

Maths Makes Sense 1 Medium-term plan

OXFORD

Arithmetic 1

- ☆ Copy addition and subtraction Maths
 Stories with I-digit whole numbers, zero,
 a half and a quarter, e.g. 2 + ½ + ½ = 3
- ☆ Act the Real Story for addition and subtraction Maths Stories with I-digit whole numbers, zero, a half and a quarter, e.g. 2 + ¹/₂ + ¹/₂ = 3
- Look at a Maths Story and read what it says, e.g. Two, add a half, add a half, equals three. Look at a Maths Story and read what it means, e.g. Two cups, add a half cup, add a half cup, equals three cups.

Geometry

- Draw straight lines by joining named dots using a ruler, e.g. draw line AB
- Draw open or closed shapes by joining named dots using a ruler, e.g. draw closed shape ABCD.

Data and Measure

- Make shapes with dm sticks from written instructions specifying the number of sides, number of sticks and whether the shape should be open or closed
- Find the length of a shape by counting dm and respond accurately to the questions: What is the length? How long is this shape? How far is it from one end to the other? What is the distance from one end to the other? What is the total length of the sticks? What is the total length of the sides?
- Find the perimeter of a closed shape made with dm sticks. Recognise that open shapes do not have a perimeter.

Arithmetic 2

- Look at an addition or subtraction Maths Story with I-digit whole numbers, zero, a half and a quarter and read what it says, e.g. Three, add a half, take away a half, add zero, equals three
- Look at an addition or subtraction Maths Story with I-digit whole numbers, zero, a half and a quarter and read what it means, e.g. Three cups, add a half cup, take away a half cup, add zero cups, equals three cups
- Act the Real Story for addition and subtraction Maths Stories with I-digit whole numbers, zero, a half and a quarter, e.q. 3 + ½ − ½ + 0 = 3.

- Distinguish between how many and how much by responding accurately to the questions How many cups did I count?
 e.g. Six, and How much is there here?
 e.g. Six cups
- Distinguish between a half cup and a quarter cup as physical objects, and their names, 'a half' and 'a quarter'
- Identify and use the phrase Same Value: Different Appearance for different arrangements of cups, which have the same value, including half cups and quarter cups
- For an addition Maths Story with I-digit whole numbers, a half and a quarter, e.g. ¹/₂ + ¹/₂ = 1: look at the Maths Story, read what it says, e.g. A half, add a half, equals one; look at the Maths Story and Read what it means, e.g. A half cup, add a half cup, equals one cup
- \Rightarrow Write numbers 0–9 accurately.

- Practise writing numbers 9 mm tall
- \Rightarrow Count on in ones along a number line
- ☆ Write numbers neatly and accurately
- ☆ Count, sequence and write numbers 0–9
- ☆ Look for information in images
- ☆ Count on and back in ones on a 0–99 grid
- ✤ Find one more than and add one on a 0–99 grid
- ☆ Find one less than and take away one on a 0–99 grid
- ☆ Count on in ones on a calendar
- \Rightarrow Count on in ones on a clock face
- Introduce the names 'triangle' and 'quadrilateral' and identify the number of sides
- Draw straight lines between named dots with a ruler

- ☆ Count dates on a calendar
- Name pentagons and hexagons and identify the numbers of sides
- Copy addition and subtraction Maths Stories accurately
- Practise writing numbers 6 mm tall
- \Rightarrow Practise writing $\frac{1}{2}$ and $\frac{1}{4}$ 9 mm tall
- ☆ Identify and name 2D shapes
- Copy addition and subtraction Maths Stories with fractions accurately
- ☆ Draw open and closed shapes
- ☆ Count days and dates on a calendar
- ☆ Count hours on a clock face
- Complete the questions on the 'I can' pages in Progress Book IA
- Discuss achievements in Progress Book IA and fill in the chart.

Resources

Maths Makes Sense Toolkit

Whole cups, half cups, quarter cards, ¹/₂ card, 'a half' card, ¹/₄ card, 'a quarter card', dot cards, cards A, B, C, D, L, S, pupil tables, pupil whole cups, pupil half cups, pupil quarter cups, dm sticks, wooden stand

Other

Modelling clay, flipchart, whiteboard, pens, metre ruler, 15-cm rulers, lined exercise books, large open space, models of 2D shapes (triangles, quadrilaterals, pentagons and hexagons)

Cross-curricular links

ICT

Geometry. Use ICT to draw a straight line between dots and take the mouse for a walk!

Physical Education

Geometry. Walk/march/skip between two labelled points.

Science

Daily practice, becoming familiar with grids. Record the daily weather in a chart throughout the school year.

Key vocabulary

add • bottom • calendar • cell • closed shape • days of the week • decimetre (dm) • distance • equals • get ready get some more • get ready to take away • grid • half • hexagon • how much is there here? • how many? • left • length • less than • look at the Maths Table and count • Maths Story • more than • o'clock • open shape • ordinal numbers (first, second, third, fourth...) • pentagon • perimeter • quadrilateral • quarter • right • Real Story • Same Value: Different Appearance • take away • top • triangle

Arithmetic 1

- Copy a written addition Maths Story with multiples of ten, a hundred or a thousand, e.g. 200 + 500 = 700
- Look at an addition Maths Story with multiples of ten, a hundred or a thousand and read what it says, e.g. Two (pause) hundred, add five (pause) hundred, equals seven (pause) hundred.

Geometry

- Read instructions for making a shape from a grid, e.g. five sticks, five sides, open, and use dm sticks to make the correct open or closed shape
- Find and record the perimeter of closed shapes made with dm sticks, e.g. 5 dm
- Measure a named straight line, e.g.
 line AB, in centimetres with a ruler
- Record the length of a named straight line, e.g. line AB, in centimetres, e.g. 4 cm.

Data and Measure

- ☆ Use the appropriate action for length to show I cm, I dm and I m
- Use the appropriate action for mass to show I g and I kg.

Arithmetic 2

- Copy multiplication Maths Stories with I-digit whole numbers, e.g. 2 × 4 = 8
- Act the Real Story using multiplication Maths Stories with I-digit whole numbers, e.g. 2 × 4 = 8
- Look at the Maths Story and read what it says, e.g. Two, times four, equals eight. Look at the Maths Story and read what it means, e.g. Two cups, times four, equals eight cups.

- Say and show bigger, smaller and the difference between by encircling cups on the Maths Table
- \Leftrightarrow Write numbers 0–9, $\frac{1}{2}$ and $\frac{1}{4}$ accurately.

- Count on and back in ones on a 0–99 grid
- ✤ Find one more or less than and add or take away one on a 0–99 grid
- \Leftrightarrow Introduce columns and rows
- ☆ Identify 2D shapes from a grid
- Find one more or less than a 2-digit whole number
- ☆ Name 2D shapes
- ☆ Look for information in images
- Find one more or less than and add or take away one for 3-digit whole numbers
- Convert I-digit Maths Stories into new Maths Stories about hundred and thousand
- Convert between decimetres and centimetres
- ✤ Find information about 2D shapes from a grid

- Convert I-digit Maths Stories into new Maths Stories about 'ty'
- Count on and back in ones from 3-digit whole numbers
- On a calendar, count how many of each day,
 e.g. Mondays, there are in a particular month
- Count on in ones on a number line
- Complete addition Maths Stories about 'ty', hundred and thousand and copy I-digit multiplication Maths Stories
- Use a ruler to measure straight lines and record their lengths in centimetres
- Identify months of the year
- ☆ Count the movements on a number line
- Complete the questions on the 'I can' pages in Progress Book IA
- Discuss achievements in Progress Book IA and fill in the chart.

Resources

Maths Makes Sense Toolkit

Whole cups, dot cards, pupil tables, pupil whole cups, dm sticks

Other

Modelling clay, metre ruler, I5-cm rulers, I-cm section cut from a matchstick, large open space, dot labels for markers, five 'A' cards, five 'B' cards, I tin of baked beans in a bowl, teaspoon, kitchen towel for wiping hands, I kg baked beans in a plastic bag sealed in another plastic bag with adhesive tape, 2 × I kg bags of sugar, lined exercise books

Cross-curricular links

Science

Data and Measure. Use the vocabulary and actions for centimetre and decimetre when measuring length, and kilograms and grams when measuring mass.

Speaking and Listening

 Daily practice, look for information in images. Display Scenes and ask children to discuss what they can see in pairs. Encourage children to use the vocabulary fewer than and more than.

ICT

Daily practice, introduce columns and rows.
 Use ICT to present information in grids.

Key vocabulary

bigger • centimetre (cm) • column • difference between • do the same thing lots of times • hundred • kilogram (kg) • mass • metre (m) • months of the year • smaller • times • thousand • ty

Maths Makes Sense 1 Block 3

End-of-block objectives

Arithmetic 1

 Copy, on squared-paper, vertical additions with 2-digit whole numbers

	4	5	
t	2	4	
	_		
	_	_	

Calculate answers to vertical additions with 2-digit whole numbers (no tricky columns) using number pairs for assistance.

	4	5
+	2	4
	6	٩

Geometry

- Using a labelled diagram of a 2D shape, select the correct number of dm sticks and make the shape
- Turn through one full turn, a quarter, a half and three quarters of one full turn, two full turns and three full turns.

Data and Measure

- Measure and record the length of a line in whole centimetres using a ruler
- Say and write the mass, indicated by pictures of bags of sugar and baked beans, in kilograms and grams, e.g. write 2kg 3g and say: Two kilograms and three grams
- Draw pictures of bags of sugar and baked beans to represent the mass of items, in kilograms and grams, e.g. draw two kg bags of sugar and three baked beans to show 2kg 3g.

Arithmetic 2

- Copy division Maths Stories with I-digit whole numbers
- Act the Real Story for division Maths Stories with I-digit whole numbers, e.g. 6 ÷ 3 = 2
- For division Maths Stories with I-digit whole numbers, look at the Maths Story and read what it says, e.g. Six, divided by two, equals three, and look at the Maths Story and read what it means, e.g. Six cups, divided by two cups, equals three.

- Use an addition and subtraction Maths Story with I-digit whole numbers to make up a Real-Life Story about everyday objects or measures, e.g. Five bananas, take away three bananas, add two bananas, equals four bananas, and state what the Real-Life Story is about, e.g. bananas
- $\Leftrightarrow~$ Draw a picture to act a Real-Life Story.

- Practice addition for pairs of numbers with totals up to ten
- ☆ Read and write numbers zero to five in words
- Find information about 2D shapes with three to ten sides from a grid
- * Copy numbers one to five in figures and words
- Find and record the perimeter of shapes in dm
- ✤ Find information in grids
- Practise subtraction for pairs of numbers with totals up to ten
- ☆ Write numbers six to ten in words and figures
- Copy a multiplication Maths Story with I-digit whole numbers
- Measure straight lines in centimetres and record the measurements in a grid
- Practice addition for pairs of numbers with totals up to 20

- ☆ Write numbers II–I5 in words and figures
- Copy addition Maths Stories with 2-digit and I-digit whole numbers
- Practise subtraction for pairs of numbers with totals up to 20
- Write numbers 16–20 in words and figures
- Find columns, rows and cells in a grid
- Copy division Maths Stories with I-digit whole numbers
- Convert horizontal addition Maths Stories with 2-digit whole numbers to vertical addition
- ☆ Practise adding 10
- Write hundred and thousand in words
- Complete the questions on the 'I can' pages in Progress Book IB
- Discuss achievements in Progress Book IB and fill in the chart

Resources

Maths Makes Sense Toolkit

☆ I-digit and 2-digit place value cards, wooden stand, whole cups, half cups, quarter cups, pupil tables, pupil whole cups, dm sticks, I, 2, 3, ¹/₂, ¹/₄, ³/₄ cards

Other

 cm-squared exercise books, lined exercise books, metre-ruler, I5-cm rulers, flipchart and pen, 2D shapes (triangles, quadrilaterals, pentagons, hexagons, heptagons, octagons, nonagons, decagons), five blank cards, I0 small pieces of card (3 cm × 4 cm), A3 paper, A4 paper, coloured pencils, large open space

Cross-curricular links

ICT

Geometry. Use programmable devices to make quarter, half and full turns.

Physical Education

Geometry. Make quarter, half, three quarters and full turns.

PSHCE

Progress Books, 'I can' pages. Practise turn-taking and listening skills when discussing achievements in Progress Books.

Literacy

 Reasoning. Challenge children to think of imaginative Real-Life Stories, e.g. three rockets, take away one rocket, equals two rockets.

Key vocabulary

decagon • direction • divided by • digit • a half of one full turn • heptagon • look at it and wonder • longer • longest • nonagon • octagon • one full turn • a quarter of one full turn • Real-Life Story • shorter • shortest • three quarters of one full turn

Maths Makes Sense 1 Block 4

End-of-block objectives

Arithmetic 1

 Copy vertical additions and subtractions with 2-digit and 3-digit whole number

425	728	
+ 4	- 15	

 Use the correct operation and calculate answers to vertical additions and subtractions with 2-digit and 3-digit whole numbers (no tricky columns), e.g.

425	728
+ 4	- 15
439	7 3

Geometry

- Name 2D shapes (triangle, quadrilateral, pentagon, hexagon, circle, ellipse) and for each polygon, identify the number of sides
- Use a dm stick to represent a *turn through* a half, a quarter or three-quarters of one full turn, from one direction to another, e.g. from direction SB to direction SC.

Data and Measure

- Associate particular volumes with different objects, e.g. I ml with a small box, 5 ml with a teaspoon, 10 ml with a dessert spoon, 50 ml with a pupil cup and 250 ml with a beaker
- Select correct combinations of Ip, 2p and 5p coins to buy and sell objects and show Same Value: Different Appearance for coins and objects

Arithmetic 2

- ☆ Copy addition and subtraction Maths Stories with I-digit whole numbers, zero, a half and a quarter, e.g. 2 + ¹/₂ + ¹/₄ + ¹/₄ + I = 4. Copy multiplication and division Maths Stories with I-digit whole numbers, e.g. 6 ÷ 3 = 2
- Act the Real Story using addition and subtraction Maths Stories with I-digit whole numbers, zero, a half and a quarter, e.g. 2 + ½ + ¼ + ¼ + I = 4. Act the Real Story using multiplication and division Maths Stories with I-digit whole numbers, e.g. 6 ÷ 3 = 2.

- Use an addition or subtraction Maths Story with I-digit whole numbers to make up a basic Real-Life Story and an embellished Real-Life Story, e.g. I went to the shops with Mummy. She bought me three apples. We went down the road. We met Daddy. He gave me two apples. Altogether I had five apples
- Say what a basic Real-Life Story is about, e.g. apples, and give the context of the embellished Real-Life Story, e.g. going shopping
- Use everyday vocabulary related to addition and subtraction, e.g. another, some more, lost, gave away in embellished Real-Life Stories involving addition and subtraction
- ☆ Draw a picture of a basic Real-Life Story.

- Use pairs of numbers with totals up to 20 to make new Maths Stories about thousand
- ☆ Chant the two times table
- ☆ Use number pairs with totals up to 10 for doubling
- Complete vertical additions with 2-digit whole numbers
- Count in 2-digit whole numbers to fill missing numbers
- ✤ Look for information in bar charts
- Use pairs of numbers with totals up to 20 to make new Maths Stories about hundred
- ☆ Chant the five times table
- Use number pairs with totals up to 20 for doubling
- Make a closed shape with dm sticks and measure the perimeter
- Copy vertical subtractions with 3-digit whole numbers
- Use pairs of numbers with totals up to 20 to make new subtraction Maths Stories about hundred
- Chant the ten times table

- Double with times tables and dominoes
- Complete vertical subtractions with 3-digit whole numbers
- ☆ Calculate total amounts of money, up to 10p
- Use pairs of numbers with totals up to 20 to make new addition Maths Stories about ty (2-digit multiples of I0)
- Practise the two, five and ten times tables
- Double numbers in different ways to 20
- Use cups to complete addition and subtraction Maths Stories with I-digit whole numbers, ¹/₂ and ¹/₄, and multiplication and division Maths Stories with I-digit whole numbers
- Use pairs of numbers with totals up to 20 to make new subtraction Maths Stories about ty (2-digit multiples of I0)
- Answer questions about the two, five and ten times tables
- Double numbers in different ways
- Complete the questions on the 'I can' pages in Progress Book IB
- Discuss achievements in Progress Book IB and fill in the chart.

Resources

Maths Makes Sense Toolkit

I-digit and 2-digit place value cards, wooden stand, whole cups, pupil tables, labelled pupil whole cup (50 ml), pupil whole cups, pupil half cups, pupil quarter cups, dm sticks

Other

cm-squared exercise books, lined exercise books, scissors, glue, Ip, 2p, 5p coins (if using real coins, make sure they are washed), labelled box (I ml), teaspoon (5 ml), dessert spoon (I0 ml), beaker (250 ml), water, sticky tape, jug, blank cards, A4 paper, A3 paper (with Activity 67, question I copied onto it), paper, plastic counters, coloured pencils, rulers, large open space, flipchart, felt-tip pens

Key vocabulary

Cross-curricular links

Science, Design and Technology

☆ Data and Measure. Measure volumes in millilitres.

Art, Design and Technology

 Geometry. Make patterns with 2D shapes; name the 2D shapes.

History, Geography

Data and Measure. Use coins from different countries, and historical coins in shopping games.

bar chart • basic Real-Life Story • circle • context • double • ellipse • embellished Real-Life Story • millimetre (mm) • pence • penny

Arithmetic 1

Copy vertical additions and subtractions with any pair of 2-digit, 3-digit or 4-digit whole numbers, e.g.

2357		4545		
+	<u> </u>		<u> </u>	

 Use the correct operation and calculate vertical additions and subtractions with any pair of 2-digit, 3-digit or 4-digit whole numbers (no tricky columns), e.g.

2	357		45	4	5
+	21	-		I	I
2	378		45	3	4

Geometry

- Recognise the difference between, and use hand actions for, ID, 2D and 3D shapes
- Identify 2D faces on 3D shapes, and name them as triangles, quadrilaterals, pentagons or hexagons.

Data and Measure

 Give change from ten pence in a shopping context.

Arithmetic 2

- Use an embellished Real-life Story to say what a basic Real-Life Story involving addition or subtraction with I-digit whole numbers is about, e.g. pens
- Use an embellished Real-life Story to draw a basic Real-Life Story involving addition or subtraction with I-digit whole numbers, e.g. draw three pens and cross out two, to leave one pen
- Use an embellished Real-life Story to say a basic Real-Life Story, e.g. Three pens, take away two pens, equals one pen
- ☆ From an embellished Real-Life Story, find and write an addition or subtraction Maths Story with I-digit whole numbers, e.g. 3 - 2 = 1.

- Cut shapes into halves and quarters by drawing lines accurately
- Shade half, a quarter and three quarters of a shape.

- ☆ Count multiples of 2
- * Recognise odd and even numbers
- ☆ Count on in ones to I0
- Copy vertical additions with 4-digit whole numbers
- Look for information about mass in pictures
- ☆ Count multiples of 5
- ☆ Count on to I0 in a number line
- ☆ Count on in ones to 20
- Copy vertical subtractions with 4-digit whole numbers
- Identify multiples of two and multiples of I0
- ☆ Count multiples of I0
- ☆ Count on a 0–99 grid
- Resources

Maths Makes Sense Toolkit

Place value cards, wooden stand, half cups, 'a half' card, '¹/₂' cards, 'a quarter' card, '¹/₄' cards, quarter cups, pupil tables, dm sticks

Other

cm-squared exercise books, 15-cm rulers, lined exercise books, scissors, Ip, 2p, 5p, 10p and 20p coins (if using real coins, make sure they are washed), modelling clay, thin stick I dm long (e.g. wooden skewer with sharp end cut off), I dm × I dm square of thin card, I dm × I dm × I dm cube made of card, triangle, quadrilateral, pentagon and hexagon made of card, 3D shapes such as cubes, cuboids, square-based pyramids, triangular-based pyramids, quadrilaterals, hexagonal prisms, a variety of 2D shapes, a variety of ID objects

- ☆ Match coins to the price of an object
- Look for information about mass in a grid and a bar chart
- \Rightarrow Count multiples of 2, 5 and 10
- A Recognise multiples of 5
- Count back
- Shade halves and quarters
- ☆ Find multiples of 2, 5 and 10
- ☆ Recognise multiples of I0
- Counting back in ones
- ☆ Identify multiples of 2, 5 and 10
- Complete the questions on the 'I can' pages in Progress Book IC
- Discuss achievements in Progress Book IC and fill in the chart.

Cross-curricular links

PSCHE

Partner teaching. Play 'getting to know you' games with designated partners, practising active listening and turn-taking skills.

History, Geography

Data and Measure. Use coins from different countries, and historical coins in shopping games.

Art, Design and Technology

Reasoning. Make pictures and collages containing 2D shapes. Shade ¹/₂, ¹/₄ and ³/₄ of different shapes.

Key vocabulary

ID, 2D, 3D • change • cost • cube • even number • face • heavier • heaviest • lighter • lightest • multiple • odd number • square pyramid • value

Arithmetic 1

Copy vertical additions and subtractions with 2-digit, 3-digit or 4-digit whole numbers (no tricky columns), e.g.

2357		4545		
+	21			

 Use the correct operation and calculate vertical additions and subtractions with 2-digit, 3-digit or 4-digit whole numbers (no tricky columns), e.g.

2	357		45	4	5
+	21	-		I	I
2	378		45	3	4

Geometry

☆ Identify the 2D shapes that make up the faces of 3D shapes (no curved faces).

Data and Measure

 Draw the short hand and long hand on a clock face to show duration, e.g.
 I hour 20 minutes, in preparation for telling the time.

Arithmetic 2

- Say what a simple word problem, involving addition or subtraction with I-digit whole numbers, is about, e.g. pens
- Draw a basic Real-Life Story involving addition or subtraction with I-digit whole numbers, e.g. draw three pens and cross out two, to leave one pen
- Say a basic Real-Life Story, e.g. Three pens, take away two pens, equals one pen
- From a word problem, find and write an addition or subtraction Maths Story with I-digit whole numbers, e.g. 3 2 = 1
- Answer a simple word problem Story involving addition or subtraction with I-digit whole numbers, e.g. Ella had three pens. She gave two pens away. How many pens did she have left?

- Identify which months (January to December) come before or after a particular month
- Identify which day numbers (first to thirty-first) come before or after a particular day number
- With assistance and as a group, collect, order and record information to create a bar chart.

- Estimate numbers of objects using groups of five
- ☆ Add or subtract I-digit numbers to complete flow diagrams
- $\, \nleftrightarrow \,$ Act out a word problem
- Complete addition and subtraction flow diagrams
- Complete vertical additions and subtractions with 2-digit, 3-digit and 4-digit whole numbers
- \Leftrightarrow Gather information from pictures
- ☆ Add or subtract multiples of 10 to complete flow diagrams
- $\,\, \ensuremath{\overset{\scriptstyle \leftrightarrow}{\scriptstyle}}\,$ Find the 2D shapes in a triangular prism
- \Leftrightarrow Find information in pictures
- Estimate numbers of objects using groups of ten

- Multiply I-digit numbers to complete flow diagrams
- Draw a short hand and a long hand on a clock face to show hours and minutes
- Complete multiplication flow diagrams
- Find information in a bar chart
- Multiply 10 by 1-digit numbers to complete flow diagrams
- \Rightarrow Compare times of the day
- ✤ Find information from a grid
- Read and complete additions, subtractions and, multiplications on flow diagrams
- Compare prices of objects in a word problem
- Complete the questions on the 'I can' pages in Progress Book IC
- Discuss achievements in Progress Book IC and fill in the chart.

Resources

Maths Makes Sense Toolkit

 Place value cards, wooden stand, number cards 0–12, one dot card, dm sticks, pupil tables, pupil whole cups, whole cups

Other

Modelling clay, cm-squared exercise books, 50-cm ruler or other stick, 30-cm ruler, 15-cm rulers, lined exercise books, thin stick longer than 1 dm (e.g. wooden skewer with sharp end cut off), 1 dm × 1 dm square of thin card, 1 dm × 1 dm × 1 dm cube made of card, triangular prism, pentagonal prism, red, blue and green pencils or crayons, large clock face, 30 pennies, 10 toy cars each labelled 5p, flipchart, pentagonal-based pyramid, triangular-based pyramid, 10 pictures of bananas or counters to represent bananas, months of the year cards, whiteboards or clipboards, large open space

Cross-curricular links

Physical Education

☆ Data and Measure. Use stop watches to time in minutes.

Throughout the school day

 Data and Measure. Refer to durations, for example I hour and 20 minutes, and ask children to show you on a clock face.

History, Literacy

Reasoning. Use and refer to calendars to order events chronologically.

Key vocabulary

after • before • cheaper • estimate • flow diagram • hour • long hand • minute • most expensive • pentagonal prism • pentagonal pyramid • short hand • triangular prism • triangular pyramid