognising odd and even numbers.

Teaching Sequence	Activities for pupils working at greater depth:	
<ul style="list-style-type: none"> ➤ Count in 2s; forward and backward. ➤ Recite the x2 table up to x12, without error. ➤ Answer any calculation involving x2, out of order. ➤ Know that 2x4 is the same as 4x2 etc. ➤ Answer any calculation involving $\div 2$, out of order. ➤ Count in 5s; forward and backward. ➤ Recite the x5 table up to x12, without error. ➤ Answer any calculation involving x5, out of order. ➤ Know that x4 is the same as 4x5 etc. ➤ Answer any calculation involving $\div 5$, out of order. ➤ Count in 10s; forward and backward. ➤ Recite the x10 table up to x12, without error. ➤ Answer any calculation involving x10, out of order. ➤ Know that 4x10 is the same as 10x4 etc. ➤ Answer any calculation involving $\div 10$, out of order. 	<p>Five friends want to buy some stickers. Each sheet of stickers has 20 stickers. How many sheets will they need to buy if each friend has at least 10 stickers each?</p> <p>How many sheets will they need to buy if each friend has at least 25 stickers each?</p>	<p>Together Hamid and Selma have £24. Hamid has twice as much as Selma.</p> <p>How much money do they each have?</p> <p>Hamid _____ Selma _____</p> <p>Together Florry and Handel have £60. Handel has five times as much as Florry.</p> <p>How much money does each have?</p> <p>Handel _____ Florry _____</p>
	<p>Coins in purse</p> <p>Ariana has 24p in her purse. All the coins are either 2p or 1p. There has to be at least one 2p and one 1p coins. What is the largest amount of coins she could have?</p> <p>Daniel has 35p in his purse. All the coins are made up of 5p or 10p coins. What is the largest and smallest amount of coins he could have?</p>	<p>Sharing Sweets</p> <p>5 children share their sweets. When they have shared them all out they are joined by another friend. Each of the five children give one of their sweets to their new friend. All 6 children now have the same number of sweets. How many sweets could there have been in the first place?</p>

Autumn 2: Week 1: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Multiplication & Division : Recall and use multiplication and division facts for the 2, 5 and 10 tables, including recognising odd and even numbers.

Me

My
Teacher

Can you answer rapidly any calculation involving the 5x table out of order?

Can you recite the 5x table rapidly, up to x12, without error?

Can you answer rapidly any calculation involving the 10x table out of order?

Do you recognise that $\div 2$ is halving?

Do you recognise that $\times 2$ is doubling?

Can you recite the 10x table rapidly, up to x12, without error?

Do you know the inverse rule; i.e. that 2×4 is the same as 4×2 ?

Can you answer rapidly any calculation involving the 2x table out of order?

Can you recite the 2x table rapidly, up to x12, without error?

Year 2: Autumn 2

Week 2: Statistics

Interpret and construct:

- pictograms
- tally charts
- block diagrams
- simple tables

Autumn 2: Week 2: Pre-Learning Task

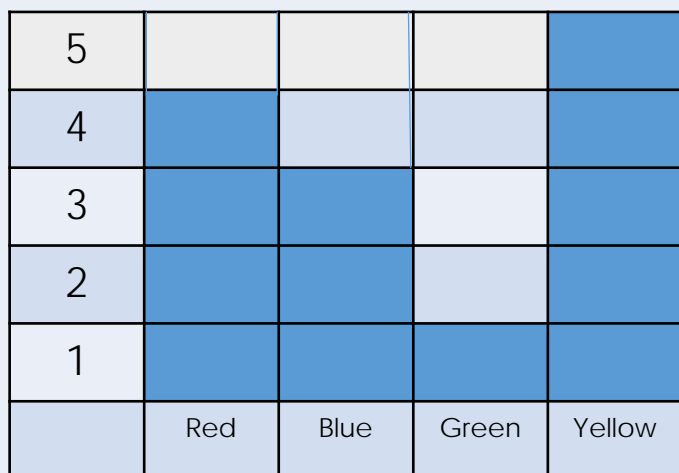
The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

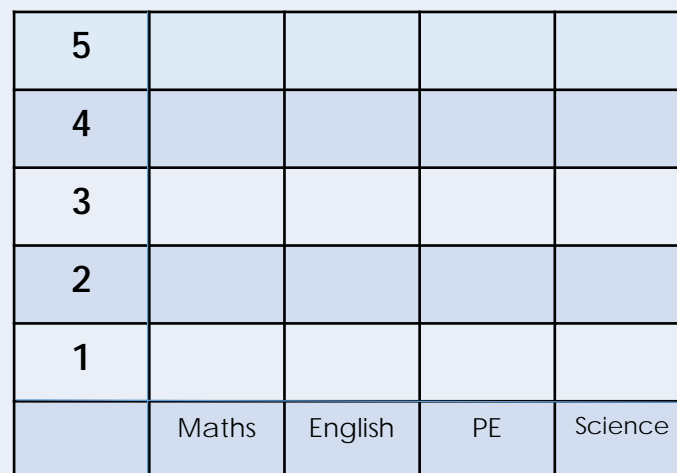
Autumn 2 Week 2

Objective
Statistics

Interpret and construct: pictograms; tally charts; block diagrams and simple tables
















Look at the block graph above. We asked a group of children which was their favourite colour.
Which colour was most popular?
Which colour was least popular?
Add your favourite colour to the block graph.



We asked children which was their favourite subject.
4 said maths; 3 said English; 5 said PE and 3 said science.
Put this information onto the block graph above.

Autumn 2: Week 2: Practice and Consolidation

Statistics : Interpret and construct: pictograms; tally charts; block diagrams and simple tables

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:								
<ul style="list-style-type: none">➤ Read information contained within a simple pictogram➤ Read information contained within a simple tally chart➤ Read information contained within a block diagram➤ Read information contained within a simple table➤ Construct a simple table to show information collected (total less than 20)➤ Construct a pictogram to show information collected (total less than 20)➤ Construct a tally chart to show information collected (total less than 20)➤ Construct a block diagram to show information collected (total less than 20)	<ul style="list-style-type: none">• Introduce the children to the concept of recording using a tally.• Provide them with a task of recording the number of various items within the classroom (up to 10 initially and then up to 20) that they can record using a tally system.• Create a large block graph together, emphasising axes and how to record accurately. Use an example of the children’s preference, eg, favourite colour, football team, etc.• Construct a tally chart to represent all numbers up to 20. Display on the maths working wall.	<p>If children could choose between vanilla; strawberry or chocolate ice cream, which would they choose? Make a tally of your friends’ preference.</p> <p>Hamed made a tally of the number of cars he saw on the road outside the school. In the first hour he recorded: </p> <p>In the second hour he recorded: </p> <p>How many cars did Hamed see in the first hour? </p> <p>How many cars did Hamed see in the second hour? </p> <p>Three children recorded the goals they had scored in January on a chart. How many did they each score?</p> <table><tr><th></th><th>Goals scored</th></tr><tr><td>James</td><td></td></tr><tr><td>Helen</td><td></td></tr><tr><td>Toby</td><td></td></tr></table>		Goals scored	James		Helen		Toby	
	Goals scored									
James										
Helen										
Toby										

Autumn 2: Week 2: Mastering this Objective - Deeper Understanding

Statistics : Interpret and construct: pictograms; tally charts; block diagrams and simple tables

Teaching Sequence

- Read information contained within a simple pictogram
- Read information contained within a simple tally chart
- Read information contained within a block diagram
- Read information contained within a simple table
- Construct a simple table to show information collected (total less than 20)
- Construct a pictogram to show information collected (total less than 20)
- Construct a tally chart to show information collected (total less than 20)
- Construct a block diagram to show information collected (total less than 20)

If pupils have mastered this objective they will be able to complete these activities independently:

In a cinema there were 10 adults; 5 boys and 7 girls.
Make up a tally chart to record how many adults, boys and girls were in the cinema.

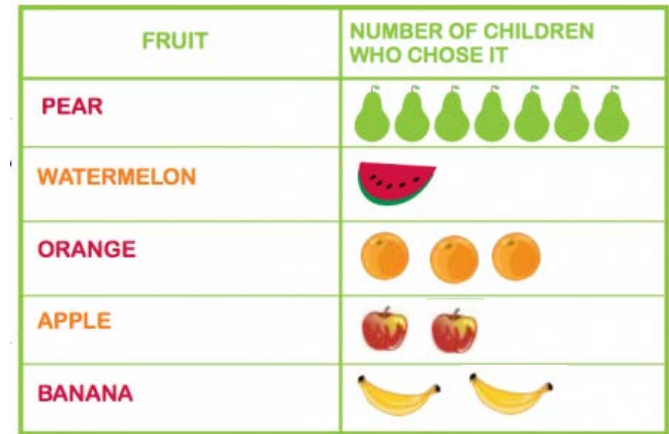
Now, present this information on a pictogram.

If 4 more boys and 5 more girls came into the cinema, make up a block graph to show how many adults, boys and girls were in the cinema.

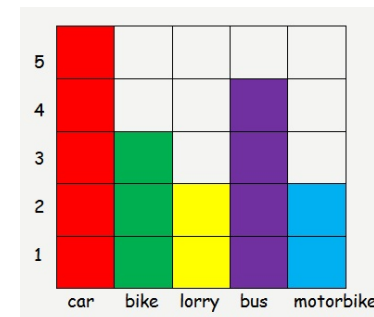
Throw 2 dice 20 times and make a tally of the sum of the throws.

2
3
4
5
6
7
8
9
10
11
12

Look at the information about children's favourite fruit on the pictogram below.



Convert this pictogram into a block graph. Label it carefully.



Popular rides

How many people were asked about their most popular ride?
Which vehicle was the second most popular?
Which was least popular?

Autumn 2: Week 2: Working at greater depth

Statistics : Interpret and construct: pictograms; tally charts; block diagrams and simple tables

Teaching Sequence

Activities for pupils working at greater depth:

- Read information contained within a simple pictogram
- Read information contained within a simple tally chart
- Read information contained within a block diagram
- Read information contained within a simple table
- Construct a simple table to show information collected (total less than 20)
- Construct a pictogram to show information collected (total less than 20)
- Construct a tally chart to show information collected (total less than 20)
- Construct a block diagram to show information collected (total less than 20)

Favourites

Collect information from 20 children in your class about their favourite day of the week. Create a block graph to show the results.

Collect information from 20 girls about their favourite colour and then from 20 boys about their favourite colour. Create block graphs of the results. What do you notice?

Throw 2 dice 20 times and make a tally of the difference between the numbers for each throw.

0

1

2

3

4

5

Look at the chart below about children's favourite food.

	Chips	Burger	Pizza	Salad
Year 2	5	3	10	2
Year 3	4	6	6	4
Year 4	10	3	7	0
Year 5	5	8	6	1
Year 6	4	3	12	1

Make up as many questions for your friends as you can think of.

Car park

With a teacher, look at the car park in school.










Make a tally of the colours of the cars. Use the information to create a block graph to show the colours of the cars.

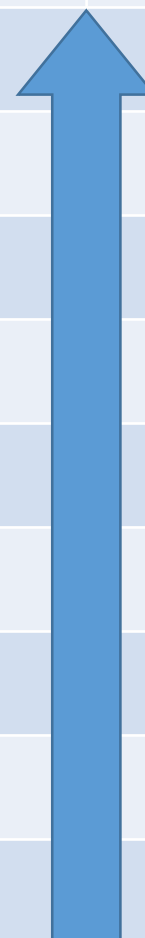
Can you think of another way of recording the information?

Now make up some questions about the cars on the car park to ask your friends.

Autumn 2: Week 2: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Objective: Interpret and construct: pictograms; tally charts; block diagrams and simple tables Statistics		Me	My Teacher
	Can you read information contained within a pictogram?		
	Can you read information contained within a simple tally chart?		
	Can you read information contained within a block diagram?		
	Can you read information contained within a simple table?		
	Can you construct a pictogram to show information collected (amounts of less than 20)?		
	Construct a tally chart to show information collected (amounts of less than 20)?		
	Construct a tally chart to show information collected (amounts of less than 20)?		
	Construct a block diagram to show information collected (amounts of less than 20)?		
	Construct a simple table to show information collected (amounts of less than 20)?		



Year 2: Autumn 2

Week 3: Fractions

Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ of a length, shape, set of objects, or quantity.

Autumn 2: Week 3: Pre-Learning Task

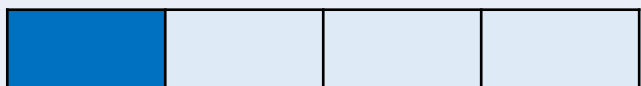
The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name _____

Autumn 2 Week 3

Objective:
Fractions

Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ of a length, shape, set of objects, or quantity.



What fraction of the block above is shaded?



What fraction of the block above is shaded?

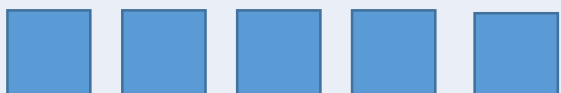
What is $\frac{1}{2}$ of the following numbers:

12 40 36 18 30

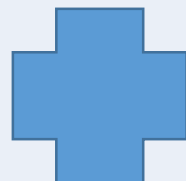


What is $\frac{1}{4}$ of the following numbers:

12 40 36 16 32



Shade in a fraction of each shape as shown.



$\frac{1}{4}$



$\frac{1}{2}$



$\frac{3}{4}$

What is $\frac{3}{4}$ of the following numbers:

12 40 36 16 32

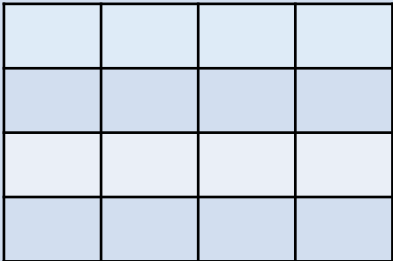
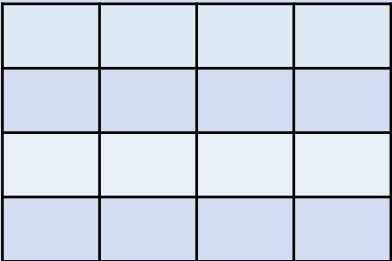





Shade in $\frac{1}{3}$ of the following block.



Autumn 2: Week 3: Practice and Consolidation

Fractions: Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ of a length, shape, set of objects, or quantity.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Know what $\frac{1}{2}$ means and use and write the term 'half' and $\frac{1}{2}$ interchangeably ➤ Know what $\frac{1}{4}$ means and use and write the term 'quarter and $\frac{1}{4}$ interchangeably ➤ Know what $\frac{3}{4}$ means and use and write the term 'three-quarters' and $\frac{3}{4}$ interchangeably ➤ Know what $\frac{1}{3}$ means and use and write the term 'third' and '$\frac{1}{3}$' interchangeably ➤ Find $\frac{1}{4}$ of a shape or length ➤ Find $\frac{1}{3}$ of a shape or length ➤ Find $\frac{2}{4}$ or $\frac{1}{2}$ of a shape or length ➤ Find $\frac{3}{4}$ of a shape or length ➤ Calculate $\frac{1}{3}$ of a number that is divisible by 3 ➤ Calculate $\frac{1}{4}$ of a number that is divisible by 4 ➤ Calculate $\frac{1}{2}$ of a given number that is divisible by 2 ➤ Calculate $\frac{3}{4}$ of a number that is divisible by 4 	<ul style="list-style-type: none"> • Focus on the symbols $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ and their respective words: half; quarter; three-quarters, etc. • Play snap games to help rapid recognition. • Show half and then quarter by taking a shape and folding it once and then again. Ensure pupils understand that one of the areas represents a half or a quarter, etc. • Physically set out a number of items and then get pupils to show a half or a quarter of the items. • Do the same with three-quarters and then one third before moving on to two-thirds. • Folding a shape into 4 show pupils how one half is the same as $\frac{2}{4}$th. 	<div> <p>Colour in $\frac{1}{4}$ of this shape.</p>  </div> <div> <p>Now $\frac{3}{4}$ of this shape.</p>  </div> <p>What is $\frac{1}{4}$ and $\frac{3}{4}$ of these numbers?:</p> <p>16 24 40 80</p> <p>What is $\frac{1}{3}$ and $\frac{2}{3}$ of these numbers?:</p> <p>15 24 18 30 60</p> <div> <p>What is $\frac{1}{4}$ of £12?</p>  </div> <div> <p>What is $\frac{1}{2}$ of 100g?</p>  </div> <div> <p>What is $\frac{3}{4}$ of 100m?</p>  </div>

Autumn 2: Week 3: Mastering this Objective - Deeper Understanding

Fractions: Recognise, find, name and write fractions $1/3$, $1/4$, $2/4$, $1/2$, $3/4$ of a length, shape, set of objects, or quantity.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:	
<ul style="list-style-type: none"> ➤ Know what $1/2$ means and use and write the term 'half' and $1/2$ interchangeably ➤ Know what $1/4$ means and use and write the term 'quarter' and $1/4$ interchangeably ➤ Know what $3/4$ means and use and write the term 'three-quarters' and $3/4$ interchangeably ➤ Know what $1/3$ means and use and write the term 'third' and '$1/3$' interchangeably ➤ Find $1/4$ of a shape or length ➤ Find $1/3$ of a shape or length ➤ Find $2/4$ or $1/2$ of a shape or length ➤ Find $3/4$ of a shape or length ➤ Calculate $1/3$ of a number that is divisible by 3 ➤ Calculate $1/4$ of a number that is divisible by 4 ➤ Calculate $1/2$ of a given number that is divisible by 2 ➤ Calculate $3/4$ of a number that is divisible by 4 	Write the next two lines in this sequence:	Spot the mistake in these sequences:
	$\begin{aligned} 1/4 \text{ of } 8 &= 2 \\ 1/4 \text{ of } 16 &= 4 \\ 1/4 \text{ of } 32 &= 8 \end{aligned}$	$7, 7\frac{1}{2}, 8, 8\frac{1}{2}, 9\frac{1}{2}, 10$ $8, 8\frac{1}{4}, 8\frac{1}{2}, 8\frac{3}{4}, 9, 9\frac{1}{2}, 9\frac{3}{4}, 10$
	<p>Yes or No</p> <p>Half of 30cms is 60cm. Yes or No</p> <p>$3/4$ of 16cms is 12cm. Yes or No</p> <p>$1/3$ of 12 is 6 Yes or No</p>	<p>If $1/3$ of 9 is 3 then $9 \div 3$ is 3</p> <p>Write the following as a division calculation:</p> <p>$1/4$ of 16 = 4</p> <p>$1/2$ of 20 = 10</p>
	Put these fractions in the right order as numbers, smallest first:	Harry bought a bag of 24 sweets. Harry ate 8 of them. What fraction of the bag of sweets did Harry eat?
	one third; one half, one quarter; three-quarters; two-thirds	

Autumn 2: Week 3: Working at greater depth

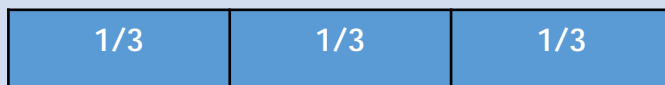
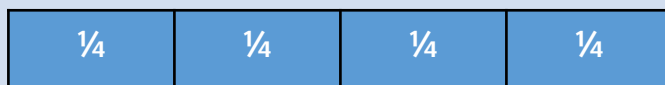
Fractions: Recognise, find, name and write fractions $\frac{1}{3}$, $\frac{1}{4}$, $\frac{2}{4}$, $\frac{1}{2}$, $\frac{3}{4}$ of a length, shape, set of objects, or quantity.

Teaching Sequence

- Know what $\frac{1}{2}$ means and use and write the term 'half' and $\frac{1}{2}$ interchangeably
- Know what $\frac{1}{4}$ means and use and write the term 'quarter' and $\frac{1}{4}$ interchangeably
- Know what $\frac{3}{4}$ means and use and write the term 'three-quarters' and $\frac{3}{4}$ interchangeably
- Know what $\frac{1}{3}$ means and use and write the term 'third' and ' $\frac{1}{3}$ ' interchangeably
- Find $\frac{1}{4}$ of a shape or length
- Find $\frac{1}{3}$ of a shape or length
- Find $\frac{2}{4}$ or $\frac{1}{2}$ of a shape or length
- Find $\frac{3}{4}$ of a shape or length
- Calculate $\frac{1}{3}$ of a number that is divisible by 3
- Calculate $\frac{1}{4}$ of a number that is divisible by 4
- Calculate $\frac{1}{2}$ of a given number that is divisible by 2
- Calculate $\frac{3}{4}$ of a number that is divisible by 4

Activities for pupils working at greater depth:

Look at the 2 bars below and then complete the number sentences.



is less than

is greater than

If $\frac{3}{4}$ of a number is 15, what is $\frac{1}{4}$ of the original number?

If $\frac{2}{3}$ of a number is 20, what is $\frac{1}{3}$ of the original number?

How many sweets

John and Ahmed shared a packet of fruit spangles.

There were 5 colours altogether.

Half of all the sweets were red.

5 sweets were yellow, 2 were black, 3 were green and 6 were purple.

How many sweets were there altogether?

Breakfast

A café had different cereals in small packets.

A quarter of all the cereals were Corn-Flakes.

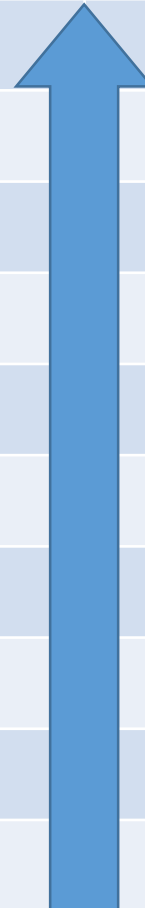
Six packets were Weetabix, 5 were Rice Krispies, 4 were honey snacks and 9 were Coco-Pops.

How many packets of cereals were there altogether?

Autumn 2: Week 3: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Objective: Fractions		Me	My Teacher
	Can you calculate $\frac{2}{3}$ of a given number up to 100?		
	Can you calculate $\frac{1}{3}$ of a given number up to 100?		
	Can you calculate $\frac{3}{4}$ of a given number up to 100?		
	Can you calculate $\frac{1}{4}$ of a given number up to 100?		
	Can you calculate $\frac{1}{2}$ of a given number up to 100?		
	Do you know that the symbol $\frac{2}{3}$ stands for two-thirds of the value of a number or object?		
	Do you know that the symbol $\frac{3}{4}$ stands for three-quarters of the value of a number or object?		
	Do you know that the symbol $\frac{1}{3}$ stands for a third of the value of a number or object?		
	Do you know that the symbol $\frac{1}{4}$ stands for a quarter of the value of a number or object?		
	Do you know that the symbol $\frac{1}{2}$ stands for half the value of a number or object?		



Year 2: Autumn 2

Week 4: Measures - Money

Recognise & use symbols for pounds (£) and pence (p); combine amounts to make a particular value.

Autumn 2: Week 4: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Autumn 2 Week 4

Objective:
Measures

Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.

How many 1p coins are there in £1?

How many 50p coins do I need to pay for an item that costs £2.50?

How many 10p coins are there in £1?

How many 20p coins do I need to pay for an item that costs £1.40?

How many 20p coins are there in £1?





Show 2 ways of paying £3.50.

Show one way of paying £1.50

If I pay for an item costing £3.50 with a £5 note, show two different ways of giving change.

Autumn 2: Week 4: Practice and Consolidation

Measures: Money - Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Use the symbols £ and p to represent amounts of money ➤ Make given amounts up to £5 using coin combinations ➤ Find different ways of making same amount 	<ul style="list-style-type: none"> • Remind pupils of the fact that 100p make £1. • Show pupils £1 and £2 coins and remind them of their value. • Set up a shop with items costing various amounts of no more than £5. Let pupils buy items and pay for them and receive the correct change. • Change £1, £2 coins and a £5 note for other coins, noting that their value is the same. • Have a variety of cards with different amounts. Play a game where the first to bring the correct amount wins the card. 	<p>How many 20p coins make £1?</p> <p>How many 50p coins make £5?</p> <p>Look at the prices of the following items.</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>70p</p> </div> <div style="text-align: center;">  <p>£1.50p</p> </div> <div style="text-align: center;">  <p>50p</p> </div> <div style="text-align: center;">  <p>£1.90p</p> </div> </div> <p>Show a way of paying for the teddy and the book.</p> <p>Show a way of paying for the ball, teddy and car.</p> <p>How much change will I get from £5 if I buy all 4 items?</p> <p>Find 5 different ways of paying £1.25p Record your answers using coins to draw around.</p> <p>Find 3 different ways of giving change if I use a £5 note to pay for an item that is £3.30. Record your answers using coins to draw around.</p>


Autumn 2: Week 4: Mastering this Objective - Deeper Understanding

Measures: Money - Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:	
<ul style="list-style-type: none"> ➤ Use the symbols £ and p to represent amounts of money ➤ Make given amounts up to £5 using coin combinations ➤ Find different ways of making same amount 	<p>Show 2 ways to make 56p using only 20p, 5p and 1p coins.</p> <p>Show 2 ways to make 68p using only 20p, 10p and 2p coins.</p> <p>Show 2 ways to make 89p using only 20p, 10p 2p, and 1p coins.</p>	<p>Show 3 ways to make £1.50p using only 50p, 20p, 10p and 5p coins.</p> <p>Show 3 ways to make £7.50p using only £5, £1, 50p, 20p, 10p and 5p coins or notes.</p> <p>Show 3 ways to make £10.50p using only £5, £1, 50p, 20p, 10p and 5p coins or notes.</p>
	<p>Terry uses a 50p coin to buy a toy animal.</p> <p>He receives the following change.</p> <div data-bbox="425 1069 593 1233"> </div> <div data-bbox="637 1069 805 1233"> </div> <div data-bbox="863 1069 1031 1233"> </div> <p>How much did the toy cost?</p>	<p>Harry uses a £1 coin to buy 2 sheets of stickers.</p> <p>This was the change he was given:</p> <div data-bbox="1141 1019 1309 1185"> </div> <div data-bbox="1369 1019 1537 1185"> </div> <div data-bbox="1599 1019 1767 1185"> </div> <p>How much does each sheet of stickers cost?</p>

Autumn 2: Week 4: Working at greater depth

Measures: Money - Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.

Teaching Sequence	Activities for pupils working at greater depth:	
<ul style="list-style-type: none"> ➤ Use the symbols £ and p to represent amounts of money ➤ Make given amounts up to £5 using coin combinations ➤ Find different ways of making same amount 	<p>A portion of fish and chips costs exactly £1.50.</p>  <p>The fish cost 50p more than the chips.</p> <p>How much did the fish cost?</p>	<p>Gabby pays for a bar of chocolate which costs 45p with a £1 coin.</p> <p>Show three ways which she could have been given her change.</p> <p>Sonny pays for a burger which costs 95p with a £2 coin.</p> <p>Show three ways he could have been given his change.</p>
	<p>Cybel says she can make 85p with 4 coins. Is she correct?</p> <p>Harry says he can make £1.67p with 4 coins. Is he correct?</p> <p>Hamish says he can make £2.35p with 4 coins. Is he correct?</p>	<p>Pay with the fewest coins</p> <p>Show a way of paying £3.45p using as few coins as you can.</p> <p>Show a way of paying £5.15p using as few coins or notes as you can.</p> <p>Show a way of paying £4.48p using as few coins as you can.</p>

Autumn 2: Week 4: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Measures: Money - Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value.

Me

My
Teacher

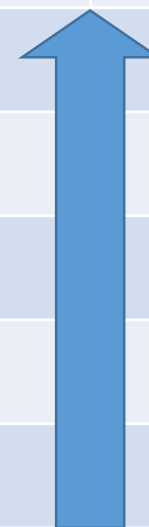
Can you work out how much change you will get from any item if you pay with a £5 note?

Can you find more than one way of paying for any amount up to £5?

Can you pay for an item up to £5 and present the correct amount of money?

Do you know how many 10p; 20p and 50p coins you need to make £1?

Can you recognise all coins and notes up to £10?



Year 2: Autumn 2

Week 5: Measures - Time

Tell and write the time to quarter past/to the hour and draw the hands on a clock face to show these times.

Autumn 2: Week 5: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

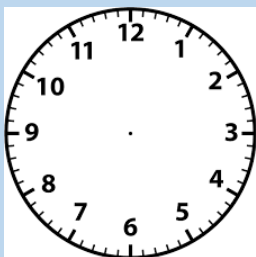
Name

Autumn 2 Week 5

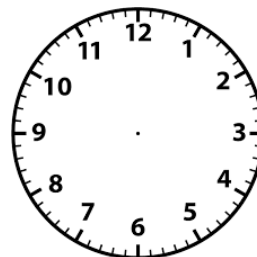
Objective Measures

Time: Tell and write the time to quarter past/to the hour and draw the hands on a clock face to show these times.

What's the time, Mr Wolf?



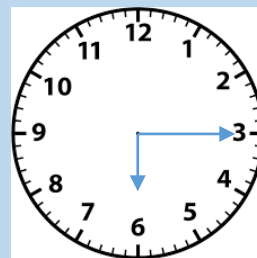
The time is quarter past four.
Draw the hands on the clock face.



The time is quarter to eight.
Draw the hands on the clock face.



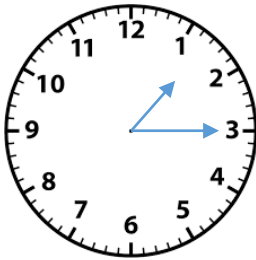
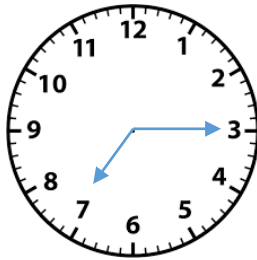

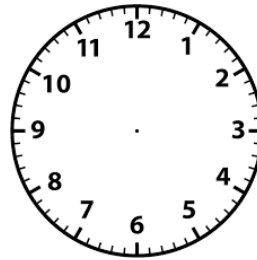
What is the time?



What is the time?

Autumn 2: Week 5: Practice and Consolidation

Measures: Time: Tell and write the time to quarter past/to the hour and draw the hands on a clock face to show these times.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Tell quarter past times. ➤ Tell quarter to times. ➤ Draw hands on clock to show quarter past times. ➤ Draw hands on clock to show quarter to times. 	<ul style="list-style-type: none"> • Remind pupils of the position of the hands of the clock when it is o'clock or half past the hour. • Use a clock face to show where the hands are when it is quarter past the hour. • Use a clock face to show where the hands of the clock are when it is quarter to the hour. • Set up games for groups of pupils to play 'What's the time, Mr Wolf?' where one person has to set up a time on a clock face that is either quarter past or quarter to the hour and the others move towards him or her if they say the correct time. 	<p>What's the time?</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <div style="display: flex; justify-content: space-around; align-items: center;"> <p>Put quarter to four on this clock face.</p> <p>Put quarter to nine on this clock face.</p> </div> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p>If it is quarter past the hour, how many minutes will have past since it was o'clock?</p> <div style="border: 1px solid black; height: 40px; width: 100px; margin-left: auto;"></div>

Autumn 2: Week 5: Mastering this Objective - Deeper Understanding

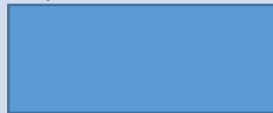
Measures: Time: Tell and write the time to quarter past/to the hour and draw the hands on a clock face to show these times.

Teaching Sequence

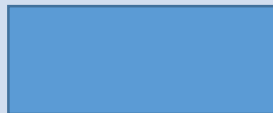
- Tell quarter past times.
- Tell quarter to times.
- Draw hands on clock to show quarter past times.
- Draw hands on clock to show quarter to times.

If pupils have mastered this objective they will be able to complete these activities independently:

If the big hand is at 1, how many minutes will have passed when it has moved to 4?

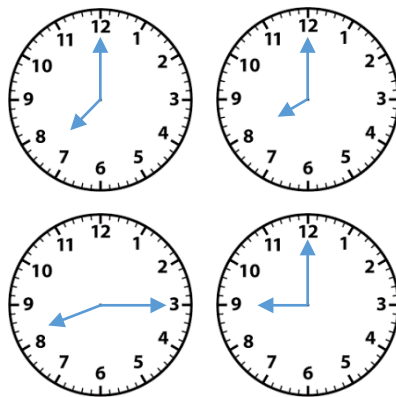


If the big hand is at 6, how many minutes have passed since it was at 3?



Think of typical things that happen at this time of day.

- Quarter past one in the afternoon
- Quarter to six in the evening
- Quarter past eight in the morning



Which two clock faces show a time between quarter past seven and quarter to nine?

Look at the times on the left and the activities on the right. Link them together.

Quarter past twelve at night

Quarter to five in the evening

Quarter past twelve midday

Quarter to nine in the morning

Arrive at School

Have lunch

Fast asleep

Watch television at home

Autumn 2: Week 5: Working at greater depth

Measures: Time: Tell and write the time to quarter past/to the hour and draw the hands on a clock face to show these times.

Teaching Sequence

- Tell quarter past times.
- Tell quarter to times.
- Draw hands on clock to show quarter past times.
- Draw hands on clock to show quarter to times.

Activities for pupils working at greater depth:

A film finishes 2 hours after it starts. It finishes at 5.15. What time did it start?



Start time

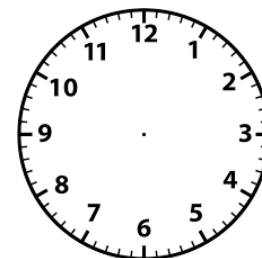


Finish time

The time is 12.45. Bryn says there are 2 hours to wait before his favourite TV programme starts.

What time does his favourite programme start?

Show the time on the clock face.



True or False?

It is two o'clock and it will be quarter past three in 1 hour and fifteen minutes.

True or False?

It is four o'clock and it was quarter past one an hour and fifteen minutes ago.

True or False?

It is 11 o'clock and it will be quarter past one in 2 hours and fifteen minutes time.

True or False?





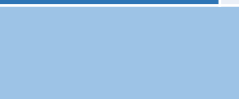

How many minutes are there in one hour and fifteen minutes?

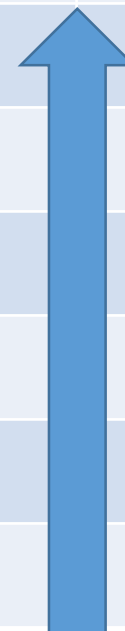
How many minutes are there in 2 hours and fifteen minutes?

How many minutes are there in one hour and three-quarters?

Autumn 2: Week 5: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Measures: Time: Tell and write the time to quarter past/to the hour and draw the hands on a clock face to show these times.		Me	My Teacher
	Can you draw any quarter to the hour time on a clock face?		
	Can you tell the time to quarter to the hour?		
	Can you draw any quarter past the hour time on a clock face?		
	Can you tell the time to quarter past the hour?		
	Can you tell the time to half past the hour?		
	Can you tell the time to o'clock?		



Year 2: Autumn 2

Week 6: Consolidate and Assess

- Start this week by using the warm ups outlined on the next page so as to ensure pupils are fluent and secure with their basic skills.
- Use a simple assessment process to check on pupils' confidence and consistency in using the learning outlined in the Autumn term.
- Analyse the results and use information to help focus the pre-teaching sessions, as needed, for the following term.

Year 2: Autumn 2: Week 6

The focus of the consolidation should be the following aspects:

- Count on/back in steps of 2s and 5s to 100, 3s to 30 from 0; and in 10s to 100 and beyond from 0 and any given number
 - Identify even and odd numbers to 20
 - Read and write all numbers to 100 and beyond accurately in numerals and write all numbers in words to 30 and beyond
 - Order a set of numbers (at least 3) to 50 in decreasing value
 - Recall fluently all addition number bonds to 10 and beyond and know all the subtraction number bonds to 10
 - Add/subtract 2-digit and 1-digit numbers to 20 and beyond
 - Find 1/10 more/less than a given number up to 30
 - Recite the 2 times tables and answer any calculation involving the 2 times table in any order
 - Recite the 10 times tables
 - Double any number up to 30
 - Halve any even 2-digit number up to 60
-
- Although practise and consolidation should be on-going through each half term, during Week 6 there should be greater opportunity taken to check pupils' learning.
 - Summative and Formative assessment procedures should help teachers gain a clear picture as to which pupils are at different stages, including mastery and greater depth.

YEAR 2 : SPRING 1: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
3 Number & Place Value	4 Measures Capacity & Volume	2 Geometry 2D and 3D shapes	5 Measures Money	2 Multiplication & Division	3 Multiplication & Division
Compare and order numbers from 0 up to 100; use < > and = signs.	Compare & order volume/capacity & record the results using >, < and =.	Identify 2D shapes on the surface of 3D shapes.	Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.	Calculate the mathematical statements for multiplication and division within the multiplication tables and write them using the \times \div = signs.	Show that multiplication of two numbers can be one in any order (commutative) and division of one number by another cannot.
<ul style="list-style-type: none"> ➤ Order numbers 0 – 20 from smallest to largest ➤ Order numbers 0 – 20 from largest to smallest ➤ Order numbers 0 – 50 from smallest to largest ➤ Order numbers 0 – 50 from largest to smallest ➤ Order numbers 0 – 100 from smallest to largest ➤ Order numbers 0 – 100 from largest to smallest ➤ Know what = sign stands for and demonstrate correct use ➤ Know what < signs stands for and demonstrate correct use ➤ Know what > signs stands for and demonstrate correct use ➤ Use the = sign in simple calculations, e.g. $15+5=20$ ➤ Use the = sign to demonstrate equal value, e.g. $15+5 = 2+18$ ➤ Use the < sign between two numbers accurately ➤ Use the > sign between two numbers accurately 	<ul style="list-style-type: none"> ➤ Record information using < > = ➤ Record amounts of liquid using ml and l ➤ Use the symbol < > = to compare amounts of liquid 	<ul style="list-style-type: none"> ➤ Describe 3D shapes according to their 2D make up ➤ Begin to explore the nets of 3D shapes according to 2D shapes contained within them 	<ul style="list-style-type: none"> ➤ Calculate change from £1 ➤ Add and subtract monetary values and find change from £1 or £2 	<ul style="list-style-type: none"> ➤ Understand the function of the \times sign. ➤ Understand the function of the \div sign. ➤ Understand the function of the = sign. ➤ Use the $\times \div$ = signs to write calculations using known table facts. 	<ul style="list-style-type: none"> ➤ Recognise commutativity in multiplication, e.g. $8 \times 2 = 2 \times 8$. ➤ Recognise that commutativity cannot be applied to division.

Year 2: Spring 1

Week 1: Number and Place Value

Compare and order numbers from 0 up to 100; use $<$ $>$ and $=$ signs.

Spring 1: Week 1: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name _____ Spring 1 Week 1

Objective
Number and Place Value

Compare and order numbers from 0 up to 100; use < > and = signs.

Which sign should be used (< > or =)?

Complete these:

8

4 + 4

16

>

9

7

23

<

17

18

<

19

34

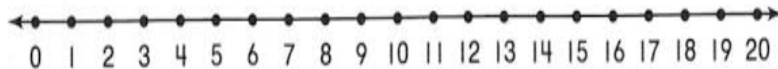
67

>

56

Spring 1: Week 1: Practice and Consolidation

Number and Place Value: Compare and order numbers from 0 up to 100; use $<$ $>$ and $=$ signs.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:																											
<ul style="list-style-type: none">➤ Order numbers 0 – 20 from smallest to largest➤ Order numbers 0 – 20 from largest to smallest➤ Order numbers 0 – 50 from smallest to largest➤ Order numbers 0 – 50 from largest to smallest➤ Order numbers 0 – 100 from smallest to largest➤ Order numbers 0 – 100 from largest to smallest➤ Know what = sign stands for and demonstrate correct use➤ Know what < signs stands for and demonstrate correct use➤ Know what > signs stands for and demonstrate correct use➤ Use the = sign in simple calculations, e.g. 15+5=20➤ Use the = sign to demonstrate equal value, e.g. 15+5 = 2+18➤ Use the < sign between two numbers accurately➤ Use the > sign between two numbers accurately	<ul style="list-style-type: none">• Ensure all pupils are familiar with the signs < > and = .• Link to previous work when these signs have been used.• Revise counting games to 20, then to 50 and then to 100.• Find rhymes, especially number rhymes, where numbers go down as well as up.• Improvise with these number games, eg, 100 green bottles with 10 or 5 accidentally falling each time.• Show how the signs work within a number sentence.	<p>Pencil and Paper Activities Examples:</p>  <p>Put the following numbers on the number line: 12; 8; 16; 1; 7; 18; 20</p> <p>Put the following numbers in order starting with the smallest number:</p> <p>35; 23; 71; 3; 56; 67; 12; 77; 90; 34</p> <p>Use the signs < > or = to complete these number sentences:</p> <table><tr><td>56</td><td><input type="text"/></td><td>67</td><td>78</td><td><input type="text"/></td><td>45</td></tr><tr><td>12</td><td><input type="text"/></td><td>45</td><td>81</td><td><input type="text"/></td><td>77</td></tr><tr><td>45</td><td><input type="text"/></td><td>41</td><td>76</td><td><input type="text"/></td><td>36 + 40</td></tr></table> <p>Complete these number sentences:</p> <table><tr><td><input type="text"/></td><td>></td><td>18</td><td><input type="text"/></td><td>></td><td>24</td><td><input type="text"/></td><td>></td><td>17</td></tr></table>	56	<input type="text"/>	67	78	<input type="text"/>	45	12	<input type="text"/>	45	81	<input type="text"/>	77	45	<input type="text"/>	41	76	<input type="text"/>	36 + 40	<input type="text"/>	>	18	<input type="text"/>	>	24	<input type="text"/>	>	17
56	<input type="text"/>	67	78	<input type="text"/>	45																								
12	<input type="text"/>	45	81	<input type="text"/>	77																								
45	<input type="text"/>	41	76	<input type="text"/>	36 + 40																								
<input type="text"/>	>	18	<input type="text"/>	>	24	<input type="text"/>	>	17																					

Spring 1: Week 1: Mastering this Objective - Deeper Understanding

Number and Place Value: Compare and order numbers from 0 up to 100; use < > and = signs.

Teaching Sequence

- Order numbers 0 – 20 from smallest to largest
- Order numbers 0 – 20 from largest to smallest
- Order numbers 0 – 50 from smallest to largest
- Order numbers 0 – 50 from largest to smallest
- Order numbers 0 – 100 from smallest to largest
- Order numbers 0 – 100 from largest to smallest
- Know what = sign stands for and demonstrate correct use
- Know what < signs stands for and demonstrate correct use
- Know what > signs stands for and demonstrate correct use
- Use the = sign in simple calculations, e.g. $15+5=20$
- Use the = sign to demonstrate equal value, e.g. $15+5 = 2+18$
- Use the < sign between two numbers accurately
- Use the > sign between two numbers accurately


If pupils have mastered this objective they will be able to complete these activities independently:


In a family there is mum (30), dad (32), great grandad (70), Uncle Tom (28), baby Ellen (1) and an older brother, Billy (7). On the chart below can you put them in order of age starting with the oldest? The first one is done for you.

Name	Age
Great Grandad	70

Use the signs < > or = to complete these number sentences:

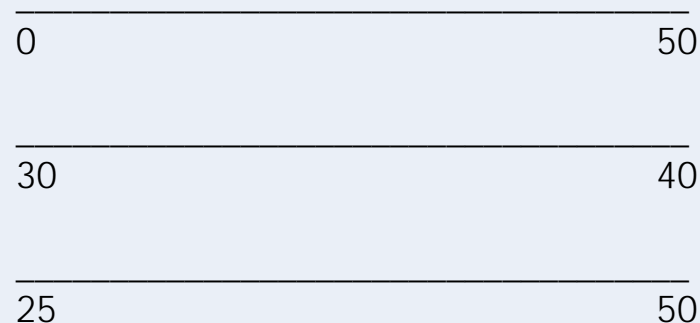
3 tens and five ones  38ones

4 tens and 5 ones  45ones

6 tens 3 ones  61ones

6 children were given a maths problem where the answer was 61. Ariana wrote 55 as her answer; George wrote 43; Jemma wrote 68; Hamid wrote 72; Harry wrote 64 and Mustafa wrote 56. Who was closest to the answer?

Place 36 on each of these number lines:



Spring 1: Week 1: Working at greater depth

Number and Place Value: Compare and order numbers from 0 up to 100; use < > and = signs.

Teaching Sequence

- Order numbers 0 – 20 from smallest to largest
- Order numbers 0 – 20 from largest to smallest
- Order numbers 0 – 50 from smallest to largest
- Order numbers 0 – 50 from largest to smallest
- Order numbers 0 – 100 from smallest to largest
- Order numbers 0 – 100 from largest to smallest
- Know what = sign stands for and demonstrate correct use
- Know what < signs stands for and demonstrate correct use
- Know what > signs stands for and demonstrate correct use
- Use the = sign in simple calculations, e.g. $15+5=20$
- Use the = sign to demonstrate equal value, e.g. $15+5 = 2+18$
- Use the < sign between two numbers accurately
- Use the > sign between two numbers accurately

Activities for pupils working at greater depth:

Create 2-digit numbers where the unit is one less than the tens.
What is the largest possible number and what is the smallest number you can create?

Largest	
Smallest	

True or False

If you count on in tens from any number the unit digit stays the same.
Explain your reasoning.

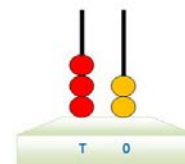
If you count on or back in fives from any number the unit digit stays the same.
Explain your reasoning.

If I count on or back in fives from any number you will always have the same two unit digits.
Explain your reasoning.

What could the number be:
It is between 31 and 40.
It is an even number.
The unit digit is less than 5.
Both the digits are different.



What could the number be:
It is more than 25 but less than 35.
It is an odd number.
The unit digit is less than 2.



Using 5 beads on an abacus, how many numbers can you make?
One has been done for you, ie, 32.

Now do the same with 6 beads; then with 8 beads before trying the same problem with 10 beads.

Spring 1: Week 1: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Number and Place Value: Compare and order numbers from 0 up to 100; use < > and = signs.

Me

My
Teacher

Can you use the > symbol between 2 numbers accurately?

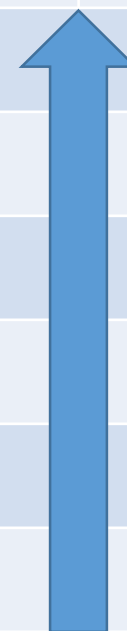
Can you use the < symbol between 2 numbers accurately?

Can you use the = sign accurately in simple calculations?

Do you know what the > symbol stands for?

Do you know what the < symbol stands for?

Do you know what the = symbol stands for?



Year 2: Spring 1

Week 2: Measures: Capacity and Volume

Compare & order volume/capacity & record the results using $>$, $<$ and $=$.

Spring 1: Week 2: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name _____

Spring 1 Week 2

**Objective Measures:
Capacity &
Volume**

Compare & order volume/capacity & record the results using $>$, $<$ and $=$.

Complete the following problems

How many ml in 1 litre?

How many ml in $\frac{1}{2}$ litre?



The jug holds 3 litres and the glass holds $\frac{1}{2}$ litre.

How many glasses will it take to fill the jug?

Name three things you buy which come in 1 litre bottles or containers.

1 _____

2 _____

3 _____

If 1 litre is 1000ml and $\frac{1}{2}$ litre is 500ml, complete the following using $>$, $<$ and $=$.

500ml

1 litre

750ml

$\frac{1}{2}$ litre

Spring 1: Week 2: Practice and Consolidation

Measures: Capacity and Volume: Compare & order volume/capacity & record the results using $>$, $<$ and $=$.

Teaching Sequence

- Record information using $<$ $>$ $=$
- Record amounts of liquid using ml and l
- Use the symbol $<$ $>$ $=$ to compare amounts of liquid

Oral and Mental Activities Examples:

- Remind pupils of last year's learning about the terminology associated with measuring liquid.
- Practically get pupils to fill containers which have $\frac{1}{2}$ litre and then see how many will be required to fill a container with 1 litre and 2 litres.
- Get pupils to make lists of liquids which we buy in the supermarkets, eg, coke, lemonade, milk, etc. Make them look at the labels and work out how much liquid each has.
- Try to get pupils to get a concept of how much a litre is.
- Gather a number of containers together and get pupils to estimate how much liquid they contain and then order them before checking their estimates.

Pencil and Paper Activities Examples:



Bottle A holds $\frac{1}{2}$ litre; Bottle B holds 1Litre and Bottle C holds 2 Litres.

How many full bottle A will it take to fill Bottle B?

How many full Bottle A will it take to fill Bottle C

Using the signs $>$, $<$ or $=$ complete the following sentences.

Bottle A

Bottle C

Bottle C

Bottle B

Bottle B

Bottle A

If there are 1000ml in each litre. Use the $>$, $<$ or $=$ complete the following sentences.

500ml

$\frac{1}{2}$ litre

200ml

$\frac{1}{4}$ litre

Spring 1: Week 2: Mastering this Objective - Deeper Understanding

Measures: Capacity and Volume: Compare & order volume/capacity & record the results using $>$, $<$ and $=$.

Teaching Sequence

- Record information using $<$ $>$ $=$
- Record amounts of liquid using ml and l
- Use the symbol $<$ $>$ $=$ to compare amounts of liquid

If pupils have mastered this objective they will be able to complete these activities independently:



Bottle A contains $\frac{1}{4}$ litre (250ml); Bottle B contains $\frac{1}{2}$ litre; Bottle C contains $\frac{3}{4}$ litre (750ml); Bottle D contains 1 litre; Bottle E contains 2 litres.

Complete the following number sentences using $>$ or $<$.

Bottle A	Bottle C	Bottle B	Bottle A
Bottle E	Bottle C	Bottle D	Bottle C
Bottle C	Bottle A	Bottle D	Bottle B



This jug contains 3 litres.

Show how much 1 litre is by shading in the jug up to 1 litre.

Use the $>$, $<$ and $=$ symbols to complete the following:

$\frac{1}{2}$ a 1 litre bottle 750ml

$\frac{1}{4}$ of a 2 litre bottle 500 ml

$\frac{1}{2}$ a 2 litre bottle Full 1 litre bottle

Spring 1: Week 2: Working at greater depth

Measures: Capacity and Volume: Compare & order volume/capacity & record the results using $>$, $<$ and $=$.

Teaching Sequence

Activities for pupils working at greater depth:

- Record information using $<$ $>$ $=$
- Record amounts of liquid using ml and l
- Use the symbol $<$ $>$ $=$ to compare amounts of liquid



Bottle A contains $\frac{1}{4}$ litre (250ml); Bottle B contains $\frac{1}{2}$ litre; Bottle C contains $\frac{3}{4}$ litre (750ml); Bottle D contains 1 litre; Bottle E contains 2 litres.

How many of Bottle A will it take to fill Bottle E?

How many of Bottle B will it take to fill Bottle D?

If I take 2 bottles from the 5 shown it will fill another bottle. Which bottles are they?

I have a $\frac{1}{2}$ litre jug; a 1 litre jug and a 2 litre jug. How can I use these jugs to:

Put exactly 7 litres into a bowl.

Put $17\frac{1}{2}$ litres into a bowl.

Put $13\frac{1}{2}$ litres into a bowl.



Collect a number of containers of different size and shape.

Working with a partner, estimate to the nearest $\frac{1}{2}$ litre how much each shape contains and then using a measuring jug, check how accurate your estimate was.

Spring 1: Week 2: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Measures: Capacity and Volume: Compare & order volume/capacity & record the results using $>$, $<$ and $=$.

Me

My
Teacher

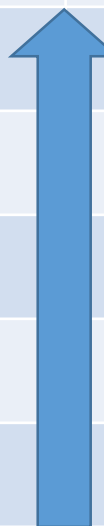
Can you fill a measuring jug to a given amount in litres or ml?

Can you use the $>$, $<$ and $=$ symbols to compare and order amounts of liquids?

Can you name a number of items we buy that are sold in litres or ml?

Do you know that 1000ml is the same as 1 litre?

Do you know that liquid is measured in litres and ml?



Year 2: Spring 1

Week 3: Geometry: Shapes

Identify 2D shapes on the surface of 3D shapes.

Spring 1: Week 3: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

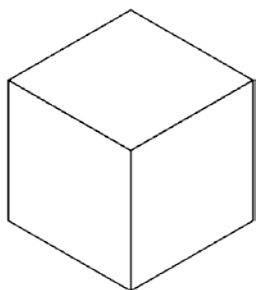
Name _____

Spring 1 Week 3

**Objective
Geometry**

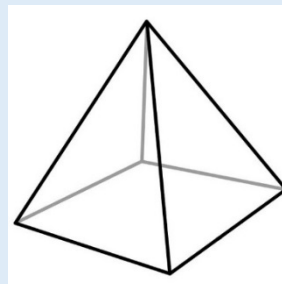
Identify 2D shapes on the surface of 3D shapes.

Look at the questions below and complete the answers.



How many 2D shapes can you see in a cube?

What about a cuboid?



How many 2D shapes can you see in this square-based pyramid?

What about a triangular based pyramid?



Name three things that are spherical.

1 _____

2 _____

3 _____



Name 3 things that are cylindrical.

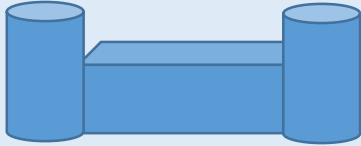
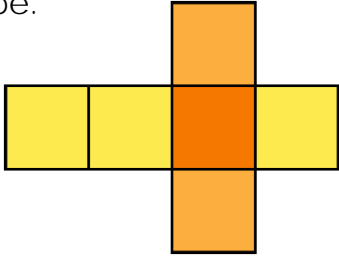
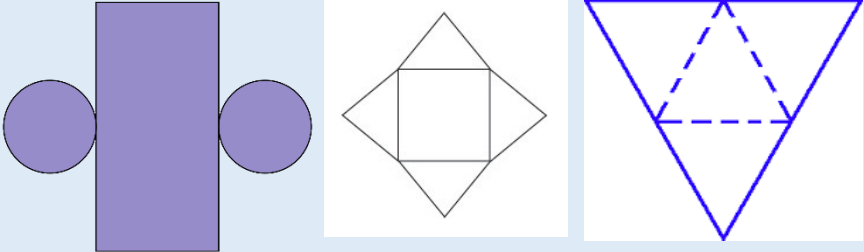
1 _____

2 _____

3 _____













Spring 1: Week 3: Practice and Consolidation

Geometry: Shapes: Identify 2D shapes on the surface of 3D shapes.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Describe 3D shapes according to their 2D make up ➤ Begin to explore the nets of 3D shapes according to 2D shapes contained within them 	<ul style="list-style-type: none"> • Show pupils 3D shapes and ensure that they know their names. • Explore with pupils the 2D shapes seen on 3D shapes. • Look for some 3D shapes in the indoor and outdoor environment. • Provide a group of pupils with a number of different 3D shapes and let them make up models. • Ensure that pupils are familiar with the term 'net' and that they explore what nets of 3D shapes look like. • Have a number of playing cards with 2D and 3D shapes on them. Play a game of snap where the winner has to name the shape. 	<p>Using a number of 3D shapes make a building and then record your building in your maths book. Label the building by identifying the 3D shapes used. Simple example shown below.</p>  <p>Look at the net for a cube. Create your own net and make up to a cube.</p>  <p>Which 3D shapes will the following nets make?</p> 

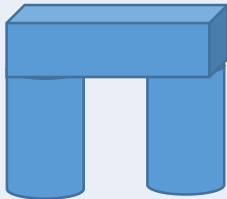
Spring 1: Week 3: Mastering this Objective - Deeper Understanding

Geometry: Shapes: Identify 2D shapes on the surface of 3D shapes.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:															
<ul style="list-style-type: none"> ➤ Describe 3D shapes according to their 2D make up ➤ Begin to explore the nets of 3D shapes according to 2D shapes contained within them 	<p>Using 2D shapes to make 3D shapes</p> <p>If I had 6 squares which 3D shape can I make?</p> <p>If I had 2 squares and another 4 rectangles, which 3D shape can I make?</p> <p>If I had 3 triangles and one square which 3D shape can I make?</p> <p>Make up some descriptions for your friends to work out.</p>	<p>Guess the shape</p> <p>Working in twos: Describe a 3D shape to your partner and they must work out the shape you are describing.</p> <p>Use the same idea but this time say which 2D shape your 3D shape does not contain, e.g. 'My shape has 4 of the same shapes but does not have a cube or a cuboid.'</p>														
	<p>Make a list of two 3D shape items you can see in the inside and outside environment.</p> <table border="1"> <thead> <tr> <th></th><th>1</th><th>2</th></tr> </thead> <tbody> <tr> <td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td></tr> </tbody> </table>		1	2												
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Spring 1: Week 3: Working at greater depth

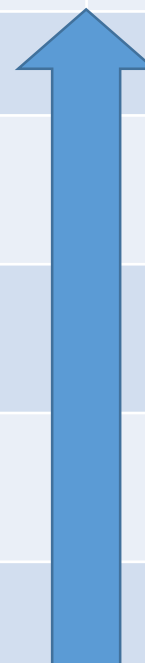
Geometry: Shapes: Identify 2D shapes on the surface of 3D shapes.

Teaching Sequence	Activities for pupils working at greater depth:	
<p>➤ Describe 3D shapes according to their 2D make up</p> <p>➤ Begin to explore the nets of 3D shapes according to 2D shapes contained within them</p>	<p>Everyday use</p> <p>Think of some common uses of the 3D shapes: cubes; cuboids; spheres square based pyramids; triangular based pyramids and cylinders.</p> <p>Explain why that particular 3D shape works best for what it is used for.</p> <p>Record your findings.</p>	<p>Creating nets</p> <p>Using the 3D shapes you have in the classroom, explore how you can make nets of the shapes and then make up 3D shapes.</p> <p>Make up some nets and give them to your partner to make them up.</p>
	<p>Create an interesting model from a number of 3D shapes, for example the one below.</p> <div data-bbox="430 906 658 1103">  </div> <p>Describe it carefully to a partner who must try and re-create your original model from your description. Note: Use correct terminology.</p>	<p>Have a set of cards with:</p> <ul style="list-style-type: none"> • 10 squares • 10 rectangles • 10 circles • 10 triangles <p>Share the cards, one at a time, between 2 to 4 players. The winner is the one who has enough cards to make up a 3D shape, e.g. 4 rectangles and 2 squares. The winner has to name the 3D shape and prove that he or she has all the 2D shapes necessary to make up the 3D shape named.</p>

Spring 1: Week 3: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Geometry: Shapes: Identify 2D shapes on the surface of 3D shapes.		Me	My Teacher
	Can you appreciate why certain shapes are used for everyday things, e.g. bricks for building walls?		
	Can you identify the 3D shapes: cube, cuboid, square-based pyramid; triangular-based pyramid, sphere and cylinder in the indoor and outdoor environment?		
	Can you identify the 2D shapes that make up: cube, cuboid, square-based pyramid; triangular-based pyramid, sphere and cylinder?		
	Can you identify and name the common 3D shapes: cube, cuboid, square-based pyramid; triangular-based pyramid, sphere and cylinder?		
	Can you identify and name the common 2D shapes: circle, triangle, rectangle and square?		



Year 2: Spring 1

Week 4: Measures: Money

Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

Spring 1: Week 4: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Spring 1 Week 4

Objective
Measures:
Money

Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

How much money have I got?



Show two ways I could pay 65p.

If I pay £1 for my items which cost 55p, draw the coins I could receive as change.

If I buy two items for 65p and 30p, how much change will I get from £1?



If I buy two items for 70p and 12p, how much change will I get from a £2 coin?



Spring 1: Week 4: Practice and Consolidation

Measures: Money: Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<div>➤ Calculate change from £1</div> <div>➤ Add and subtract monetary values and find change from £1 or £2</div>	<ul style="list-style-type: none">Remind pupils of the number of different coins which make up a £1, e.g. two 50p coins; ten 10p coins.Have a number of items priced differently up to £1, then get pupils to buy one and say how much change they would get from £1.Then move on to buy two items – under a £1 – and then work out the change they would get from £1.These could be played with small groups of pupils in a competitive way.Pupils make circles of between 6 and 8. They each have a card with an amount on up to £1, they then turn to their partner and show the amount. The first to say the correct change from a £1 wins and stays in the game.	How many of these coins make up £1? <div><div>10p<div></div></div><div>50p<div></div></div><div>2p<div></div></div><div>20p<div></div></div><div>5p<div></div></div><div>1p<div></div></div></div>
		<div>5 Coins</div> <div>Make up different amounts of money using 5 coins. You can have the same coin for all 5 if you want.</div> <div>Set them out and ask your friend to say how much the coins are worth. Then record your findings.</div>
		<div>Giving change</div> <div>How much change will I have from £1 if I use a £1 coin to pay for items that cost the following amounts:</div> <div><div>34p<div></div></div><div>67p<div></div></div><div>43p<div></div></div><div>16p<div></div></div><div>28p<div></div></div><div>51p<div></div></div><div>77p<div></div></div><div>19p<div></div></div></div>

Spring 1: Week 4: Mastering this Objective - Deeper Understanding

Measures: Money: Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

Teaching Sequence

If pupils have mastered this objective they will be able to complete these activities independently:

- Calculate change from £1
- Add and subtract monetary values and find change from £1 or £2

Making up amounts

Use £1, 10p and 1p coins to create the following amounts:

	£1	10p	1p
£1.69p			
£3.78p			
£5.17p			
£6.17p			

Fran had a £1 coin when she went to the shops for her parents.
She bought a loaf of bread for 75p.

She was given 4 coins as change.

What could the coins have been?

Is there more than one answer?

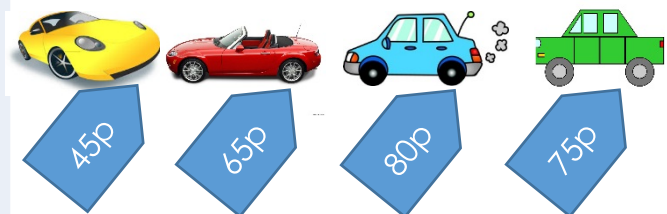
Explain your reasons.

Tanya uses a £2 coin to buy 5 cartoon figures.
Here is the change she was given:



How much did each cartoon figure cost?

The following toy cars cost as shown:



Terry bought two cars which cost him £1.20.
Which cars did he buy?

Spring 1: Week 4: Working at greater depth

Measures: Money: Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

Teaching Sequence

- Calculate change from £1
- Add and subtract monetary values and find change from £1 or £2

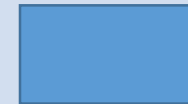
Activities for pupils working at greater depth:

Harry has £1 coins; 20p coins 5p coins and 1p coins.
Using only these coins show one way in which Harry can pay £3.45
Now think of another way.

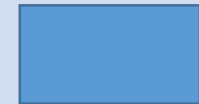
Steph has £2 coins; 50p coins; 20p coins and 2p coins.
Using only these coins show one way in which Steph can pay £7.24p

David spent £2 on an ice cream and a magazine.

The ice cream cost 80p more than the ice cream.
How much did each item cost?



Ice cream



Magazine

The following items cost as shown. Franky bought two items. One cost 50p more than the other. She spent £1.40p in total:



45p



70p



80p



90p



40p



65p



95p

Which two items did Franky buy?

Sidney bought two items, one cost 30p more than the other. She spent £1.10.
Which two items did Sidney buy?

Spring 1: Week 4: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Measures: Money: Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.

Me

My
Teacher

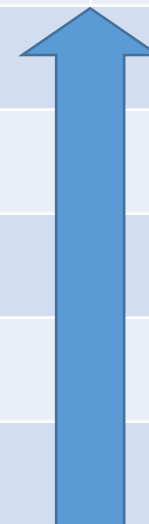
Can you subtract one amount of money from another up to the value of £2?

Can you add any two amounts of money up to the value of £2?

Are you confident enough to give change from any amount up to £1?

Do you know how many 50p; 20p; 10; 5p; 2p and 1p coins you need to make up to £1?

Can you recognise all coins between 1p and £2?



Year 2: Spring 1

Week 5: Multiplication & Division

Calculate the mathematical statements for multiplication and division within the multiplication tables and write them using the \times \div $=$ signs.

Spring 1: Week 5: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name _____ Spring 1 Week 5

Objective
Multiplication &
Division

Calculate the mathematical statements for multiplication and division within the multiplication tables and write them using the \times \div = signs.

Calculate the following:

16×2

$15 \div 5$

7×2

$25 \div 5$

10×3

$24 \div 2$

8×5

$60 \div 10$

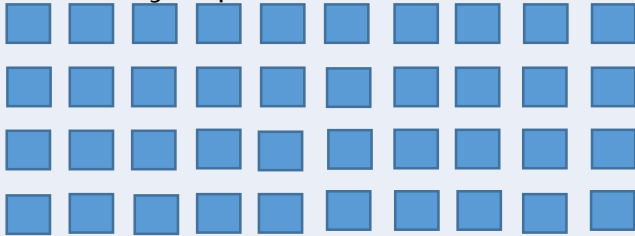
Spring 1: Week 5: Practice and Consolidation

Multiplication & Division: Calculate the mathematical statements for multiplication and division within the multiplication tables and write them using the \times \div $=$ signs.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Understand the function of the \times sign. ➤ Understand the function of the \div sign. ➤ Understand the function of the $=$ sign. ➤ Use the \times \div $=$ signs to write calculations using known table facts. 	<ul style="list-style-type: none"> Remind pupils of counting in 2s, 5s and 10s. Explain how the 'x' symbol represents multiplication. Focus on saying the times tables for x2, explaining how 3 x2 represents 3 lots of 2. Say the x2 tables to x12. Focus on saying the times tables for x5, explaining how 3 x5 represents 3 lots of 5. Say the x5 tables to x12. Focus on saying the times tables for x10, explaining how 3 x10 represents 3 lots of 10. Say the x10 tables to x12. Explain how the '\div' symbol represents division. Focus on the division sign and explain its relationship to sharing. Orally divide ten numbers by 10, before doing the same with dividing by 2 and then dividing by 5. 	<p>If 5 lots of 3 can be written as $3 \times 5 = 15$</p> <p>What can these be written as:</p> <p>10 lots of 4 is the same as <input type="text"/> = <input type="text"/></p> <p>2 lots of 8 is the same as <input type="text"/> = <input type="text"/></p> <p>20 sweets shared between 5 friends can be written as:</p> <p>$20 \div 5 =$ <input type="text"/></p> <p>10 shared amongst 5 can be written as <input type="text"/> \div <input type="text"/> = <input type="text"/></p> <p>25 shared amongst 5 can be written as <input type="text"/> \div <input type="text"/> = <input type="text"/></p> <p>Harry needs to buy presents for his 4 friends. He decides to buy them special action figures. He buys each one 5 action figures. How many does he need to buy altogether?</p> <p>Cybel is inviting 5 friends to her summer party. She needs to buy each friend 3 cup cakes. How many cup cakes does she need to buy altogether?</p>

Spring 1: Week 5: Mastering the Objective - Deeper Understanding

Multiplication & Division: Calculate the mathematical statements for multiplication and division within the multiplication tables and write them using the $\times \div =$ signs.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:	
<ul style="list-style-type: none"> ➤ Understand the function of the \times sign. ➤ Understand the function of the \div sign. ➤ Understand the function of the $=$ sign. ➤ Use the $\times \div =$ signs to write calculations using known table facts. 	<p>Number Sentences Write 4 number sentences to link the numbers: 4, 3 and 12. Now do the same with the numbers: 6, 2 and 12 and again with the numbers: 5, 3 and 15 Now do the same with the numbers: 10, 2 and 20 What about: 5, 6 and 30</p>	<p>Write these addition sentences as multiplication sentences:</p> <p>$10 + 10 + 10 + 10 = 4 \times 10$</p> <p>$2 + 2 + 2 + 2 + 2 + 2 =$</p> <p>$5 + 5 + 5 + 5 =$</p> <p>$10 + 10 + 10 + 10 + 10 =$</p>
	<p>This array represents 10×4</p>  <p>Set out an array for 5×4 Set out another array for 10×3</p>	<p>Action Figures Which will have most action figures:</p> <p>5 packets with 5 action figures in each one, or 10 packets with 3 action figures in each one.</p>

Spring 1: Week 5: Working at Greater Depth

Multiplication & Division: Calculate the mathematical statements for multiplication and division within the multiplication tables and write them using the \times \div $=$ signs.

Teaching Sequence	Activities for pupils working at greater depth:	
<ul style="list-style-type: none">➤ Understand the function of the \times sign.➤ Understand the function of the \div sign.➤ Understand the function of the $=$ sign.➤ Use the $\times \div =$ signs to write calculations using known table facts.	<p>Coins in the purse</p> <p>Tony has £2.50 in his purse in 50p and 20p coins.</p> <p>How many coins could he have altogether?</p> <p>Set out how many of each.</p> <p>Show your answer.</p> <p>Claire has 35p in her purse in 5p and 10p coins.</p> <p>How many coins could she have altogether?</p> <p>Set out how many of each. Show your answer.</p>	<p>Valentine Fancy Dress</p> <p>A class has a Valentine's Fancy Dress Party. Everyone has to pay 5p to enter the party. How much money could be collected? Tick all possible answers.</p> <div><div>72p</div><div>60p</div><div>98p</div><div>35p</div></div> <p>There are 10 areas for planting flowers around school.</p> <p>Each planter grows the same number of flowers.</p> <p>How many flowers could there be altogether?</p> <p>Tick all possible answers.</p> <div><div>98</div><div>100</div><div>72</div><div>70</div></div>
	<p>Shopkins friends</p> <p>5 children share their shopkins. When they have shared them all out they are joined by another friend.</p> <p>Each of the 5 children give two of their shopkins to their new friend.</p> <p>All 6 children now have the same number of shopkins.</p> <p>How many shopkins could there have been in the first place?</p>	

Spring 1: Week 5: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Multiplication & Division: Calculate the mathematical statements for multiplication and division within the multiplication tables and write them using the \times \div = signs.

Me

My
Teacher

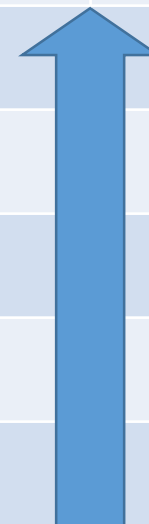
Can you solve word problems for division using the multiples of 2, 5 and 10?

Can you solve word problems for multiplication using the multiples of 2, 5 and 10?

Can you use the \times , \div , and = signs in simple calculations for numbers up to 100?

Do you know that the \div sign stands for division?

Do you know that the 'x' sign stands for multiplication?



Year 2: Spring 1

Week 6: Multiplication & Division

Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.

Spring 1: Week 6: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Spring 1 Week 6

Objective:

Multiplication & Division

Show that multiplication of two numbers can be one in any order (commutative) and division of one number by another cannot.

If $5 \times 4 = 20$

What is $4 \times 5 =$

If $15 \div 3 = 5$

What is $15 \div 5 =$

If $10 \times 5 = 50$

What is $5 \times 10 =$

If $30 \div 5 = 6$

What is $30 \div 6 =$

Jo, Ariana and Franky each buy 5 cards for their friends. How many cards did they buy altogether?

George has 25 cup cakes made for his party. He has four friends coming to the party. How many cup cakes will each of the five friends get?

Henna loves to make cakes. Each of her cup cakes needs 10g of flour. How much flour does she need to make 8 cup cakes?

Hamish puts 2 dolly mixtures on top of each cake he makes. He needs 24 dolly mixtures for the cakes he has made. How many cakes did he make?

Spring 1: Week 6: Practice and Consolidation

Multiplication & Division: Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:				
<div>➤ Recognise commutativity in multiplication, e.g. $8 \times 2 = 2 \times 8$.</div> <div>➤ Recognise that commutativity cannot be applied to division.</div>	<ul style="list-style-type: none">• Use apparatus to show how for example, 2 lots of 5 is the same as 5 lots of 2.• Do the same with multiples of 2, 5 and 10.• Move on to show that number sentences involving multiplication can be written in any way, ie, $5 \times 6 = 30$ and $6 \times 5 = 30$• However, go on to explain that the same does not apply to division, for example, although $15 \div 5 = 3$; you cannot write $5 \div 15 = 3$.• Use the term 'commutative' in relation to multiplication with the pupils.	<p>If $4 \times 5 = 20$ we know that $5 \times 4 = 20$. Now do the same with the following:</p> <p>If $5 \times 2 = 10$ we know that <div></div></p> <p>If $6 \times 5 = 30$ we know that <div></div></p> <p>If $4 \times 10 = 40$ we know that <div></div></p>				
		<p>Which of these is correct?:</p> <table><tr><td>$15 \div 5 = 3$</td><td>$20 \div 10 = 2$</td></tr><tr><td>$5 \div 15 = 3$</td><td>$10 \div 20 = 2$</td></tr><tr><td>$12 \div 2 = 6$</td><td>$2 \div 12 = 6$</td></tr></table> <p>If $5 \times 10 = 50$ we know that $50 \div 10 = 5$ or $50 \div 5 = 10$</p> <p>Now complete the following: If $7 \times 5 = 35$ we know that</p> <p>If $10 \times 2 = 20$ we know that</p>	$15 \div 5 = 3$	$20 \div 10 = 2$	$5 \div 15 = 3$	$10 \div 20 = 2$
$15 \div 5 = 3$	$20 \div 10 = 2$					
$5 \div 15 = 3$	$10 \div 20 = 2$					
$12 \div 2 = 6$	$2 \div 12 = 6$					

Spring 1: Week 6: Mastering this Objective - Deeper Understanding

Multiplication & Division: Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:						
<ul style="list-style-type: none">➤ Recognise commutativity in multiplication, e.g. $8 \times 2 = 2 \times 8$.➤ Recognise that commutativity cannot be applied to division.	<p>What do you notice about this pair of multiplications:</p> $4 \times 5 = 5 \times 4 = 20$ $10 \times 2 = 2 \times 10 = 20$ <p>Explain what you notice to your partner.</p> <p>Now this one:</p> $5 \times 6 = 6 \times 5 = 30$ $10 \times 3 = 3 \times 10 = 30$	<p>Five friends share 20 sweets. How much will each one get? Write it as a division number sentence.</p> <p>Ten friends share 30 golf balls. How much will each one get? Write it as a division number sentence.</p> <p>Make up more for your friends.</p>					
	<p>Write down the 5x table and by its side write down the 10x table.</p> <p>It has been started for you:</p> <table><tr><td>$1 \times 5 = 5$</td><td>$1 \times 10 = 10$</td></tr><tr><td>$2 \times 5 = 10$</td><td>$2 \times 10 = 20$</td></tr><tr><td>$3 \times 5 = 15$</td><td>$3 \times 10 = 30$</td></tr></table> <p>Complete until you arrive at 12×5. What do you notice about the two sets of tables?</p>	$1 \times 5 = 5$	$1 \times 10 = 10$	$2 \times 5 = 10$	$2 \times 10 = 20$	$3 \times 5 = 15$	$3 \times 10 = 30$
$1 \times 5 = 5$	$1 \times 10 = 10$						
$2 \times 5 = 10$	$2 \times 10 = 20$						
$3 \times 5 = 15$	$3 \times 10 = 30$						

Spring 1: Week 6: Working at greater depth

Multiplication & Division: Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.

Teaching Sequence	Activities for pupils working at greater depth:	
<ul style="list-style-type: none"> ➤ Recognise commutativity in multiplication, e.g. $8 \times 2 = 2 \times 8$. ➤ Recognise that commutativity cannot be applied to division. 	<p>Five friends want to buy some stickers. Packs come in groups of 36; 66; and 45. If they want to share the stickers and have the same number which pack should they buy?</p> <p>Ten friends want to buy some tennis balls. They can buy them in sets of 35; 24 or 50.</p> <p>If they want to have at least 2 each which set should they buy so that they do not spend too much money?</p>	<p>Together Henry and Jasmine have £15. Henry has twice as much as Jasmine. How much does Henry have?</p> <p>Paula and Sharon have £60. Sharon has five times as much as Paula. How much does Paula have? How much does Sharon have?</p>
	<p>Work out what the missing numbers are:</p> <div> $4 \times \square = 20$ $6 \times \square = 30$ </div> <div> $10 \times \square = 40$ $8 \times \square = 40$ </div> <div> $5 \times \square = 25$ $7 \times \square = 70$ </div>	<p>Look at these division number sentences and work out the missing numbers:</p> <div> $30 \div 5 = \square$ $25 \div \square = 5$ </div> <div> $35 \div \square = 7$ $70 \div \square = 7$ </div> <div> $30 \div \square = 6$ $80 \div \square = 8$ </div>

Spring 1: Week 6: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Multiplication & Division: Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot.

Me

My
Teacher

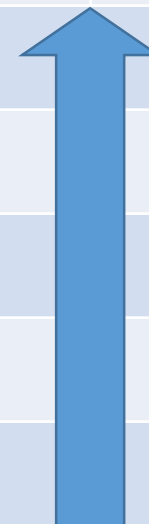
Do you know what is meant by the word commutative?

Do you know the inverse rule; i.e. that examples such as $21 \div 7 = 3$ correspond to $3 \times 7 = 21$?

Do you know the inverse rule; i.e. that examples such as $8 \times 3 = 24$ correspond to $24 \div 3 = 8$?

Can you calculate and write simple division statements, such as $16 \div 4 = 4$?

Can you calculate and write out simple multiplication statements, such as $6 \times 3 = 18$?



YEAR 2 : SPRING 2: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
6 Measures Length/ Weight/ Mass	3 Addition & Subtraction	2 Fractions	3 Geometry Position & Direction	7 Measures Time	Consolidate and Assess
Choose and use appropriate standard units to estimate and measure: - length/height in any direction (m/cm) - mass (kg/g) to the nearest appropriate unit, using rulers & scales,	Show that addition of any two numbers can be done in any order (commutative) and subtraction of one number from another cannot.	Write simple fractions and recognise the equivalence	Order and arrange combinations of mathematical objects in patterns and sequences	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.	Start this week by revising the learning covered in the Autumn and Spring terms so as to ensure pupils are fluent and secure with their basic skills.
<ul style="list-style-type: none"> ➤ Measure accurately in cm ➤ Measure accurately in m ➤ Know 1m and make reasonable estimates of length/height up to 10m. ➤ Know 1cm and make reasonable estimates of length/height up to 100cm. ➤ Measure accurately in g/kg ➤ Know kg and make reasonable estimates of weight up to 5kg. ➤ Name objects that weigh more/less than 1kg, 5kg etc. ➤ Know their own approx. weight in kg ➤ Read ruler scales to the nearest cm ➤ Read weighing scales to the nearest g 	<ul style="list-style-type: none"> ➤ Swap numbers in addition calculations and explain they total the same answer. ➤ Understand that the numbers in a subtraction calculation cannot be reversed and explain why. 	<ul style="list-style-type: none"> ➤ Write simple fractions, e.g. $\frac{1}{2}$ of 6 = 3 ➤ Recognise and demonstrate the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$ 	<ul style="list-style-type: none"> ➤ Place objects in a repeating pattern ➤ Place objects in an order which forms a sequence 	<ul style="list-style-type: none"> ➤ Read the clock in 5 min intervals past the hour ➤ Read the clock in 5 min intervals to the hour. ➤ Draw hands on the clock showing 5 min intervals ➤ Know that 15 minutes past is the same as quarter past. ➤ Know that 15 minutes to is the same as quarter to. 	<p>Use a simple assessment process to check on pupils' confidence and consistency in using the learning outlined in the Autumn and Spring terms.</p> <p>Analyse the results and use information to help focus the intervention sessions, as needed, for the following term.</p>

Year 2: Spring 2

Week 1: Measures

Choose and use appropriate standard units to estimate and measure:

- length/height in any direction (m/cm)
- mass (kg/g)

to the nearest appropriate unit, using rulers & scales

Spring 2: Week 1: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Spring 2 Week 1

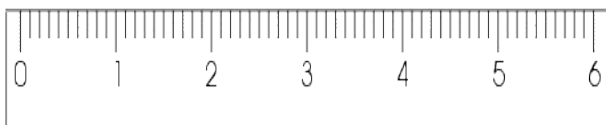
Objective: Measures

Choose and use appropriate standard units to estimate and measure:

- length/height in any direction (m/cm)
- mass (kg/g)

to the nearest appropriate unit, using rulers and scales.

Using a Ruler



Measure 10 cm; then 5cm and finally 20 cm.

Name 3 things that measure approximately 1 metre and then check to see how accurate you were.

Name 3 things that weigh approximately 1Kg and then check to see how accurate you were.



Balance Scales

Using balancing scales, first estimate and then find out how many lego brick (of the same size) it will take to weigh 1Kg.

Estimate the following:

How high is a tree?

How much does a baby weigh?

How long is your classroom?

How long is a car?

How much does an adult person weigh?

Spring 2: Week 1: Practice and Consolidation

Measures: Choose and use appropriate standard units to estimate and measure:

- length/height in any direction (m/cm)
- mass (kg/g)

to the nearest appropriate unit, using rulers and scales.

Teaching Sequence

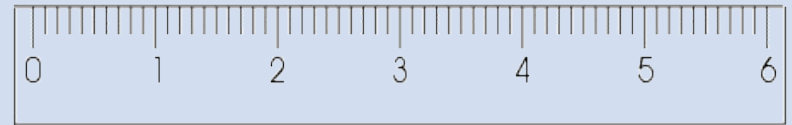
- Measure accurately in cm
- Measure accurately in m
- Know 1m and make reasonable estimates of length/height up to 10m.
- Know 1cm and make reasonable estimates of length/height up to 100cm.
- Measure accurately in g/kg
- Know kg and make reasonable estimates of weight up to 5kg.
- Name objects that weigh more/less than 1kg, 5kg etc.
- Know their own approx. weight in kg
- Read ruler scales to the nearest cm
- Read weighing scales to the nearest g

Oral and Mental Activities Examples:

- Remind pupils of the standard units associated with measuring length or height.
- Use a metre stick to help pupils gain a true concept for one metre.
- Remind pupils that a metre is broken into 100 cm.
- Use most adults, being just below 2 metres, as a standard height measure.
- Use the metre stick to check on items in the classroom that are more or less than one metre.
- Consider weight and remind pupils that weight is measures in Kg and grams.
- As with length, let pupils find items that weigh more or less than 1Kg.

Pencil and Paper Activities Examples:

Using a Ruler



Draw a line that is exactly 5cm
Now another that is 10cm.
A third that is 7cm.

Using a metre stick estimate and then check the length:

- of the classroom
- the playground
- the football pitch

Estimate and check before you complete the table:

These items weigh less than 1Kg	These items weigh between 1 and 5 Kg	These items weigh more than 5Kg

Spring 2: Week 1: Mastering this Objective - Deeper Understanding

Measures: Choose and use appropriate standard units to estimate and measure:

- length/height in any direction (m/cm)
- mass (kg/g)

to the nearest appropriate unit, using rulers and scales.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:	
<ul style="list-style-type: none"> ➤ Measure accurately in cm ➤ Measure accurately in m ➤ Know 1m and make reasonable estimates of length/height up to 10m. ➤ Know 1cm and make reasonable estimates of length/height up to 100cm. ➤ Measure accurately in g/kg ➤ Know kg and make reasonable estimates of weight up to 5kg. ➤ Name objects that weigh more/less than 1kg, 5kg etc. ➤ Know their own approx. weight in kg ➤ Read ruler scales to the nearest cm ➤ Read weighing scales to the nearest g 	<p>Drawing accurate lines</p> <p>Draw lines of the following length as accurately as you can using a ruler:</p> <p>10cms.</p> <p>15cms.</p> <p>20cms.</p>	<p>Your height and weight</p> <p>Working with a partner and using a tape measure.</p> <p>Stand against a wall or other straight surface and mark your height before measuring your height.</p> <p>Now change places with your partner.</p> <p>Using appropriate scales weigh yourself and record your weight.</p>
	<p>Measuring different objects</p> <p>Draw one line that is 5cm long and another that is 6cm longer.</p> <p>What is the difference between them?</p> <p>Take a number of objects such as a pencil; book and white board and estimate their length before measuring each item and then record the outcome.</p>	<p>Estimate a distance of 1 metre and then check to see how accurate you were.</p> <p>Estimate a distance of 10 metres and then check to see how accurate you were.</p> <p>Estimate a weight of 1Kg and then check to see how accurate you were.</p> <p>Fill a bag with sand to the weight of 5Kg by estimating and then check to see how accurate you were.</p>

Spring 2: Week 1: Working at greater depth

Measures: Choose and use appropriate standard units to estimate and measure:

- length/height in any direction (m/cm)
- mass (kg/g)

to the nearest appropriate unit, using rulers and scales.

Teaching Sequence

- Measure accurately in cm
- Measure accurately in m
- Know 1m and make reasonable estimates of length/height up to 10m.
- Know 1cm and make reasonable estimates of length/height up to 100cm.
- Measure accurately in g/kg
- Know kg and make reasonable estimates of weight up to 5kg.
- Name objects that weigh more/less than 1kg, 5kg etc.
- Know their own approx. weight in kg
- Read ruler scales to the nearest cm
- Read weighing scales to the nearest g

Activities for pupils working at greater depth:

Drawing lines and then checking difference

Draw 2 lines whose length differs by 5cms.

Draw 2 lines whose length differs by 7cms.

50m Race

Three runners had a 50m running race. Tom, the winner was 5m ahead of Rhian, the person who finished second. Rhian was 4 m ahead of the third person, Jan.

What is the distance between Tom and Jan at the end of the race?

How many metres had Rhian run when Tom had finished?

Sack of potatoes

Sack A



10Kg

Sack B



20Kg

Sack C



6Kg

Three sacks hold different amounts of potatoes. If Sack A has to have the same amount as Sack B, how many Kg of potatoes will I have to move from B to A?

If Sack C has to have the same as Sack A, how many Kg of potatoes will have to move from A to C?

Spring 2: Week 1: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Measures: Choose and use appropriate standard units to estimate and measure:

- length/height in any direction (m/cm)
- mass (kg/g)

to the nearest appropriate unit, using rulers and scales.

Me

My
Teacher

Do you recognise mm as a very small amount and that 10mm makes 1 cm.?

Can you order different weights using kilograms and grams?

Can you order different lengths using metres and centimetres?

Can you use a ruler to measure 5cm, 10cm, 20cm and 30cm accurately?

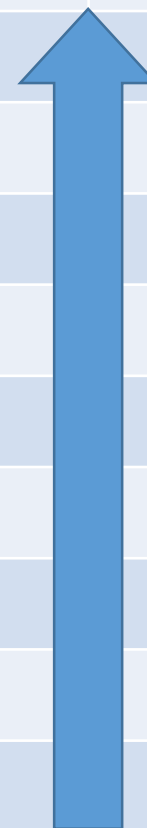
Can you read lengths to the nearest centimetre?

Can you read weighing scales to the nearest 10 gram units?

Do you know how long a centimetre is?

Can you name objects that are more or less than a Kg in weight?

Can you name objects that are more or less than a metre long or high?



Year 2: Spring 2

Week 2: Addition & Subtraction

Show that addition of any two numbers can be done in any order (commutative) and subtraction of one number from another cannot.

Spring 2: Week 2: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Spring 2 Week 2

Objective:
Addition & Subtraction

Show that addition of any two numbers can be done in any order (commutative) and subtraction of one number from another cannot.

If $23 + 11 = 34$; what is $11 + 23$

If $18 + 9 = 27$; what is $9 + 18$

If the answer to an addition calculation is 45, give 2 examples of what the calculations could have been in the first place.

$$\boxed{} + \boxed{} = 45$$

$$\boxed{} + \boxed{} = 45$$

If $25 - 9 + 16$; work out the following:

$$16 + 9 = \boxed{} \quad \text{What do you notice?}$$

Do the same with the following:

$$34 - 12 = 22; \text{ so therefore } 22 + \boxed{} = 34$$

$$45 - 12 = 33; \text{ so therefore } 33 + 12 = \boxed{}$$

Tom and Harry are collecting stickers. Between them they have 45. Tom has 14, how many has Harry got?

Spring 2: Week 2: Practice and Consolidation

Addition & Subtraction: Show that addition of any two numbers can be done in any order (commutative) and subtraction of one number from another cannot.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<p>➤ Swap numbers in addition calculations and explain they total the same answer.</p> <p>➤ Understand that the numbers in a subtraction calculation cannot be reversed and explain why.</p>	<ul style="list-style-type: none"> Through the use of practical materials help pupils understand that when adding two or more objects or items that the order is not important because ultimately everything is bought together. Rapid addition calculations when the numbers are reversed, eg, $2 + 5 = 7$ or $5 + 2 = 7$. Explain why this cannot be the same for subtraction. In other words the order is important when subtracting. Introduce the term 'commutative' and help pupils to add it to their mathematical terminology. 	Complete these calculations: If $15 + 7 = 22$, what is $7 + 15$? If $23 + 12 = 35$, what is $12 + 23$? If $31 + 7 = 38$, what is $7 + 31$?
		When added together 2 numbers make 45. Make a list of at least 10 possible additions that could have been used.
		When added together 2 numbers make 56 Make a list of at least 10 possible additions that could have been used.
		Explain why the following calculations cannot be true: $17 - 5$ is the same as $5 - 17$, and $34 - 11$ is the same as $11 - 34$.
		When subtracted from each other the answer is 15. Make a list of 10 possible calculations that there could have been.
		When subtracted from each other the answer is 18. Make a list of 10 possible calculations that there could have been.

Spring 2: Week 2: Mastering this Objective - Deeper Understanding

Addition & Subtraction: Show that addition of any two numbers can be done in any order (commutative) and subtraction of one number from another cannot.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:	
<ul style="list-style-type: none"> ➤ Swap numbers in addition calculations and explain they total the same answer. ➤ Understand that the numbers in a subtraction calculation cannot be reversed and explain why. 	<p>Write 4 number sentences involving + and – using the numbers 100, 67 and 33.</p> <p>Now do the same with the numbers 23, 45 and 68.</p> <p>Again with the numbers 17, 30 and 47.</p>	<p>Which of these calculations is incorrect? Tick the one that is.</p> <p>$73 + 40 = 113$</p> <p>$98 - 18 = 70$</p> <p>$46 + 77 = 123$</p> <p>$92 - 67 = 35$</p>
	<p>What do I need to add or subtract from each of these numbers so that the answer is 45.</p> <p>17, 48, 23, 56, 32, 98, 16, 46</p>	<p>Complete the following:</p> <p>$30 + \square = 70$</p> <p>$80 - \square = 70$</p> <p>$50 + \square = 70$</p> <p>$90 - \square = 70$</p>

Spring 2: Week 2: Working at greater depth

Addition & Subtraction: Show that addition of any two numbers can be done in any order (commutative) and subtraction of one number from another cannot.

Teaching Sequence

- Swap numbers in addition calculations and explain they total the same answer.
- Understand that the numbers in a subtraction calculation cannot be reversed and explain why.

Activities for pupils working at greater depth:

Which digits could go into these number sentences:

$$7 \square - 2 \square = 46$$

$$2 \square + 3 \square = 62$$

$$5 \square - 2 \square = 28$$

I think of a number and add 7.
The answer is 17.
What was my original number?

I think of a number and subtract 12.
The answer is 15.
What was my original number?

I think of a number and add 9.
The answer is 82.
What was my original answer?

Find all the possible answers you can to complete this number sentence:

$$\square + \square = 40$$

$$40 - \square = \square$$

When I take one number away from the other the answer is 36.
One of the numbers is 18.
What is the other number?

When I take one number away from the other the answer is 29.
One of the numbers is 46.
What is the other number?

Spring 2: Week 2: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Addition & Subtraction: Show that addition of any two numbers can be done in any order (commutative) and subtraction of one number from another cannot.

Me

My
Teacher

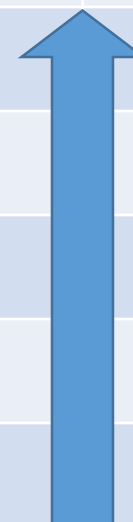
Do you know that in the calculation ' $a + b = c$ '; that $c - a = b$ and $c - b = a$?

Can you complete a subtraction problem requiring you to find the difference in value between two numbers?

Can you complete a subtraction problem requiring you to 'take away' one number from another?

Do you know that when subtracting you must always take the smaller number from the larger one?

Do you know that when adding you can start with any number?



Year 2: Spring 2

Week 3: Fractions

Write simple fractions and recognise the equivalence

Spring 2: Week 3: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Spring 2 Week 3

Objective:
Fractions

Write simple fractions and recognise the equivalence

Find $\frac{1}{2}$ of the following values:

8	<input type="text"/>	18	<input type="text"/>
16	<input type="text"/>	32	<input type="text"/>
24	<input type="text"/>	80	<input type="text"/>

Can you write the following fractions in another way:

$\frac{2}{4}$	<input type="text"/>	$\frac{3}{9}$	<input type="text"/>	$\frac{6}{12}$	<input type="text"/>
$\frac{6}{8}$	<input type="text"/>	$\frac{10}{40}$	<input type="text"/>	$\frac{4}{12}$	<input type="text"/>

Find a $\frac{1}{4}$ of the following values:

200 g.	<input type="text"/>	40p	<input type="text"/>
1 metre	<input type="text"/>	£1.20	<input type="text"/>

Find $\frac{3}{4}$ of the following values:




200 g	<input type="text"/>	40p	<input type="text"/>
1 metre	<input type="text"/>	£1.20	<input type="text"/>

Tom ran for 500 metres. How far had he run when he was half way?

Helen bought 8 apples which weighed 2Kg. How much did 4 apples weigh?

Spring 2: Week 3: Practice and Consolidation

Fractions: Write simple fractions and recognise the equivalence

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Write simple fractions, e.g. $\frac{1}{2}$ of 6 = 3 ➤ Recognise and demonstrate the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$ 	<ul style="list-style-type: none"> Using practical materials emphasise how one half can be two out of 4; or 4 out of 8; etc. Use apparatus to emphasise this. Then link this to using the symbol $\frac{1}{2}$ for all of the outcomes. Now do the same with $\frac{1}{4}$ values. In other words one quarter is 1 in 4; or 2 in 8; or 4 in 16, etc. Now do the same with other fractional values such as $\frac{3}{4}$, $\frac{1}{3}$ and $\frac{2}{3}$. Link finding $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, $\frac{1}{3}$ etc. to measures such as length, weight and money. 	Find $\frac{1}{2}$ of the following numbers: 10 16 50 30 24 20 100 60 
		Find $\frac{1}{4}$ of the following numbers: 48 24 40 36 100 80 28 32 44 96 
		Complete the following: $\frac{1}{4}$ $\frac{2}{\quad}$ $\frac{3}{4}$ $\frac{6}{\quad}$ $\frac{5}{10}$ $\frac{15}{\quad}$ 
		Find a $\frac{1}{4}$ of the following values: 200gms 40p £4 400metres 600metres £40 £2.40 800g.

Spring 2: Week 3: Mastering this Objective - Deeper Understanding

Fractions : Write simple fractions and recognise the equivalence

Teaching Sequence

- Write simple fractions, e.g. $\frac{1}{2}$ of 6 = 3
- Recognise and demonstrate the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$

If pupils have mastered this objective they will be able to complete these activities independently:

Half of  is 6.

Half of  is 60p.

Quarter of  is 4.

Quarter of  is £2

Three-quarters of  is £12

If you count in steps of $\frac{1}{4}$ starting from 0,
How many steps will you have taken to reach 2?



How many steps will you have taken to reach 4?



How many steps will you have taken to reach $6\frac{1}{2}$?

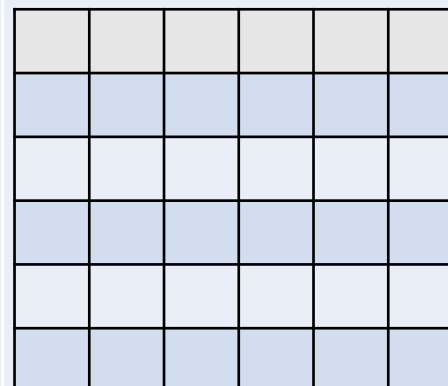


Is there a quick way of working out the answer? If so, explain it.

Harry had 24 grapes in his packed lunch. He ate three-quarters of them. How many grapes did he have left.



What fraction of the grapes were left?



Colour in $\frac{1}{3}$ of this grid.
Now try to think of a different way of colouring in $\frac{1}{3}$ of the grid.
How many squares did you colour?

Finally, think of an unusual way of colouring in a $\frac{1}{3}$ of the grid.

Spring 2: Week 3: Working at greater depth

Fractions : Write simple fractions and recognise the equivalence

Teaching Sequence

- Write simple fractions, e.g. $\frac{1}{2}$ of 6 = 3
- Recognise and demonstrate the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$

Activities for pupils working at greater depth:

A class has 24 children in it.
 $\frac{1}{4}$ of all the children are girls.

How many boys are there in the class?



There are 30 animals in a vet's surgery.
Half of all the animals are dogs and a third of the animals are cats.
How many other animals were in the surgery?



Carry had a bag of tennis balls.
Two-thirds of the balls were used during the lesson and others remained in the bag.

Explain why there had to be an even number of balls used during the lesson.

If 20 balls were used during the lesson how many balls were there altogether?



Helen had 24 sweets.

If Helen ate 16 of her 24 sweets, what fraction of her sweets were left not eaten?



All 24 children in a class had bicycles.
Three-quarters of the children had blue bicycles.

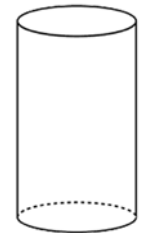
How many children did not have blue bicycles?



A



B


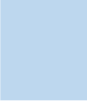

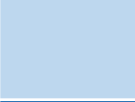







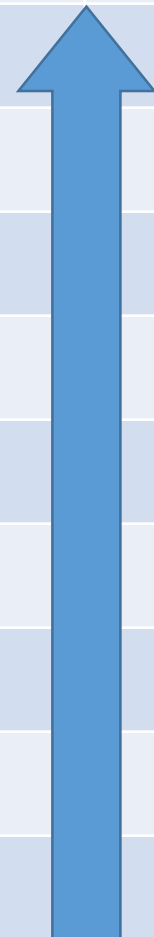
C

Shade in a $\frac{1}{3}$ of A; $\frac{2}{3}$ of B and $\frac{1}{4}$ of C.
If I added the contents of C to the contents of B, will B be full? Explain your reasoning.

Spring 2: Week 3: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Fractions: Write simple fractions and recognise the equivalence		Me	My Teacher
	Can you calculate $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$ or $\frac{3}{4}$ of a given number up to 100?		
	Do you know that $\frac{1}{4}$ can be written as $\frac{2}{8}$ or $\frac{4}{16}$, etc.?		
	Do you know that $\frac{1}{3}$ can be written as $\frac{2}{6}$ or $\frac{3}{9}$, etc.?		
	Do you know that $\frac{1}{2}$ can be written as $\frac{2}{4}$ or $\frac{3}{6}$, etc.?		
	Do you know that the symbol $\frac{2}{3}$ stands for two-thirds of the value of a number or object?		
	Do you know that the symbol $\frac{3}{4}$ stands for a three-quarters of the value of a number or object?		
	Do you know that the symbol $\frac{1}{4}$ stands for a quarter of the value of a number or object?		
	Do you know that the symbol $\frac{1}{3}$ stands for a third of the value of a number or object?		
	Do you know that the symbol $\frac{1}{2}$ stands for half the value of a number or object?		



Year 2: Spring 2

Week 4: Geometry: Position and Direction

Order and arrange combinations of mathematical objects in patterns and sequences

Spring 2: Week 4: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

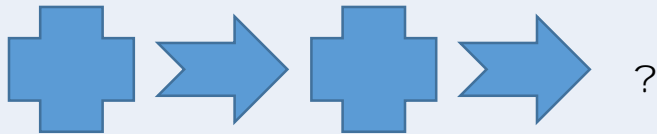
Name

Spring 2 Week 4


Objective:
Geometry


Position & Direction: Order and arrange combinations of mathematical objects in patterns and sequences


What comes next?



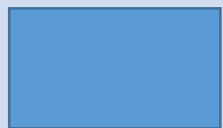
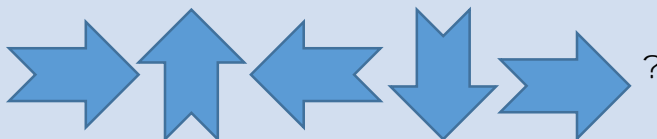
Complete the sequences:

2 4 6 8 

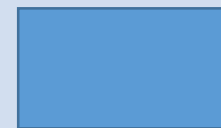
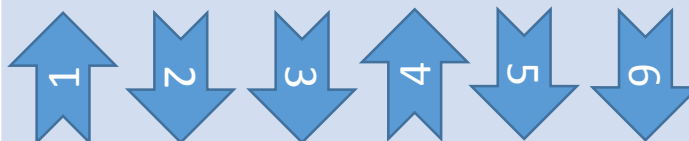
17 13 9 5 

120 110 100 90 

What comes next?



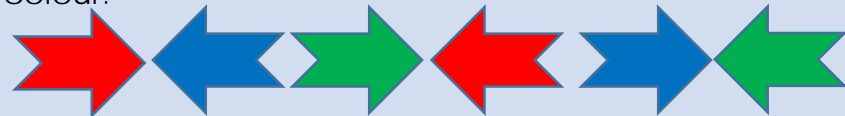



What comes next?



Spring 2: Week 4: Practice and Consolidation

Geometry: Position & Direction: Order and arrange combinations of mathematical objects in patterns and sequences

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Place objects in a repeating pattern ➤ Place objects in an order which forms a sequence 	<ul style="list-style-type: none"> • Set out a number of different shapes. • Let pupils create their own repeating patterns before setting up a repeating pattern for their friends to solve. • Introduce two different aspects, eg, colour and shape and see how they cope. • Now let them create sequences with numbers only. • Have a go at doing the same with shape and numbers and see how they cope. • Create repeating patterns using various apparatus and objects within the classroom. • Create themes, that is, repeating patterns of leaves found around the playground. 	<p>Look at the following repeated pattern. Continue the pattern by adding the next 2 shapes.</p>  <p>Now do the same but think of both position and shape.</p>  <p>What are the next 2 in the pattern? Think position and colour.</p>  <p>Collect leaves from the school grounds or the immediate area and create your own repeating pattern for your friends to work out.</p> 

Spring 2: Week 4: Mastering this Objective - Deeper Understanding

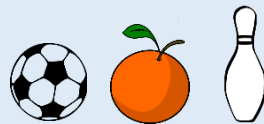
Geometry: Position & Direction: Order and arrange combinations of mathematical objects in patterns and sequences

Teaching Sequence

- Place objects in a repeating pattern
- Place objects in an order which forms a sequence

If pupils have mastered this objective they will be able to complete these activities independently:

Using the 3 items below create a challenging sequence for your friend to complete.



Now do the same again except introduce the following 2 items:

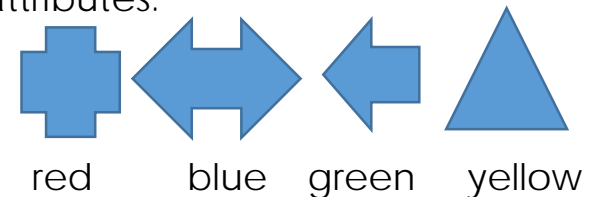


Find the mistake in these repeated patterns.



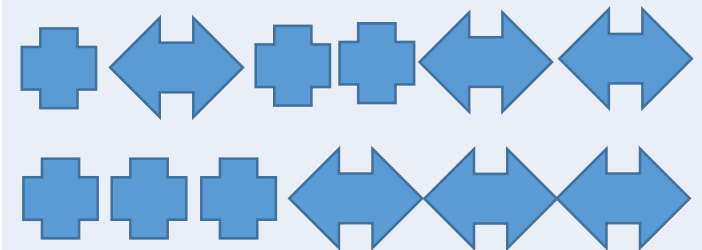
15, 13, 11, 8, 6, 4, 2, 0

Using the following shapes and the following colours make up a repeating pattern that has two attributes.



Check to see if your friends can work out the next two in the pattern.

Complete this repeated pattern.



This is one pattern on two lines.

Spring 2: Week 4: Working at greater depth

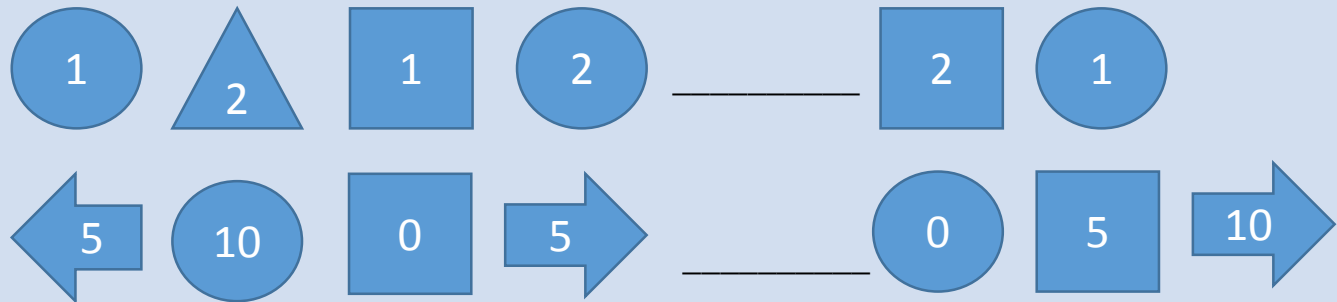
Geometry: Position & Direction: Order and arrange combinations of mathematical objects in patterns and sequences

Teaching Sequence

- Place objects in a repeating pattern
- Place objects in an order which forms a sequence

Activities for pupils working at greater depth:

Complete the following patterns (It is not as easy as it seems).



Now make up some more for your friends to solve using shapes and numbers.

On a walk around the school or in the neighbouring streets, see if you can find symbols that you can use to create a repeating pattern, e.g. traffic signs, colour of house doors, etc.

After the walk, create your own repeated pattern using items you saw on your walk.

Find some endangered species or birds on the internet and create a repeating pattern chart with their images.

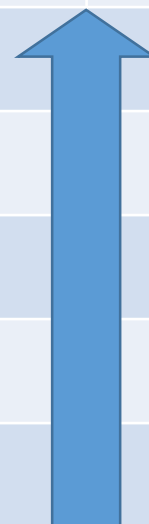
Use the chart to raise awareness of endangered species.

Now do the same with birds that frequent your school grounds.

Spring 2: Week 4: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Geometry: Position & Direction: Order and arrange combinations of mathematical objects in patterns and sequences		Me	My Teacher
	Can you use items found in the natural environment to create your own repeated patterns, e.g. leaves?		
	Can you create your own repeated pattern that has two attributes?		
	Can you continue a repeated pattern that has two attributes, e.g. shape and colour?		
	Can you create your own repeated pattern with one attribute?		
	Can you continue a repeated pattern that has one attribute?		



Year 2: Spring 2

Week 5: Measures: 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.

Spring 2: Week 5: Pre-Learning Task

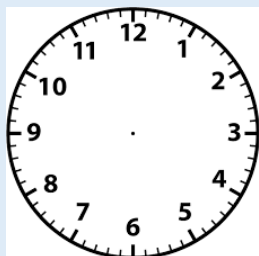
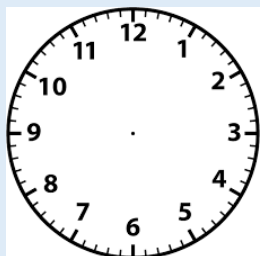
The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name _____

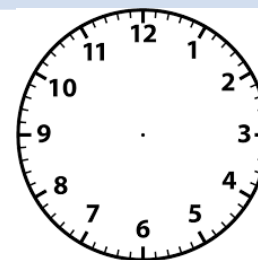
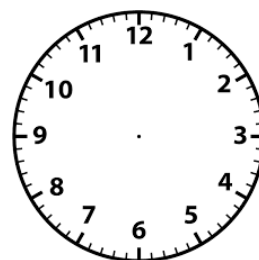
Spring 2 Week 5

Objective:
Measures

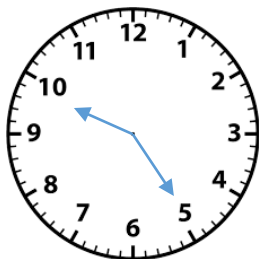
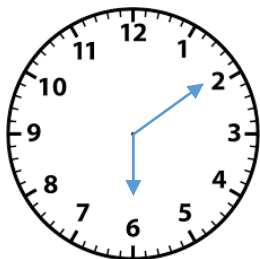
Measures: Time: Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.



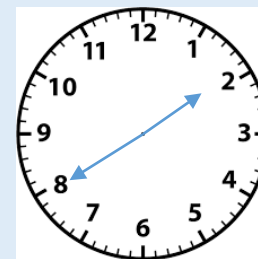
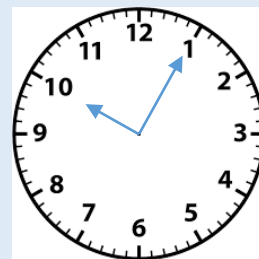
Put the following times on these two clock faces: quarter past three and quarter to four.



Put the following times on these two clock faces: five past three and twenty past four.



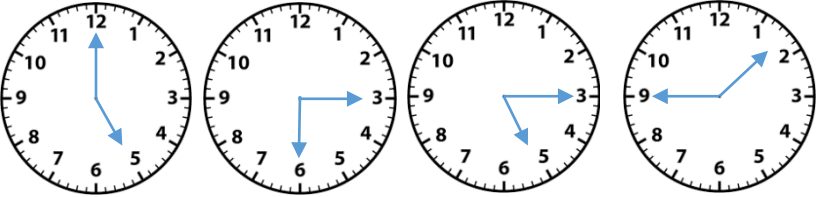

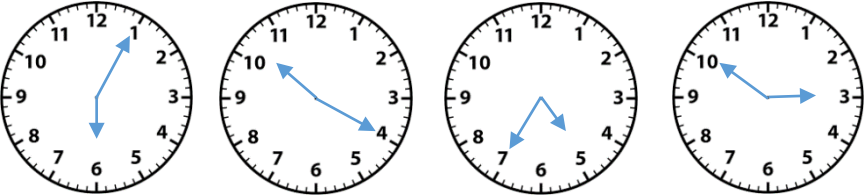
What is the time?



What is the time?

Spring 2: Week 5: Practice and Consolidation

Measures: 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.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Read the clock in 5 min intervals past the hour ➤ Read clock in 5 min intervals to the hour. ➤ Draw hands on clock showing 5 min internals ➤ Know that 15 minutes past is the same as quarter past. ➤ Know that 15 minutes to is the same as quarter to. 	<ul style="list-style-type: none"> • Using a clock where the hour hand moves as the minute hand is moved along take pupils through the five minute sequence on the clock, e.g. five past, ten past, quarter past etc. • Explain how the hour hand does not remain stationary but moves slightly as the minute hand moves along. • In pairs, pupils set a time at five minute intervals and check that their partner can read it. Then change places. • Get pupils to consider what the time will be five minutes later and then five minutes before. • Remind pupils that when the minute hand is 'to' the hour the hour hand will nearly be at the number but when the minute hand is after the hour the hour hand will be just after the number. 	<p>Reminder of where the minute hand is at 'o'clock' half past and quarter to and quarter past the hour:</p>  <p>Tell the time on these 4 clock faces.</p>  <p>On 5 different clock faces put in the time for the following:</p> <ul style="list-style-type: none"> • Five past Three • Twenty past Six • Twenty-five past Nine • Ten to Four • Twenty to Seven <p>Say what the time is on these clock faces:</p> 

Spring 2: Week 5: Mastering this Objective - - Deeper Understanding

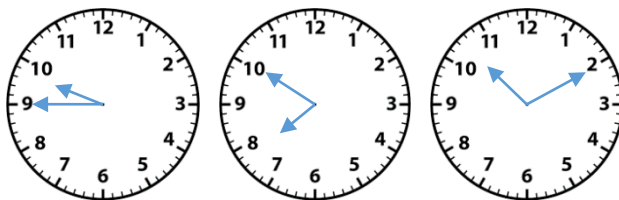
Measures: Time: Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.

Teaching Sequence

- Read the clock in 5 min intervals past the hour
- Read clock in 5 min intervals to the hour.
- Draw hands on clock showing 5 min intervals
- Know that 15 minutes past is the same as quarter past.
- Know that 15 minutes to is the same as quarter to.

If pupils have mastered this objective they will be able to complete these activities independently:

Which one of these clock faces shows a time between eight o'clock and ten o'clock?



Now draw two more clock faces showing the time between eight and ten o'clock.

Five minutes later

What will be the time in five minutes if it is:

- Twenty past Three
- Five past Six
- Quarter to Seven
- Ten past Eleven
- Twenty-five past Nine

If it is ten past five, will the hour hand be slightly after the five or slightly before the five?

If it is half past six, will the hour hand be after the six or before the six?

If it twenty-five to seven, will the hour hand be slightly before or after the seven?

Clock faces

Use clock faces to show what the time will be twenty minutes past the times given below:

- Twenty-five past Four
- Ten past Seven
- Quarter past Seven
- Twenty to Eleven
- Twenty-five past Eleven

Spring 2: Week 5: Working at greater depth

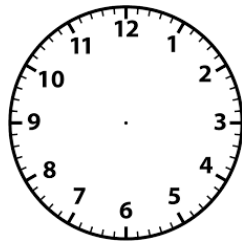
Measures: Time: Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times.

Teaching Sequence

- Read the clock in 5 min intervals past the hour
- Read clock in 5 min intervals to the hour.
- Draw hands on clock showing 5 min intervals
- Know that 15 minutes past is the same as quarter past.
- Know that 15 minutes to is the same as quarter to.

Activities for pupils working at greater depth:

The time is twenty past twelve.
Rhian says there are 2 hours to wait before her favourite TV programme starts.
What time does her favourite programme start? Show it on the clock face.

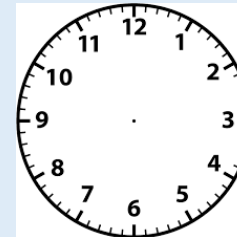


Explain why you could almost do without a minute hand when telling the time.

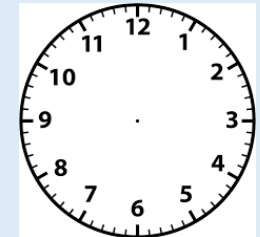
Draw a clock face with a time on it and then draw another showing what the time will be:

- Five minutes later
- Twenty minutes later
- Twenty-five minutes later

A film at the cinema starts at five past eight and finishes one hour and twenty minutes later. Draw two clock faces to show the start time and the finish time of the film.



Start time



Finish time

True or False?

- It is five past two and it will be twenty-five to four in 1 and a half hours.
- True or False?
- It is ten past four and it was twenty past one an hour and a half ago.
- True or False?
- It is five to 11 and it will be 1 o'clock in 2 hours' time.
- True or False?

Spring 2: Week 5: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils books so that they can keep their own checks.

Measures: 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.

Me

My
Teacher

Can you tell what the time will be five minutes later or what the time was five minutes earlier?

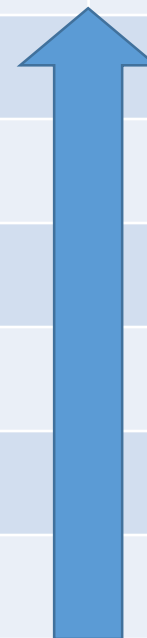
Can you draw times on clock faces to the intervals of o'clock, half past, quarter past and quarter to the hour?

Can you read the clock to five minute intervals to the hour?

Can you read the clock in five minute intervals past the hour?

Can you read the clock to quarter past and quarter to?

Can you read the clock to o'clock and half past?



Year 2: Spring 2

Week 6: Consolidate and Assess

- Start this week by using the warm ups outlined on the next page so as to ensure pupils are fluent and secure with their basic skills.
- Use a simple assessment process to check on pupils' confidence and consistency in using the learning outlined in the Autumn and Spring terms.
- Analyse the results and use information to help focus the intervention sessions, as needed, for the following term.

Year 2: Spring 2: Week 6

The focus of the consolidation should be the following aspects:

- Count on/back in steps of 2s and 5s to 100, 3s to 60 from 0; and in 10s to 100 and beyond from 0 and any given number
 - Count in $\frac{1}{2}$ s to 5
 - Identify even and odd numbers to 50
 - Read and write all numbers to 100 and beyond in numerals and write all numbers in words to 50 and beyond
 - Order a set of numbers (at least 3) to 50 and beyond in decreasing value
 - Compare numbers up to 50 using =, <, > symbols
 - Round numbers to the nearest 10 up to at least 50
 - Recall fluently all addition number bonds to 20 and know all the subtraction number bonds to 20
 - Find $\frac{1}{10}$ more/less than a given number up to 50 and beyond
 - Add/subtract 2-digit and 1-digit numbers to 20; a 2-digit number and tens
 - Add/subtract: 2-digit and 1-digit numbers, a 2-digit number and tens and add 3 one digit numbers
 - Recite the 2 and 10 times tables and answer any calculation involving the 2 and 10 times table in any order
 - Recite the 5 times tables
 - Double any number up to at least 40
 - Halve any even 2-digit number up to 80
-
- Although practise and consolidation should be on-going through each half term, during Week 6 there should be greater opportunity taken to check pupils' learning.
 - Summative and Formative assessment procedures should help teachers gain a clear picture as to which pupils are at different stages, including mastery and greater depth.

YEAR 2 : SUMMER 1: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
4 Number & Place Value	4 Addition & Subtraction	8 Measures Capacity & Volume + Temperature	3 Fractions	4 Geometry Position & Direction	5 Geometry 2D & 3D Shapes
Recognise the place value of each digit in a 2 digit number	Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.	Choose and use appropriate standard units to estimate and measure: - temperature ($^{\circ}\text{C}$) - capacity (l/ml) to the nearest appropriate unit, using, thermometers & measuring vessels.	Revisit and revise previous Year 2 objectives with regard to fractions, ie Know $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ of numbers and work out equivalence of fractions	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)	Compare and sort common 2D and 3D shapes and everyday objects.
<ul style="list-style-type: none"> ➤ Identify the tens and ones in any 2 digit number ➤ Partition a 2 digit number identifying the value of each digit 	<ul style="list-style-type: none"> ➤ Recognise the inverse relationship between addition and subtraction, e.g. $5+7$; $12-5$; $12-7$ etc. ➤ Infer the related calculation from a given, e.g. If $6+8=14$ what is $14-8$? ➤ Complete missing number calculations. 	<ul style="list-style-type: none"> ➤ Know how much one litre is in ml ➤ Know that many liquids are sold in litres ➤ Know amounts that are more, less than a litre ➤ Measure liquid accurately to the nearest litre and 50 ml ➤ Know that 0°C is freezing point of water ➤ Know that 100°C is boiling point of water ➤ Use a thermometer to accurately measure temperature ➤ Read liquid amount to the nearest 10ml 	<ul style="list-style-type: none"> ➤ Know what $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ means ➤ Find $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ of a shape or length ➤ Find $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ of a given number ➤ Write simple fractions, e.g. $\frac{1}{2}$ of $6 = 3$ ➤ Recognise and demonstrate the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$ 	<ul style="list-style-type: none"> ➤ Know what a right angle is ➤ Describe quarter, half and three-quarter turns in relation to right angles ➤ Use the terms clockwise, anti-clockwise to describe movement 	<ul style="list-style-type: none"> ➤ Compare and sort a set of triangles and pyramids recognising their similarities and differences ➤ Gather a set of rectangles and cuboids, recognising their similarities and differences ➤ Gather a set of circles and spheres, recognising their similarities and differences

Year 2: Summer 1

Week 1: Number and Place Value

Recognise the place value of each digit in a 2 digit number

Summer 1: Week 1: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Summer 1 Week 1

Objective:
Number and
Place Value

Recognise the place value of each digit in a 2 digit number

Partition the following numbers, the first is done for you:

$$45 = (\quad \quad \quad)$$

$$36 = (30 + 6)$$

$$58 = (\quad + \quad)$$

$$72 = (\quad + \quad)$$

$$81 = (\quad + \quad)$$

Ten more or less than

What is 10 more than 57:

What is 10 less than 47:

What is 10 more than 77:

What is 10 less than 53:

What is 10 more than 78:

A number has 3 tens and 6 ones,
what is it?

A number has 8 tens and 7 ones,
what is it?

Which numbers come immediately before
and after:

Before

78

91

After

Summer 1: Week 1: Practice and Consolidation

Number and Place Value: Recognise the place value of each digit in a 2 digit number

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:								
<ul style="list-style-type: none">➤ Identify the tens and ones in any 2 digit number➤ Partition a 2 digit number identifying the value of each digit	<ul style="list-style-type: none">• The oracy sessions will mostly be in the form of reminders.• Games could include rapid response to saying, e.g. 3 tens and 7 units is 37.• How many tens in a number like 48?• Rapid response is the key at this stage of the year.• Rapid response to adding one or taking one away from a given number.• Rapid response to adding ten or taking away ten from a given number.• Give up to 6 pupils a number between 0 and 99 and get them to organise themselves so that the smaller number is first.	<p>Look at the abacus below: If you put four beads on this abacus you can make the following numbers: 4, 13, 22, 31, and 40. How many numbers can you make with 5 beads or 6 beads.</p> <div><div></div><div></div><div>TensUnits</div></div> <p>Complete the following partitions, one has been done for you:</p> <p>36= (30 + 6)</p> <table><tr><td>• 45</td><td>58</td></tr><tr><td>• 56</td><td>93</td></tr><tr><td>• 91</td><td>17</td></tr><tr><td>• 27</td><td>32</td></tr></table>	• 45	58	• 56	93	• 91	17	• 27	32
		• 45	58							
		• 56	93							
		• 91	17							
		• 27	32							
A number has 4 tens and 5 ones; what is it?	<div></div>									
A number has 3 tens and 6 ones; what is it?	<div></div>									
A number has 7 tens and 9 ones; what is it?	<div></div>									
The number 37 has	<div></div> groups of tens and <div></div> ones.									
The number 29 has	<div></div> groups of tens and <div></div> ones.									

Summer 1: Week 1: Mastering this Objective - Deeper Understanding

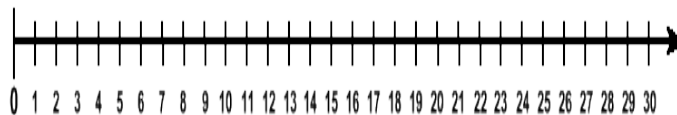
Number and Place Value: Recognise the place value of each digit in a 2 digit number

Teaching Sequence

- Identify the tens and ones in any 2 digit number
- Partition a 2 digit number identifying the value of each digit

If pupils have mastered this objective they will be able to complete these activities independently:

Position the following numbers on the number line below:



27 18 23 12 7 19

6 children were given a maths problem where the answer was 61. Ariana wrote 55 as her answer; Gemma wrote 43; Jack wrote 78; Hamij wrote 75; Harry wrote 64 and Mustafa wrote 56. Who was closest to the answer?

Yes or No

If I start with 7 and I count in 5s, I will say 19. Yes or No?

If I start with 9 and I count in 10s, I will say 39. Yes or No?

If I start with 8 and I count in 3s, I will say 31. Yes or No

Create 2-digit numbers where the unit is one less than the tens. What is the largest possible number, and what is the smallest number, you can create?

Largest

Smallest

Create two 2-digit numbers that have a difference of 10 and the number in the ones is 7.

Summer 1: Week 1: Working at greater depth

Number and Place Value: Recognise the place value of each digit in a 2 digit number

Teaching Sequence

- Identify the tens and ones in any 2 digit number
- Partition a 2 digit number identifying the value of each digit

Activities for pupils working at greater depth:

The digits in a number like 47 add up to 11. If I had a 2-digit number whose digits add up to 14, what is the largest number it could be:

The digits of a 2-digit number add up to 16. What are the largest and smallest numbers they could be:

largest

smallest

Position the number 36 on each line.

0 _____ 100

30 _____ 40

33 _____ 50

3	6	9	12	15
18				
	B			45
48				
		A		

Look carefully at the 5 x 5 grid above. Work out what A and B are. What will be the largest number on the completed grid?

Look at the number cards below. Using the cards make up two, 2-digit numbers that are more than 20 apart.

6	5	2	4	7
---	---	---	---	---

Now two numbers that are less than 20 apart.

Make up two numbers that are as far apart as possible.

Summer 1: Week 1: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Number and Place Value: Recognise the place value of each digit in a 2 digit number

Me

My
Teacher

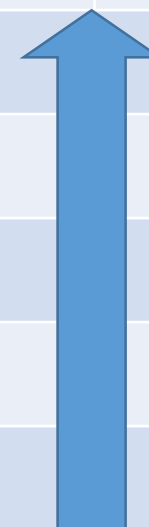
Can you work out which numbers should and should not be in a sequence up to the value of 100?

Can you work out quickly which number comes before and after a given 2-digit number?

Can you work out quickly what is 10 more than a given 2-digit number?

Can you partition a 2-digit number to show the value of each digit?

Can you recognise the 'tens' number in a 2-digit number?



Year 2: Summer 1

Week 2: Addition and Subtraction

Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

Summer 1: Week 2: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Summer 1 Week 2

Objective:
Addition & Subtraction

Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

Each set of numbers makes up 4 number sentences as below:

$$34 + 12 = 46$$

$$12 + 34 = 46$$

$$46 - 12 = 34$$

$$46 - 34 = 12$$

Now make up 4 number sentences with the following sets of numbers:

34, 15, 49

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$\square + \square = \square$$

$$17 + 15 = \square$$

$$23 + 24 = \square$$

$$30 - 17 = \square$$

$$27 - 14 = \square$$

$$23 + \square = 39$$

$$36 + \square = 42$$

$$40 - \square = 17$$

$$30 - \square = 13$$

If $56 + 15 = 71$

What else do you know about the three numbers: 56; 15 and 71?

If $23 + 67 = 90$

What else do you know about the three numbers 23; 67 and 90?

Summer 1: Week 2: Practice and Consolidation

Addition & Subtraction: Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:	
<ul style="list-style-type: none"> ➤ Recognise the inverse relationship between addition and subtraction, e.g. $5+7$; $12-5$; $12-7$ etc. ➤ Infer the related calculation from a given, e.g. If $6+8=14$ what is $14-8$? ➤ Complete missing number calculations. 	<ul style="list-style-type: none"> Recall learning from the Spring term related to the commutative rule and addition and subtraction. Focus on practical activities, bringing two groups together, e.g. 7 and 5 items. Ensure pupils recognise this as addition. When the answer is worked out, e.g. 12, explain how taking either the original 7 or 5 away from this total will leave the other, e.g. $12-7=5$ or $12-5=7$. Introduce the term 'inverse' and ensure that pupils use it in reference to the way they carry out calculations. 	<p>If $14 + 8 = 22$, what is $22 - 14$ and, $22 - 8$?</p> <p>If $34 + 12 = \square$ what is $\square - 34$ and $\square - 12$?</p>	<p>If $23 + 24 = 47$ what is $47 - 24$ and, $47 - 23$</p> <p>If $45 + 16 = \square$ what is $\square - 16$ and $\square - 45$</p>
		<p>Complete the following:</p> <div> $23 + \square = 39$ $34 + \square = 56$ </div> <div> $45 + \square = 76$ $27 + \square = 67$ </div>	
		<p>Now these:</p> <div> $45 - \square = 23$ $34 - \square = 23$ </div> <div> $29 - \square = 17$ $50 - \square = 24$ </div>	

Summer 1: Week 2: Mastering this Objective - Deeper Understanding

Addition & Subtraction: Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

Teaching Sequence

If pupils have mastered this objective they will be able to complete these activities independently:

- Recognise the inverse relationship between addition and subtraction, e.g. $5+7$; $12-5$; $12-7$ etc.
- Infer the related calculation from a given, e.g. If $6+8=14$ what is $14-8$?
- Complete missing number calculations.

Using the Inverse rule

If $16 + 9 = 25$,
what is $9 + 16$;
 $25 - 16$
and, $25 - 9$

Explain to your friend why you don't need to work this out by adding or subtracting each stage.

Create 4 number sentences with the following calculations:

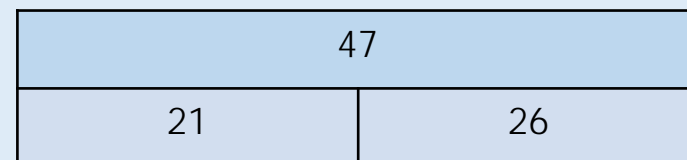
$$16 + \boxed{} = 34$$

$$30 - \boxed{} = 21$$

$$35 + \boxed{} = 67$$

$$92 - \boxed{} = 65$$

Look at the following bar model.



Using the bar model we can create 4 number sentences:

$$21 + 26 = 47$$

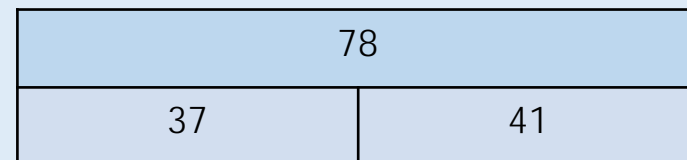
$$26 + 21 = 47$$

$$47 - 21 = 26$$

$$47 - 26 = 21$$

Now create your own bar model and 4 sentences with the numbers 63, 25 and 38.

Now do the same with this bar model:



Summer 1: Week 2: Working at greater depth

Addition & Subtraction: Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

Teaching Sequence

- Recognise the inverse relationship between addition and subtraction, e.g. $5+7$; $12-5$; $12-7$ etc.
- Infer the related calculation from a given, e.g. If $6+8=14$ what is $14-8$?
- Complete missing number calculations.

Activities for pupils working at greater depth:

Completing Bar Models

Look at the bar model below. Find the missing number before creating the 4 number sentences.

39	
21	

Now do the same with these 2 incomplete bar models:

64	
39	

75	
29	

Explain the term inverse to a partner.

Finding different answers:

Using the 4 number sentences system, e.g. $34 + 14 = 48$

$$14 + 34 = 48$$

$$48 - 14 = 34$$

$$48 - 34 = 14$$

Find at least 3 different ways to complete these number sentences. Don't forget to show your 4 number sentences each time:

$$\boxed{} + \boxed{} = 50$$

Now do the same with:

$$\boxed{} + \boxed{} = 70$$

Summer 1: Week 2: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Addition & Subtraction: Recognise and use the inverse relationship between addition and subtraction and use this to check calculations and missing number problems.

Me

My
Teacher

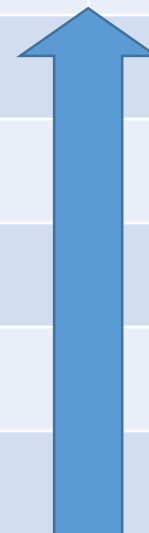
Do you know what the term 'inverse' means and can you describe it to someone else?

Do you know that when given 3 numbers you can create 4 number sentences for addition and subtraction?

Do you know that when subtracting you must always take the smaller number from the larger one?

Do you know that when adding you can start with any number?

Do you know that in the calculation ' $a + b = c$ '; that $c - a = b$ and $c - b = a$?



Year 2: Summer 1

Week 3: Measures: Capacity, Volume and Temperature

Choose and use appropriate standard units to estimate and measure:

- temperature ($^{\circ}\text{C}$)
- capacity (l/ml)

to the nearest appropriate unit, using, thermometers & measuring vessels.

Summer 1: Week 3: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Summer 1 Week 3

**Objective:
Measures**

Capacity, Volume and Temperature: Choose and use appropriate standard units to estimate and measure: temperature ($^{\circ}\text{C}$); capacity (l/ml) to the nearest appropriate unit, using thermometers & measuring vessels.

Temperature is measured in degrees.
We mostly use the 'centigrade' measure to tell us the temperature each day.
In England during the summer which of these temperatures is most likely to be true.
Put a circle around the correct one.

3 $^{\circ}\text{C}$ 20 $^{\circ}\text{C}$ 9 $^{\circ}\text{C}$ 50 $^{\circ}\text{C}$

The boiling point of water is one of the following measures:
Put a circle around the correct answer.

50 $^{\circ}\text{C}$ 100 $^{\circ}\text{C}$ 25 $^{\circ}\text{C}$ 200 $^{\circ}\text{C}$
Now what about the freezing point of water:

10 $^{\circ}\text{C}$ 20 $^{\circ}\text{C}$ 0 $^{\circ}\text{C}$ 50 $^{\circ}\text{C}$

At the supermarket we can buy milk in containers:
Which of these measures is milk most likely to be sold?:
Circle the correct one.

1 litre 10 litres 20 litres 50 litres

Is 500ml the same as:
Put a circle around the correct answer.

$\frac{1}{2}$ litre $\frac{1}{4}$ litre 1 litre 2 litres

How much liquid is there likely to be in a mug of tea?

$\frac{1}{2}$ litre 5 litres 10 litres 20 litres

Which country or state is most likely to have a temperature of more than 40 $^{\circ}\text{C}$?

England Dubai Iceland

Summer 1: Week 3: Practice and Consolidation

Measures: Capacity, Volume and Temperature: Choose and use appropriate standard units to estimate and measure: temperature (°C); capacity (l/ml) to the nearest appropriate unit, using, thermometers & measuring vessels.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:								
<ul style="list-style-type: none">➤ Know how much one litre is in ml➤ Know that many liquids are sold in litres➤ Know amounts that are more, less than a litre➤ Measure liquid accurately to the nearest litre and 50 ml➤ Know that 0°C is freezing point of water➤ Know that 100°C is boiling point of water➤ Use a thermometer to accurately measure temperature➤ Read liquid amount to the nearest 10ml	<ul style="list-style-type: none">• Talk to pupils about measuring the temperature. Most pupils will already have some experience of keeping records of temperature through the daily weather records that they may have kept in EY or Year 1.• Talk about the way temperature is measured in either Centigrade or Fahrenheit. Explain that most older people will still be more familiar with the Fahrenheit scale.• Focus on the Centigrade scale and talk about boiling point being 100°C and freezing being 0°C.• Revise the work already covered for measuring liquids and the use of litres and millilitres.	<p>Join the first measures to the correct measures on line below</p> <table><tr><td>1000ml</td><td>250ml</td><td>500ml</td><td>750ml</td></tr><tr><td>$\frac{3}{4}$ litre</td><td>$\frac{1}{2}$ litre</td><td>1 litre</td><td>$\frac{1}{4}$ litre</td></tr></table> <p>Name 4 items that we know very well which are sold by the litre.</p> <p>1 _____</p> <p>2 _____</p> <p>3 _____</p> <p>4 _____</p> <p>Estimate what you think the following temperatures are:</p> <p>Water in a bath _____ Sunny day in August _____</p> <p>Inside a fridge _____ Your classroom _____</p>	1000ml	250ml	500ml	750ml	$\frac{3}{4}$ litre	$\frac{1}{2}$ litre	1 litre	$\frac{1}{4}$ litre
1000ml	250ml	500ml	750ml							
$\frac{3}{4}$ litre	$\frac{1}{2}$ litre	1 litre	$\frac{1}{4}$ litre							

Summer 1: Week 3: Mastering this Objective - Deeper Understanding

Measures: Capacity, Volume and Temperature: Choose and use appropriate standard units to estimate and measure: temperature ($^{\circ}\text{C}$); capacity (l/ml) to the nearest appropriate unit, using, thermometers & measuring vessels.

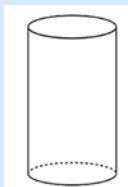
Teaching Sequence

- Know how much one litre is in ml
- Know that many liquids are sold in litres
- Know amounts that are more, less than a litre
- Measure liquid accurately to the nearest litre and 50 ml
- Know that 0°C is freezing point of water
- Know that 100°C is boiling point of water
- Use a thermometer to accurately measure temperature
- Read liquid amount to the nearest 10ml

If pupils have mastered this objective they will be able to complete these activities independently:

Create a chart of the approximate temperature in relation to the following contexts:

	Temp
In the desert in August	
North Pole	
Typical day in May in the UK	
Midnight in May in the UK	



A glass holds 250 ml of liquid.
How many glasses can be filled from a litre jug?

In a class of 24 children, half the class like orange juice and the other half like milk. Each child has a glass of either milk or orange juice each day
How many 1 litre jugs of milk and orange are needed each day?

John has the job of keeping a record of the temperature each day. He notices that the temperature is at its hottest at 1pm each day. It drops by 2°C by the time it is 4pm each day and it is 5°C colder at 9 in the morning than it is at 1pm each day. Complete the temperature chart below:

	9am	1pm	4pm
Monday		12°C	
Tuesday	9°C		
Wednesday			13°C

Summer 1: Week 3: Working at greater depth

Measures: Capacity, Volume and Temperature: Choose and use appropriate standard units to estimate and measure: temperature ($^{\circ}\text{C}$); capacity (l/ml) to the nearest appropriate unit, using, thermometers & measuring vessels.

Teaching Sequence

- Know how much one litre is in ml
- Know that many liquids are sold in litres
- Know amounts that are more, less than a litre
- Measure liquid accurately to the nearest litre and 50 ml
- Know that 0°C is freezing point of water
- Know that 100°C is boiling point of water
- Use a thermometer to accurately measure temperature
- Read liquid amount to the nearest 10ml

Activities for pupils working at greater depth:

Filling a measuring jug



A glass of milk holds 250ml.
How many glasses will it take to fill a 3 litre measuring jug?

What about a 5 litre measuring jug?

In a class of 24 children, each has a glass of milk at lunchtime.
Each glass holds 250ml.
How many litres of milk is drunk by this group each lunchtime?

If the milk is bought in a plastic container which holds 2 litres, how many plastic containers are bought for this group each lunchtime

Carry out some research to find out the temperature in various places across the world at certain times of the year.
Fill in the table below:

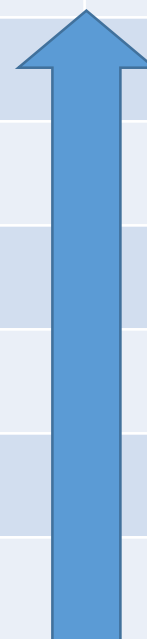
Temperature in $^{\circ}\text{C}$ at different times of the year				
	Jan	April	July	Nov
Brazil				
England				
North Pole				
Equator				
Spain				

Taking account of the information on your chart, which place is the hottest and at what time of the year?
Which place is the coldest and at what time of the year?

Summer 1: Week 3: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Measures: Capacity, Volume and Temperature: Choose and use appropriate standard units to estimate and measure: temperature (°C); capacity (l/ml) to the nearest appropriate unit, using, thermometers & measuring vessels.		Me	My Teacher
	Can you estimate the temperature outside to a reasonable approximation?		
	Do you know that 100°C is the boiling point of water?		
	Do you know that 0°C is the freezing point of water?		
	Do you know amounts that are more or less than 1 litre?		
	Can you name liquids which are sold in 1 litre amounts?		
	Do you know how much 1 litre is?		



Year 2: Summer 1

Week 4: Fractions

Revisit and revise previous Year 2 objectives with regard to fractions, i.e. know $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ of numbers and work out equivalence of fractions

Summer 1: Week 4: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name _____

Summer 1 Week 4

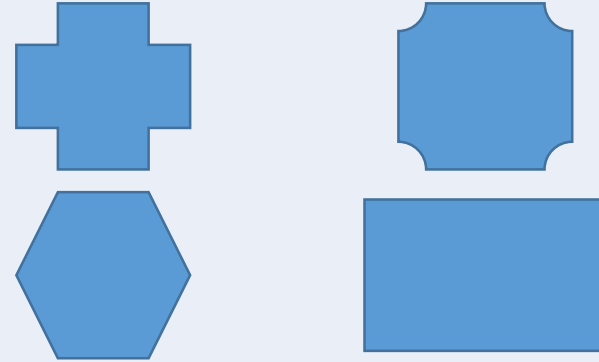
Objective:
Fractions

Revisit and revise previous Year 2 objectives with regard to fractions, i.e. know $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ of numbers and work out equivalence of fractions

Find $\frac{1}{3}$ of the following numbers:

15	<input type="text"/>	33	<input type="text"/>
27	<input type="text"/>	30	<input type="text"/>
18	<input type="text"/>	24	<input type="text"/>
21	<input type="text"/>	12	<input type="text"/>

Shade in $\frac{3}{4}$ of the following shapes:



Tom was running in a charity race.
He aimed to run 800 metres.

How far had he run when he was $\frac{1}{4}$ of the way?

How far had he run when he was $\frac{3}{4}$ of the way?

A sack of potatoes contained 16 kg of potatoes.

A family used 4Kg every time they made chips for their evening meal.

How many evening meals can they have chips before the sack is empty?

Summer 1: Week 4: Practice and Consolidation

Fractions: Revisit and revise previous Year 2 objectives with regard to fractions, ie, know $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ of numbers and work out equivalence of fractions

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Know what $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ means ➤ Find $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ of a shape or length ➤ Find $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ of a given number ➤ Write simple fractions, e.g. $\frac{1}{2}$ of 6 = 3 ➤ Recognise and demonstrate the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$ 	<ul style="list-style-type: none"> • Remind pupils of the learning they did in relation to fractions during the Spring term and in Year 1. • Rapid oral recall of half of numbers up to 100. • Rapid oral recall of a quarter of numbers up to 100. • Then, rapid recall of three-quarters of numbers up to 100. • Find one third and two thirds of numbers up to 100. • Recognise the similarities between finding a third as dividing by 3 and recognise the similarities of finding a quarter as dividing by 4. • Explore finding one tenth as dividing by 10. • In small groups, play snap with equivalent fractions. 	<p>Equivalent Fractions</p> <p>Complete the following: Work out what the x should be.</p> $\frac{4}{x} = \frac{5}{10} = \frac{6}{x} = \frac{x}{14} = \frac{10}{x} = \frac{1}{2}$ $\frac{3}{12} = \frac{4}{x} = \frac{x}{24} = \frac{10}{x} = \frac{x}{32} = \frac{1}{4}$ <p>What is $\frac{3}{4}$ of 24? <input type="text"/> What is $\frac{3}{4}$ of 16? <input type="text"/></p> <p>What is $\frac{1}{3}$ of 12? <input type="text"/> What is $\frac{1}{3}$ of 30? <input type="text"/></p> <p>What is $\frac{1}{4}$ of 20? <input type="text"/> What is $\frac{1}{4}$ of 40? <input type="text"/></p> <p>Rowan rows his boat for 600 metres each day. How far will he have travelled when he has gone a $\frac{1}{3}$ of the way? <input type="text"/></p> <p>Jenny plays football for 60 minutes. How much time has gone when she is $\frac{3}{4}$ of the way through the match? <input type="text"/></p>

Summer 1: Week 4: Mastering this Objective - Deeper Understanding

Fractions: Revisit and revise previous Year 2 objectives with regard to fractions, ie, know $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ of numbers and work out equivalence of fractions

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:																																				
<ul style="list-style-type: none">➤ Know what $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ means➤ Find $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ of a shape or length➤ Find $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ of a given number➤ Write simple fractions, e.g. $\frac{1}{2}$ of 6 = 3➤ Recognise and demonstrate the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$	<p>Write 2 equivalent fractions for the following fractions:</p> <div>$\frac{1}{2},$$\frac{3}{4},$</div> <div>$\frac{1}{4},$$\frac{1}{3},$</div> <div>$\frac{2}{3},$$\frac{1}{8},$</div>	<p>Find $\frac{1}{3}$ of 300 g.</p> <p>Find $\frac{2}{3}$ of 600m.</p> <p>Find $\frac{3}{4}$ of 1 litre</p> <p>Find $\frac{1}{4}$ of 880m</p>																																			
	<p>Colour $\frac{2}{3}$ of the grid.</p> <table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> <p>Think of another way of colouring $\frac{2}{3}$ of the grid.</p>																																				

Summer 1: Week 4: Working at greater depth

Fractions: Revisit and revise previous Year 2 objectives with regard to fractions, ie, know $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ of numbers and work out equivalence of fractions

Teaching Sequence

- Know what $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ means
- Find $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ of a shape or length
- Find $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ and $\frac{1}{3}$ of a given number
- Write simple fractions, e.g. $\frac{1}{2}$ of 6 = 3
- Recognise and demonstrate the equivalence of $\frac{1}{2}$ and $\frac{2}{4}$

Activities for pupils working at greater depth:

Leanne had a bag of tennis balls. Two-thirds of the balls were used during the lesson and others remained in the bag.

Explain why there had to be an even number of balls used during the lesson.

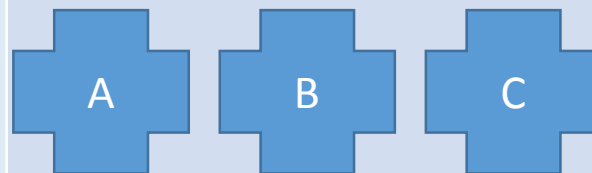
If 40 balls were used during the lesson, how many balls were there altogether?



David had 48 stickers. If David put 16 of his 48 stickers in the album, what fraction of his stickers were not in the album?

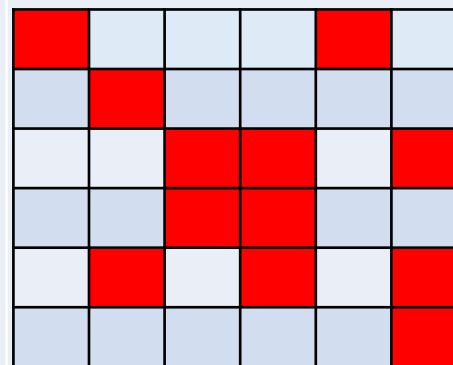


All 24 children in a class had sweaters. Two-thirds of the children had blue sweaters, the others had red sweaters. How many children had red sweaters?



Shade in a $\frac{1}{4}$ of A; $\frac{3}{4}$ of B and $\frac{1}{2}$ of C. After you have done that, will there be:

- More shaded areas across all 3
- More unshaded areas across all 3
- About the same shaded as unshaded across all 3?



How much of the 6x6 grid is filled in?

Does it matter that there is no specific pattern to the shading?

Explain.

Summer 1: Week 4: Assessment (as Spring 2 Week 3)

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Fractions: Revisit and revise previous Year 2 objectives with regard to fractions, i.e. know $\frac{1}{2}$, $\frac{3}{4}$, $\frac{1}{4}$ of numbers and work out equivalence of fractions

Me

My
Teacher

Can you calculate $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{3}$ or $\frac{3}{4}$ of a given number up to 100?

Do you know that $\frac{1}{4}$ can be written as $\frac{2}{8}$ or $\frac{4}{16}$, etc.?

Do you know that $\frac{1}{3}$ can be written as $\frac{2}{6}$ or $\frac{3}{9}$, etc.?

Do you know that $\frac{1}{2}$ can be written as $\frac{2}{4}$ or $\frac{3}{6}$, etc.?

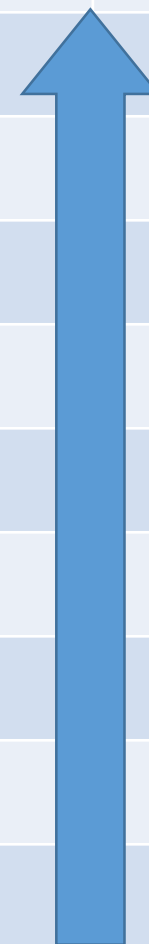
Do you know that the symbol $\frac{2}{3}$ stands for two-thirds of the value of a number or object?

Do you know that the symbol $\frac{3}{4}$ stands for a three-quarters of the value of a number or object?

Do you know that the symbol $\frac{1}{4}$ stands for a quarter of the value of a number or object?

Do you know that the symbol $\frac{1}{3}$ stands for a third of the value of a number or object?

Do you know that the symbol $\frac{1}{2}$ stands for half the value of a number or object?



Year 2: Summer 1

Week 5: Geometry: Position and Direction

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)

Summer 1: Week 5: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Summer 1 Week 5

Objective:
Geometry

Position & Direction: 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)



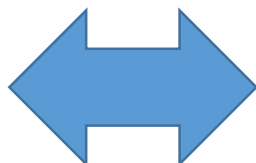
Why is this triangle known as a 'right-angled' triangle?

Draw another right angled triangle.

Which of these is moving in a clockwise and which is moving in an anti-clockwise direction?



Move these shapes:
One quarter turn clockwise



Daisy is facing forwards. Which way will she be facing if she makes half a turn clockwise?
Will she be facing a different way if she turned half a turn anti-clockwise?

Summer 1: Week 5: Practice and Consolidation

Geometry: Position & Direction: 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)

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Know what a right angle is ➤ Describe quarter, half and three-quarter turns in relation to right angles ➤ Use the terms clockwise, anti-clockwise to describe movement 	<ul style="list-style-type: none"> • Look for examples of right angles in the classroom and in the immediate outside environment. • Use the term 'right angle' and ensure pupils are confident in using it. • Use the terms 'clockwise' and 'anticlockwise' in relation to the direction of turns made. • Link the terms with the way the hands on the clock moves. Let pupils know that the term 'anti' in this respect is opposite. • Remind pupils about movements through a quarter, half and three-quarter turns. Do this physically with pupils in the first instance and then using a large sheet with four different items at NESW and get pupils to describe moving from one to another. 	<p>Find at least 5 right angles in the classroom or outside and make a list of them.</p> <p>Draw a right angle and explain why it is so useful in buildings.</p> <div data-bbox="1043 628 1352 714"> </div> <p>Which of these is turning in a clockwise and which is turning in an anti-clockwise direction?</p> <p>Move these shapes in a clockwise direction through one quarter turn: then through half a turn.</p> <div data-bbox="1004 871 1758 1013"> </div> <div data-bbox="966 1071 1468 1328"> </div> <p>Betty is facing the school. If she makes a quarter turn, anti-clockwise, what will she be facing?</p>

Summer 1: Week 5: Mastering this Objective - Deeper Understanding

Geometry: Position & Direction: 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)

Teaching Sequence

If pupils have mastered this objective they will be able to complete these activities independently:

- Know what a right angle is
- Describe quarter, half and three-quarter turns in relation to right angles
- Use the terms clockwise, anti-clockwise to describe movement

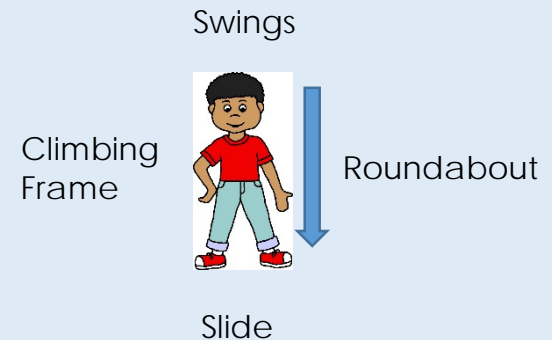
Write a set of instructions for your friend to follow. For example, start facing the school; walk five steps forward, now make a quarter turn in a clockwise direction; walk four more pace, etc. Have something at the end for them to find. Now change places.



If someone makes a half turn, does it matter whether he or she turns clockwise or anti-clockwise?

John makes a quarter turn clockwise. What type of turn does he need to make anti-clockwise to end up facing the same way?

Create a scenario similar to this one and ask your friends questions related to turns and clockwise or anti-clockwise movements.



Ben is on a playground. He is facing the slide. What will he be facing if he makes a three-quarter turn clockwise?

Now think of some more questions to ask your friend before creating your own example.

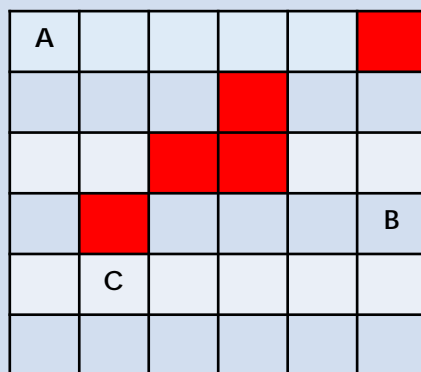
Summer 1: Week 5: Working at greater depth

Geometry: Position & Direction: 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)

Teaching Sequence

- Know what a right angle is
- Describe quarter, half and three-quarter turns in relation to right angles
- Use the terms clockwise, anti-clockwise to describe movement

Activities for pupils working at greater depth:



Now create similar obstacle systems on 6x6 grids

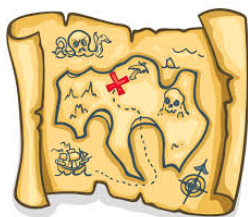
Work out a way of getting from A to B; B to C; and C to A, describing your movements in terms of clockwise and anti-clockwise movements, avoiding the obstacles.

Use a chess board. Place a figure (play person) on one square and set a challenge for a friend to describe how he would move to another square on the board.

Put in some obstacles, e.g. a lake that he cannot move through.

When you are used to the game, try to give a challenge of getting from one square to another, using as few moves as you require.

Create a treasure map with interesting items at the four points.



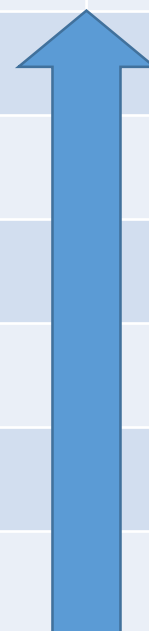
Write a set of instructions for others to follow but you must use appropriate language, such as clockwise, anti-clockwise, quarter, half and three-quarter turns, etc.

On the playground create a chalked map with treasure at different points. Make your friends start at a given point and instruct them to move a given number of paces after turning through various turns in a clockwise or anticlockwise direction. Now change places.

Summer 1: Week 5: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Geometry: Position & Direction: 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)		Me	My Teacher
	Can you appreciate why right angles are useful for buildings?		
	Do you recognise right angles in the environment, both indoor and outdoor?		
	Can you combine turns with clockwise and anti-clockwise movements?		
	Can you work out what a quarter, half and three quarter turn looks like?		
	Do you know and understand the term 'anti-clockwise' movement?		
	Do you know and understand the term 'clockwise' movement?		



Year 2: Summer 1

Week 6: Geometry : 2D and 3D Shapes

Compare and sort common 2D and 3D shapes and everyday objects.

Summer 1: Week 6: Pre-Learning Task

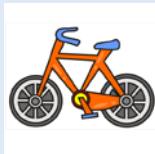
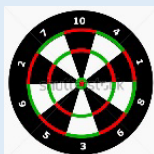
The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Summer 1 Week 6

**Objective:
Geometry**

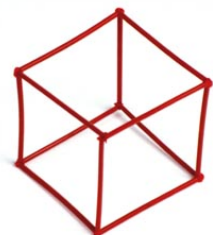
2D and 3D Shapes: Compare and sort common 2D and 3D shapes and everyday objects.



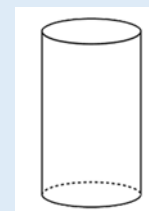
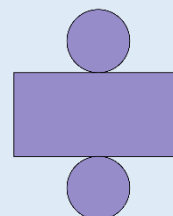
These items have circles.
Find more items that have a circle in them.



These items are spherical.
Find more items that are spherical.




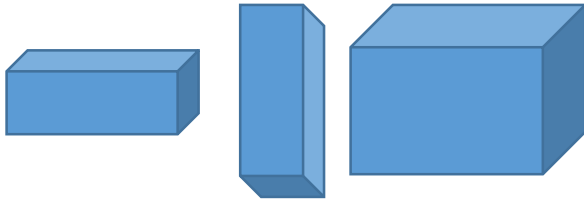
What are the differences and similarities between a cube and a square?
Explain using geometric language.



Look at the net for a cylinder and the cylinder above. Describe some differences and similarities between them.

Summer 1: Week 6: Practice and Consolidation

Geometry: 2D and 3D Shapes: Compare and sort common 2D and 3D shapes and everyday objects.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Compare and sort a set of triangles and pyramids, recognising their similarities and differences ➤ Gather a set of rectangles and cuboids, recognising their similarities and differences ➤ Gather a set of circles and spheres, recognising their similarities and differences 	<ul style="list-style-type: none"> • Look closely at a range of 3D shapes. Start with a cube and cuboid and consider the 2D shapes that make up each of the 3D shapes looked at. • Remind pupils of where they can find examples of the 3D shapes looked at in the outside environment, pointing out that some of the shapes are chosen for a range of properties that they have, e.g. strength of triangles and pyramids • Look at the properties of 3D and 2D shapes and use correct geometrical language when doing so. 	<p>Look at the following triangles and consider their similarities and differences:</p>  <p>Name 2 similarities and 2 differences. Now do the same with cuboids.</p> <p>Look at the following 3D cuboid shapes. Consider their similarities and differences:</p>  <p>Find as many cuboids; cylinders; cubes; spheres and pyramids as you can that we use everyday.</p> <p>Start by thinking of sweet containers. Some are very well known.</p>

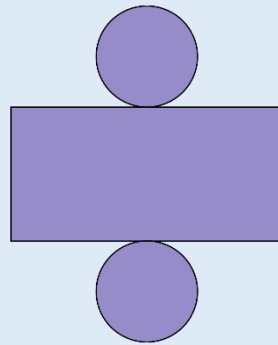
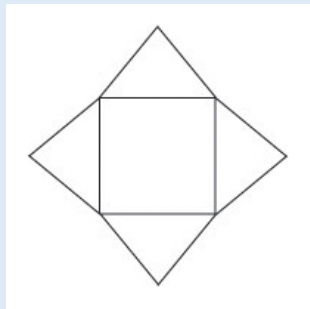
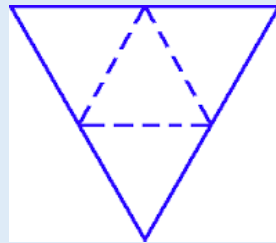
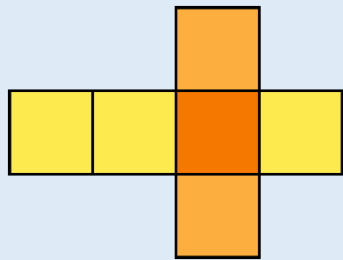
Summer 1: Week 6: Mastering this Objective - Deeper Understanding

Geometry: 2D and 3D Shapes: Compare and sort common 2D and 3D shapes and everyday objects.

Teaching Sequence

If pupils have mastered this objective they will be able to complete these activities independently:

- Compare and sort a set of triangles and pyramids, recognising their similarities and differences
- Gather a set of rectangles and cuboids, recognising their similarities and differences
- Gather a set of circles and spheres, recognising their similarities and differences

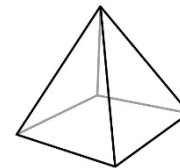


Look at the nets of the 3D shapes above. Describe how they are made up in terms of their 2D shapes.

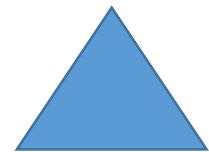
Describe a net to your friend and see if they are able to follow your instructions.

Swap tasks so that your friend describes a net to you.

Describe the similarities and differences between these 2D and 3D shapes:



Square-based pyramid



triangle



Sphere



circle

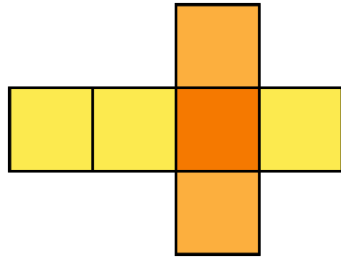
Summer 1: Week 6: Working at greater depth

Geometry: 2D and 3D Shapes: Compare and sort common 2D and 3D shapes and everyday objects.

Teaching Sequence

- Compare and sort a set of triangles and pyramids, recognising their similarities and differences
- Gather a set of rectangles and cuboids, recognising their similarities and differences
- Gather a set of circles and spheres, recognising their similarities and differences

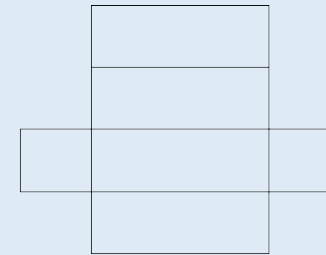
Activities for pupils working at greater depth:



Look at the net of a cube. Try and make one up and join together using sticky tape. Make it into a dice but check how the numbers opposite each other always add up to 7

Think of 5 different uses for a cube and a cuboid.

Cube	Cuboid



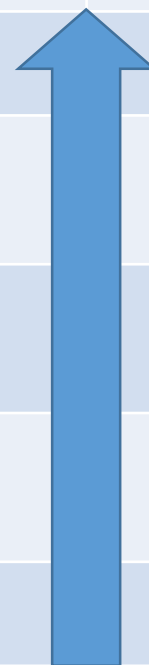
Look at how a net of a cuboid works. Try making your own. Design it as a sweet that you have just created and decorate your cuboid accordingly.

Using cubes, cuboids, spheres, cylinders, square-based pyramids and triangular-based pyramids, create a model. Try to make the model as interesting as possible. Record the model in your maths book and state which shapes you have used. Challenge your friend to create a model with a specific number of shapes that you give them. Photograph your models and place them into your maths books.

Summer 1: Week 6: Assessment (as Spring 1: Week 3)

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Geometry: Shapes: Identify 2D shapes on the surface of 3D shapes.		Me	My Teacher
	Can you appreciate why certain shapes are used for everyday things, e.g. bricks for building walls?		
	Can you identify the 3D shapes: cube, cuboid, square-based pyramid; triangular-based pyramid, sphere and cylinder in the indoor and outdoor environment?		
	Can you identify the 2D shapes that make up: cube, cuboid, square-based pyramid; triangular-based pyramid, sphere and cylinder?		
	Can you identify and name the common 3D shapes: cube, cuboid, square-based pyramid; triangular-based pyramid, sphere and cylinder?		
	Can you identify and name the common 2D shapes: circle, triangle, rectangle and square?		



YEAR 2 : SUMMER 2: Overview and Teaching Steps

WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6
9 Measures Time	4 Multiplication & Division	2 Statistics	10 Measures Money	Consolidate and Assess	Consolidate and Assess
Compare and sequence intervals of time.	Recognise that division is the inverse of multiplication and use to check calculations.	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 compare categorical data	Find different combinations of coins that equal the same amounts of money. Solve simple problems in a practical context involving addition & subtraction of money of the same unit, including giving change.	<p>Start this week by revising the learning covered in the Year 2 so as to ensure pupils are fluent and secure with their basic skills.</p> <p>Use a simple assessment process to check on pupils' confidence and consistency in using the learning outlined in Year 2.</p> <p>Analyse the results and use information to help focus the intervention sessions, as needed, for the following term.</p>	
<ul style="list-style-type: none"> ➤ Sequence events in a given day using appropriate time language, i.e. morning, afternoon, evening, night, earlier and later ➤ Order a given number of time events to the given hour or half an hour ➤ Work out longest and shortest interval of times to the given hour ➤ Revise telling the time to 5 minute intervals 	<ul style="list-style-type: none"> ➤ Know that examples such as 8×2 correspond to $16 \div 2$. ➤ Know that examples such as $20 \div 5 = 4$ correspond to 5×4. 	<ul style="list-style-type: none"> ➤ Count objects to answer questions ➤ Pose questions about given information for others to answer ➤ Compare data and answer questions ➤ Sort information and present it pictorially 	<ul style="list-style-type: none"> ➤ Find all different ways of making 10p ➤ Find all different ways of making 20p ➤ Find ways of making given amount with least number of coins ➤ Calculate change from £1 ➤ Add monetary values and find change from £1 		

Year 2: Summer 2

Week 1: Measures: Time

Compare and sequence intervals of time.

Summer 2: Week 1: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name _____

Summer 2 Week 1

Objective:
Measures

Time: Compare and sequence intervals of time.

Using the terms: morning; afternoon; evening and night, show when these events are most likely to happen:

- Breakfast
- Bed Time
- Do homework
- Moon is out
- Sun rises
- Hottest time of day
- Have tea/ supper

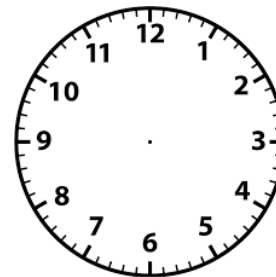
Use the terms earlier or later to fill in the blanks:

- In the week Tuesday is _____ than Thursday.
- In the year Easter comes _____ than the summer holidays.
- School finishes _____ than lunchtime.

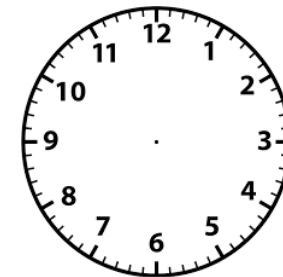
Link the event with the time:

12.00 noon	Get home from school
4.00 in the afternoon	go to bed
10.00 in the morning	have lunch
8.00 at night	do maths

Put in the correct time:



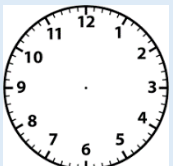
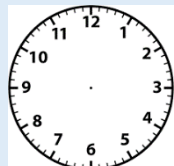
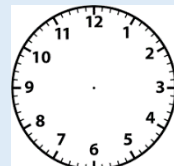
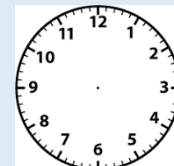




Ten past three



twenty to four

Summer 2: Week 1: Practice and Consolidation

Measures: Time: Compare and sequence intervals of time.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none"> ➤ Sequence events in a given day using appropriate time language, i.e. morning, afternoon, evening, night, earlier and later ➤ Order a given number of time events to the given hour or half an hour ➤ Work out longest and shortest interval of times to the given hour ➤ Revise telling the time to 5 minute intervals 	<ul style="list-style-type: none"> • Revise previous work done on time, reminding pupils of the five minute intervals and appropriate use of terminology. • Consider the things that happen in morning; afternoon, evening and night time. Build a picture of the things that typically happen at these times. • Use terms like 'one hour later' and 'one hour earlier'. • Get pupils to think about time intervals during a typical day, e.g. arrive at school and going home from school. 	<p>Put in the time on clock faces:</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>10 past 5</p> </div> <div style="text-align: center;">  <p>25 to 7</p> </div> <div style="text-align: center;">  <p>20 to 8</p> </div> <div style="text-align: center;">  <p>5 past 3</p> </div> </div> <p>Working out what the time is on clock faces:</p> <div style="display: flex; justify-content: space-around; align-items: flex-end;">     </div> <p>Name 3 things that happen typically in the morning. Name 3 things that happen typically in the afternoon. Name 3 things that happen typically in the evening. Name 3 things that happen typically at night.</p> <p>If I arrive at school at 8 in the morning and I have lunch at 12 noon, how much time has passed between arriving and lunch?</p> <p>I wake up at 7 in the morning and I go to bed at 8 at night. How much time has passed between getting up and going to bed?</p>

Summer 2: Week 1: Mastering this Objective - Deeper Understanding

Measures: Time: Compare and sequence intervals of time.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:	
<ul style="list-style-type: none"> ➤ Sequence events in a given day using appropriate time language, i.e. morning, afternoon, evening, night, earlier and later ➤ Order a given number of time events to the given hour or half an hour ➤ Work out longest and shortest interval of times to the given hour ➤ Revise telling the time to 5 minute intervals 	<p>TV Programme</p> <p>The time is 2.30 in the afternoon. Scarlet says there are 2 hours to wait before her favourite TV programme starts. What time does her favourite programme start?</p> <p>A film lasts for two and a half hours. It started at quarter to six, what time will it finish?</p> <p>Draw two clock faces to show start and finish time.</p>	<p>True or False</p> <p>It is four o'clock and it will be half past five in 1 and a half hours. True or False?</p> <p>It is six o'clock and it was half past three an hour and a half ago. True or False?</p> <p>It is 1 o'clock and it will be 3 o'clock in 2 hours' time. True or False?</p>
	<p>Clock faces</p> <p>Use clock faces to show what the time will be forty minutes past the times given below:</p> <ul style="list-style-type: none"> • Twenty-five past Four • Ten past Seven • Quarter past Seven • Twenty to Eleven • Twenty-five past Eleven 	<p>Swimming Lesson</p> <p>Jay and Sam both swim at the town pool.</p> <p>It takes Sam 30 minutes to get to the pool and it takes Jay 45 minutes to get there.</p> <p>It takes both 15 minutes to change and get ready to swim.</p> <p>At what time do both have to leave their houses if the lesson starts at 5.30?</p>

Summer 2: Week 1: Working at greater depth

Measures: Time: Compare and sequence intervals of time.

Teaching Sequence	Activities for pupils working at greater depth:	
<ul style="list-style-type: none"> ➤ Sequence events in a given day using appropriate time language, i.e. morning, afternoon, evening, night, earlier and later ➤ Order a given number of time events to the given hour or half an hour ➤ Work out longest and shortest interval of times to the given hour ➤ Revise telling the time to 5 minute intervals 	<p>True or False</p> <p>It is quarter past four and it will be quarter to six in 1 and a half hours. True or False?</p> <p>It is ten past six and it was twenty to four an hour and a half ago. True or False?</p> <p>It is twenty past three and it will be ten past five in 2 hours' time. True or False?</p>	<p>Journey to Grandma</p> <p>Harry visits his Grandma 3 times each week. On Monday his journey took 20 minutes. He was 3 minutes slower on Wednesday. He did the journey on Friday in 15 minutes.</p> <p>On which day did his journey take the least amount of time?</p> <p>What was the difference in time between his Wednesday and Friday journey?</p>
	<p>Playing Football</p> <p>Rose, Jim and Harry all play football for the local team. They all walk to the ground each Saturday morning.</p> <p>It takes Rose the longest to walk as she lives furthest away. It takes Jim 15 minutes less than Rose to walk to the ground. It takes Harry only 10 minutes to get to the ground, which is 10 minutes less than Jim. How long does it take Rose to walk to the ground?</p>	<p>The Party</p> <p>A class party is taking place on Saturday on at 12 noon.</p> <p>Henry will be taken by car and it will take him 45 minutes to get to the party. Sally will have to walk but it will only take her 10 minutes to get there. Javed will catch a bus and he will have to leave home 55 minutes before the party starts. At what time will each person have to leave to get to the party on time?</p>

Summer 2: Week 1: Assessment (as with Spring 2 Week 5)

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Measures: 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.

Me

My
Teacher

Can you tell what the time will be five minutes later or what the time was five minutes earlier?

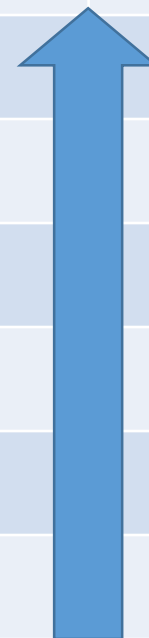
Can you draw times on clock faces to the intervals of o'clock, half past, quarter past and quarter to the hour?

Can you read the clock to five minute intervals to the hour?

Can you read the clock in five minute intervals past the hour?

Can you read the clock to quarter past and quarter to?

Can you read the clock to o'clock and half past?



Year 2: Summer 2

Week 2: Multiplication & Division

Recognise that division is the inverse of multiplication and use to check calculations.

Summer 2: Week 2: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Summer 2 Week 2

Objective:
Multiplication & Division

Recognise that division is the inverse of multiplication and use to check calculations.

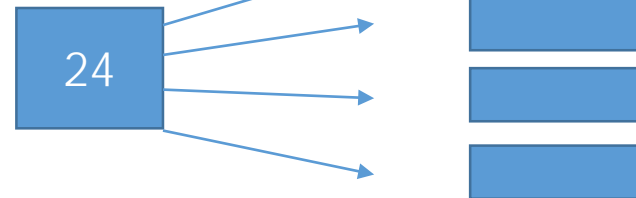
$6 \times 5 = 30$, so $\div 6 = 5$

$3 \times 10 = 30$, so $\div 10 = 3$

$10 \times 2 = 20$, so $\div 10 = 2$

$7 \times 5 = 35$, so $\div 5 = 7$

Using division and multiplication, find as many ways of having the answer 24.



What is double 4?

What is half of 16?

What is a quarter of 24?

What is 8 times 5?

What is 20 divided by 4?

Helen's dad is getting party bags ready.

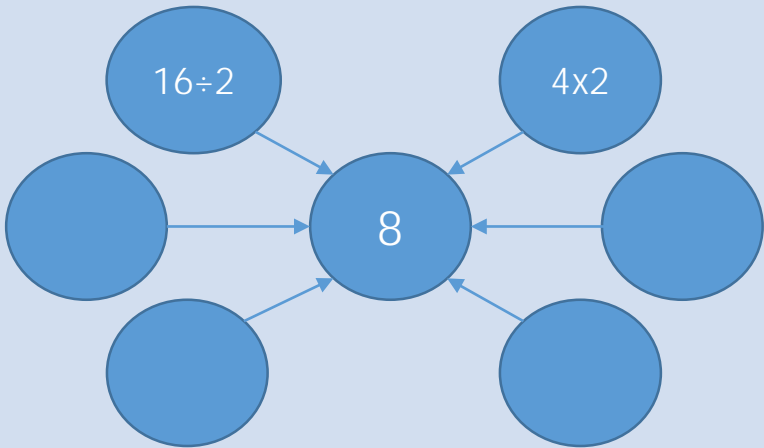
There are 10 children coming to the party. He wants to put 5 grapes in each bag and 4 sweets in each. How many grapes and sweets will he need?

Grapes

Sweets

Summer 2: Week 2: Practice and Consolidation

Multiplication & Division: Recognise that division is the inverse of multiplication and use to check calculations.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:
<ul style="list-style-type: none">➤ Know that examples such as 8×2 correspond to $16 \div 2$.➤ Know that examples such as $20 \div 5 = 4$ correspond to 5×4.	<ul style="list-style-type: none">• Remind pupils of the term inverse as it relates to addition and subtraction.• Explain a similar principle relates to multiplication and division.• Revise 2, 5 and 10 times tables.• Then go on to ask questions such as, 'How many 5s in 25?' 'How many 2s in 14?'• Use practical examples to explain how the inverse works in relation to multiplication and division.• Get pupils working in pairs with apparatus to explain to each other how the principle works.	<div></div> <p>Make up as many multiplication or division facts as you can so that the answer is 8. Two have been done for you.</p> <div>$6 \times 5 =$<input type="text"/> so, $30 \div 6 =$<input type="text"/></div> <div>$7 \times 2 =$<input type="text"/> so, $14 \div 2 =$<input type="text"/></div> <div>$8 \times 5 =$<input type="text"/> so, $40 \div 8 =$<input type="text"/></div> <div>$3 \times 10 =$<input type="text"/> so, $30 \div 10 =$<input type="text"/></div>

Summer 2: Week 2: Mastering this Objective - Deeper Understanding

Multiplication & Division: Recognise that division is the inverse of multiplication and use to check calculations.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:	
<div>➤ Know that examples such as 8×2 correspond to $16 \div 2$.</div> <div>➤ Know that examples such as $20 \div 5 = 4$ correspond to 5×4.</div>	<div>If you have 3 numbers that are related by multiplication and division, then you can create 4 number sentences, e.g. 3, 4, 12</div> <div>$3 \times 4 = 12$</div> <div>$4 \times 3 = 12$</div> <div>$12 \div 3 = 4$</div> <div>$12 \div 4 = 3$</div> <div>Now do the same with the following sets of numbers:</div> <div><div>15, 3 and 5</div><div>4, 5 and 20</div></div> <div><div>8, 4, and 2</div><div>16, 8 and 2</div></div> <div><div>24, 6 and 4</div><div>24, 8 and 3</div></div>	<div>Put numbers into the empty boxes and then work out the inverse.</div> <div><div><div></div><div>x</div><div></div><div>=</div><div>18</div></div><div><div>18</div><div>÷</div><div></div><div>=</div><div></div></div></div> <div>Now create another set of your own.</div>
	<div>Ali wants to treat his friends.</div> <div>He wants to buy them all an orange.</div> <div>At the supermarket oranges are sold in bags of 4.</div> <div>Ali has 30 friends.</div> <div>How many bags will he have to buy?</div> <div>Explain your reasoning.</div>	<div>Helen has 36 grapes.</div> <div>She wants to put some in bags for her friends.</div> <div>Will she be able to have the same number in each bag if she fills 4 bags?</div> <div>What about 5? What about 6? What about 10?</div>

Summer 2: Week 2: Working at greater depth

Multiplication & Division: Recognise that division is the inverse of multiplication and use to check calculations.

Teaching Sequence	Activities for pupils working at greater depth:	
<ul style="list-style-type: none"> ➤ Know that examples such as 8×2 correspond to $16 \div 2$. ➤ Know that examples such as $20 \div 5 = 4$ correspond to 5×4. 	<p>How many sets of 3 numbers can you think of that will end give you 4 multiplication and division number sentences?</p> <p>Record 5 sets:</p> <p>Give some of your sets for your friends to work out.</p>	<p>Find 2 different ways that 20 sweets could be put inside bags, so that each bag had exactly the same amount.</p> <p>Add another 10 sweets to your original 20 and find a way in which they could be bagged up for 6 children, so that they all received the same amount.</p> <p>Is there another way it could be done for a different group of children?</p>
	<p>Chocolate bars cost 10p each or you could buy 3 bars for 25p</p> <p>How many bars could Javed buy if he had a £1 to spend?</p> <p>If Javed needed to buy 8 bars, how much will it cost him?</p>	<p>On the car park there is a mixture of bicycles and cars.</p> <p>Altogether there were 24 wheels on the ground.</p> <p>Think of the different numbers of cars and bicycles there could have been on the car park. Give at least three different alternatives.</p>

Summer 2: Week 2: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Multiplication & Division: Recognise that division is the inverse of multiplication and use to check calculations.

Me

My
Teacher

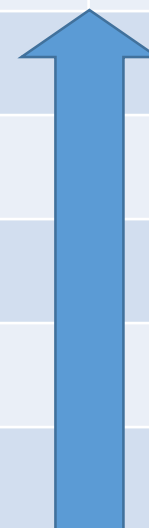
Do you know the inverse rule; i.e. that examples such as $21 \div 7 = 3$ correspond to $3 \times 7 = 21$?

Do you know the inverse rule; i.e. that examples such as $8 \times 3 = 24$ correspond to $24 \div 3 = 8$?

Can you calculate and write simple division statements, such as $16 \div 4 = 4$?

Can you calculate and write out simple multiplication statements, such as $6 \times 3 = 18$?

Can you use the \times , \div , and $=$ signs in simple calculations for numbers up to 100?



Year 2: Summer 2

Week 3: Statistics

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 compare categorical data.

Summer 2: Week 3: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

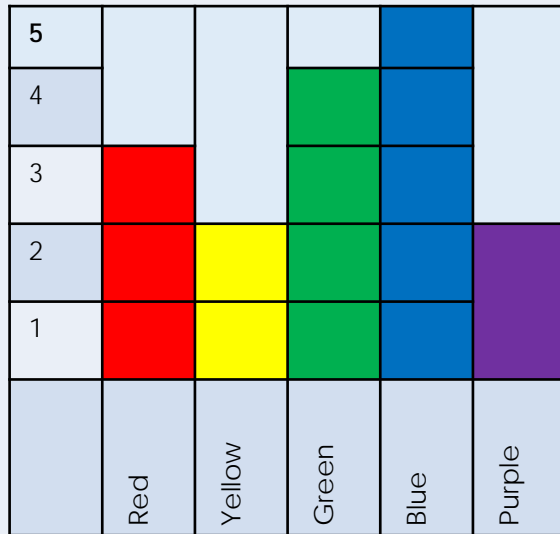
Name

Summer 2 Week 3

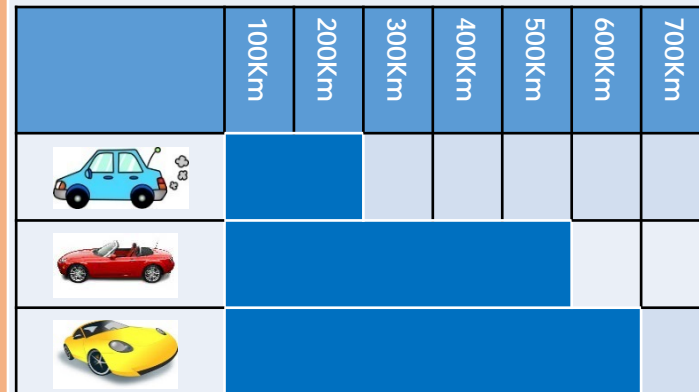
Objective:
Statistics

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 compare categorical data.

The block graph shows pupils' favourite colours:



Which was the favourite colour?
Which was the least favourite colour?
How many children voted?



The graph shows how far a car has travelled in 4 hours.

Which car has travelled the furthest?

Which car has travelled the least?

How many Km did the red car travel?

Summer 2: Week 3: Practice and Consolidation

Statistics: 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 compare categorical data.

Teaching Sequence

- Count objects to answer questions
- Pose questions about given information for others to answer
- Compare data and answer questions
- Sort information and present it pictorially

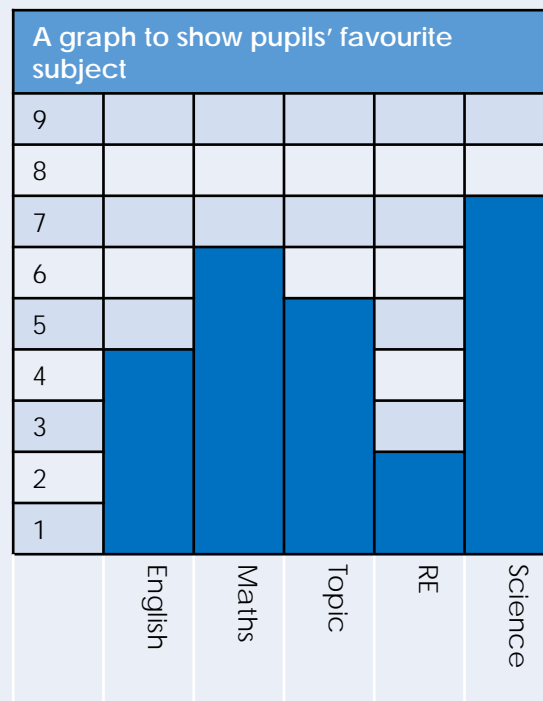
Oral and Mental Activities Examples:

- Talk to the pupils about creating charts. Many will already be familiar with the idea after their work in EY and Year 1.
- However, talk more about the axes and how important the labelling is.
- Create a class block graph on a large scale, emphasising the important aspects of labelling and moving from a pictograph to a block graph.
- Get the pupils to carry out their own surveys in small groups and then work together on collating the results.
- Pupils should be able to use a tally system for collecting their information.

Pencil and Paper Activities Examples:

Carry out a survey to find out which is the favourite fruit across the class. When collating the information record the information as a tally.

Work as a group to create a pictograph of the results. (This should be done on a pre-prepared chart).



Which is the pupils' favourite subject?
Which is the least favourite subject?
How many pupils voted for Topic as their favourite subject?
How many pupils voted altogether?
How many pupils voted for English and Maths?

Summer 2: Week 3: Mastering this Objective - Deeper Understanding

Statistics: 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 compare categorical data

Teaching Sequence

If pupils have mastered this objective they will be able to complete these activities independently:

- Count objects to answer questions
- Pose questions about given information for others to answer
- Compare data and answer questions
- Sort information and present it pictorially

On the chart below put in the tally for each of the numbers shown:

1	4	5	10	12	15	20	25	28	30

Here are the results of a survey about the children's favourite lunch:

- Burger and chips 6
- Pizza 9
- Pasta 3
- Jacket Potato 5
- Curly Fries and Beans 11
- Roast Dinner 3

Create your own graph on the squared paper provided for you to show the results.

Look at the graph below. It is the result of a survey amongst the class about who they thought would win the next World Cup.



Work out 5 questions you could ask your friends about this graph.

Summer 2: Week 3: Working at greater depth

Statistics: Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity

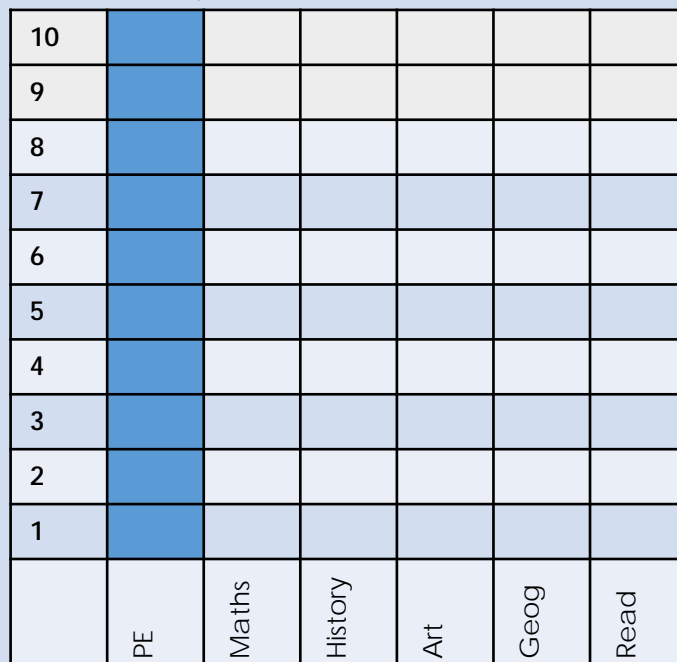
Ask and answer questions about totalling and compare categorical data

Teaching Sequence

- Count objects to answer questions
- Pose questions about given information for others to answer
- Compare data and answer questions
- Sort information and present it pictorially

Activities for pupils working at greater depth:

In a class children are asked to vote for their favourite subject.
10 voted for PE, 6 voted for Maths, 5 for History, 4 for Art, 2 for Geography and 1 for Reading.
Use the block graph to show how everyone voted, putting the most popular subject first (the first has been done for you).



Graphs and Charts:

What would be a good survey to carry out in your class, so as to show similarities and differences in your class's views?
Think of 2 ideas.

Create a block graph with your results.

Make a tally chart to show that there are 15 boys in a class and 13 girls.

Boys	Girls

School Council

In a class children are asked to vote for a member to be on the school council. 10 voted for Helen, 5 for Ariana, 6 voted for Ella, 2 for Henry and 4 for Cybel. Create a graph to show how everyone voted.

Summer 2: Week 3: Assessment

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Statistics: 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 compare categorical data

Me

My
Teacher

Construct a block diagram to show information collected (amounts of less than 20)?

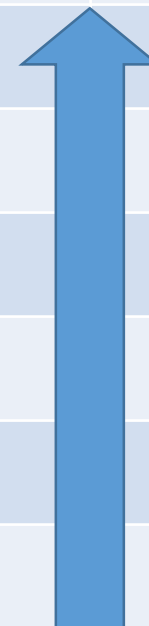
Construct a simple table to show information collected (amounts of less than 20)?

Can you keep a record of a survey by using a tally chart?

Can you read information contained within a simple tally chart?

Can you read information contained within a block diagram?

Can you read information contained within a simple table?



Year 2: Summer 2

Week 4: Measures: Money

Find different combinations of coins that equal the same amounts of money.

Solve simple problems in a practical context involving addition & subtraction of money of the same unit, including giving change.

Summer 2: Week 4: Pre-Learning Task

The pre-learning task below could be used to assess pupils' starting points within this objective. It needs to be completed by all/ or some of the pupils in advance of the main teaching.

Name

Summer 2 Week 4

Objective:
Money

Money: Find different combinations of coins that equal the same amounts of money. Solve simple problems in a practical context involving addition & subtraction of money of the same unit, including giving change.



How much money
have I got?

How much more do I
need to have £2

I have £1 to pay for two items.
The first item cost 60p and the
second item cost 17p.

How much change should I receive?

How would you pay 56p using only
three coins?
Show the coins below:

John has three different silver coins in
his pocket.
What is the most he could have and
what is least he could have?

Most

Least

Summer 2: Week 4: Practice and Consolidation

Money: Find different combinations of coins that equal the same amounts of money. Solve simple problems in a practical context involving addition & subtraction of money of the same unit, including giving change.

Teaching Sequence	Oral and Mental Activities Examples:	Pencil and Paper Activities Examples:															
<ul style="list-style-type: none">➤ Find all different ways of making 10p➤ Find all different ways of making 20p➤ Find ways of making given amount with least number of coins➤ Calculate change from £1 and £2➤ Add monetary values and find change from £1 and £2	<ul style="list-style-type: none">• Set up a mini shop and get pupils used to paying for items and giving the correct amount of change.• Ensure that they are familiar with all coins, up to and including £2.• Create a number of items that have prices labelled to them. Get pupils to pay for the amount shown, using exact money or an amount that is above but close to the actual amount shown.• Give pupils sums of money in different coins. Get the pupils to handle the money as you provide problems for them to solve. Start with simple problems, such as, 'I need to pay £1.26p' and move on to requiring change, etc.	<p>Make up the following amount using as few coins as possible.</p> <p>35p £1.20 65p 70p 85p 90p 45p</p> <p>If you paid 50p for the following amounts, how much change should you receive?</p> <p>17p 23p 37p 42p 18p 24p</p> <table><tr><th colspan="5">This is a chart to show the cost of fruit</th></tr><tr><th>Apples</th><th>Pears</th><th>Bananas</th><th>Oranges</th><th>Kiwis</th></tr><tr><td>8p</td><td>6p</td><td>10p</td><td>12p</td><td>15p</td></tr></table> <p>If I wanted to buy 3 apples; 2 pears; 1 orange; 2 kiwis and 3 bananas, have I enough money if I have a £2 coin? If not, how much more do I need? If so, how much change will I get?</p> <p>How much change should I get if I used a £1 and a 50p to pay a bill of £1.23p?</p>	This is a chart to show the cost of fruit					Apples	Pears	Bananas	Oranges	Kiwis	8p	6p	10p	12p	15p
This is a chart to show the cost of fruit																	
Apples	Pears	Bananas	Oranges	Kiwis													
8p	6p	10p	12p	15p													

Summer 2: Week 4: Mastering this Objective - Deeper Understanding

Money: 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.

Teaching Sequence	If pupils have mastered this objective they will be able to complete these activities independently:						
<ul style="list-style-type: none"> ➤ Find all different ways of making 10p ➤ Find all different ways of making 20p ➤ Find ways of making given amount with least number of coins ➤ Calculate change from £1 ➤ Add monetary values and find change from £1 	<p>Show 2 ways in which you can make 68p using only 20p, 10p and 2p coins.</p> <p>Show 3 ways in which you can make 88p using only 50p, 20p, 10p and 2p coins.</p> <p>Show 4 ways in which you can make £3.90p using only 50p, 20p, 10p, 5p and 2p coins.</p>	<p>I only have silver coins. Would I be able to pay 48p without requiring change?</p> <p>I only have silver coins. Show one way I could end up paying £2.65p.</p>					
	<p>Grandad has been to the supermarket. He bought tea bags at £1.74p; a loaf of bread for 82p and some jam for £1.26p.</p> <p>He had 2 x £2 coins. Did he have enough to pay for everything?</p> <p>How much change should he have?</p>	<p>How can you pay the following amounts using the least amount of coins as possible:</p> <table> <tr> <td>65p</td><td>£1.76p</td><td>£2.89p</td></tr> <tr> <td>99p</td><td>£3.87p</td><td>£5.99p</td></tr> </table>	65p	£1.76p	£2.89p	99p	£3.87p
65p	£1.76p	£2.89p					
99p	£3.87p	£5.99p					

Summer 2: Week 4: Working at greater depth

Money: Find different combinations of coins that equal the same amounts of money. Solve simple problems in a practical context involving addition & subtraction of money of the same unit, including giving change.

Teaching Sequence

- Find all different ways of making 10p
- Find all different ways of making 20p
- Find ways of making given amount with least number of coins
- Calculate change from £1
- Add monetary values and find change from £1

Activities for pupils working at greater depth:

Duncan has £2 coins; 50p coins; 10p coins and 1p coins.

Using only these coins, show one way in which Duncan can pay £5.45
Now think of another way.

Rachel has £1 coins; 50p coins; 10p coins; 5p coins and 2p coins.

Using only these coins, show one way in which Rachel can pay £9.44p

The cost of fruit is listed below. You have £5 to fill a fruit bowl. Using as much of the money as you can, show one way of filling the fruit bowl.

Cost of Fruit				
Apples	Pears	Bananas	Oranges	Kiwis
8p	6p	10p	12p	15p

Bakery

Here are some items at a bakery with the prices:

Sliced loaf	87p
Seeded Loaf	£1.35p
Scones	25p each
Vanilla Cake	£2.80p
Steak Pie	85p each

Harry is preparing for a party.

He has a budget of £15.

Work out what he could buy from the bakery with this amount of money (remember he can buy more than one item).

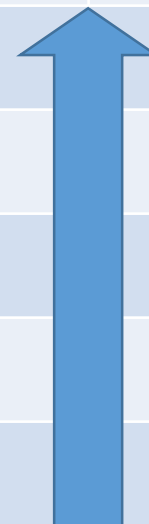
Now make another list which Danny can buy with a budget of £25.

In each case, don't forget to show the change they will have from their original money.

Summer 1: Week 4: Assessment (As with Spring 1: Week 4)

The grid below helps to identify the journey pupils make towards mastering this objective. It can be used by the teacher to keep an on-going check on progress or more likely placed in the pupils' books so that they can keep their own checks.

Measures: Money: Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change.		Me	My Teacher
	Can you subtract one amount of money from another up to the value of £2?		
	Can you add any two amounts of money up to the value of £2?		
	Are you confident enough to give change from any amount up to £1?		
	Do you know how many 50p; 20p; 10; 5p; 2p and 1p coins you need to make up to £1?		
	Can you recognise all coins between 1p and £2?		



Year 2: Summer 2

Week 5 and 6: Consolidate and Assess

- Start these weeks by using the warm ups outlined on the next page so as to ensure pupils are fluent and secure with their basic skills.
- Use a simple assessment process to check on pupils' confidence and consistency in using the learning outlined throughout Year 2.
- Analyse the results and use information to help focus the pre-teaching sessions, as needed, for the following term.

Year 2: Spring 2: Week 6

The focus of the consolidation should be the following aspects:

- Count on/back in steps of 2s and 5s to 100 and beyond, 3s to 99 from 0; and in 10s to 100 and beyond from 0 and any given number
 - Count in 1p, 2p, 5p 10p and £1
 - Count in $\frac{1}{2}$ s to 10; in $\frac{1}{4}$ s to 5
 - Read and write all numbers to 100 and beyond in numerals and write all numbers in words to 100 and over
 - Order a set of numbers (4 and/or) to 100 in increasing and decreasing value
 - Round numbers to the nearest 10 up to at least 100
 - Compare numbers up to 100 using =, <, > symbols
 - Begin to recognise the place value of a 3 digit number (hundreds, tens and ones)
 - Find $\frac{1}{10}$ more/less than a given number up to 100 and beyond
 - Recall fluently all addition number bonds to 20 and know all the subtraction number bonds to 20 to begin to become fluent in deriving facts (e.g. $3 + 7 = 10$; $10 - 7 = 3$ and $7 = 10 - 3$ to calculate $30 + 70 = 100$; $100 - 70 = 30$ and $70 = 100 - 30$)
 - Add/subtract: 2-digit and 1-digit numbers, a 2-digit number and tens, two 2- digit numbers and add 3 one digit numbers
 - Recite the 2, 10 and 5 times tables and answer any calculation involving the 2, 10 and 5 times table in any order
 - Identify even and odd numbers to 100
 - Double any number up to at least 50
 - Halve any even 2-digit number up to 100
-
- Although practise and consolidation should be on-going through each half term, during Week 5 and 6 there should be greater opportunity taken to check pupils' learning.
 - Summative and Formative assessment procedures should help teachers gain a clear picture as to which pupils are at different stages, including mastery and greater depth.