Year 1 Mathematics Curriculum Objectives

Mathematics – Year 1
Number & Place Value

Count, read and write numbers to 100 in numerals; count in multiples of twos, fives and tens.
Read and write numbers from 1 to 20 in numerals and words. (Number: Number and Place Value, Year 1)
Counting to 100
Use the sequence of number names to count a small set of objects reliably by touching or moving.
Recognise a small number of objects without counting them and explain how they know.
Know that when objects are rearranged the number remains the same.
Read numbers to 100 as numerals, e.g.,
when shown a numeral, count out the correct number.
Write numbers to 100 as numerals, e.g.,
record how many shells were in the cup.
Solve counting problems, e.g.,
'Are there enough books on the shelf for everyone to have one?'
'This is 16 (pointing to the end of the stick).
If you count back in ones, which number is at the beginning of the stick?
Counting in multiples of 2
Count forwards and backwards up to 100 in multiples of 2 from any multiple of 2.
Count sets in the multiple, e.g.,
8 socks on the line, count the pairs as 2, 4, 6, 8.
Recognise some patterns in the number system, e.g.,
when counting in 2's from 0, the numbers always end in 0, 2, 4, 6 or 8 and these are even numbers.
Counting in multiples of 5
Count forwards and backwards up to 100 in multiples of 5 from any multiple of 5.
Count sets in the multiple, e.g.,
fingers on hands, 5, 10, 15.
Recognise some patterns in the number system, e.g.,
when counting in 5's from 0, the numbers always end in 0 or 5.
Counting in multiples of 10
Count forwards and backwards up to 100 in multiples of 10 from any multiple of 5.
Count sets in the multiple, e.g.,
sticks made from 10 Multi-link, 10, 20, 30.
Recognise some patterns in the number system, e.g.,
when counting backwards or forwards in 10's from 0 the numbers always end in 0.

Year 1 Mathematics Curriculum Objectives

Solve one-step problems involving multiplication and division,. . .. (Number: Number and Place Value, Year 1)

Given a number, identify one more and one less.

Add and subtract one-digit and two-digit numbers to 20, including zero. (Number: Addition and Subtraction, Year 1)

Find the number that is one more or one less than a given number by adding / removing one object from a set then counting the new number.

Know that, when counting forwards, each number is one more and the numbers get bigger; when counting back, each number is one less and the numbers get smaller.

Find any number on a number track / 100-square and say the number that is one more or one less.

Identify a missing number in a spoken sequence (forwards / backwards), e.g.,

44, 45, 46, (clap), 48.

Find missing or covered numbers on a number track.

Identify and represent numbers using objects and pictorial representations including the number line, and use the language of: equal to, more than, less than (fewer), most, least.

Represent and use number bonds and related subtraction facts within 20. (Number: Addition and Subtraction, Year 1)

Emphasis should be on the language used in discussion.

There are no statistics objectives for Year 1 but there are opportunities for representing objects and numbers in simple tables and pictograms that would be part of this particular objective and would lay foundations for Year 2.

Objects

Compare and record with objects that can / cannot be moved, e.g.,

cubes, pictures of owls in a tree.

Identify which of two sets contains more objects, by matching the objects and counting the number in each set.

Arrange objects systematically to make counting easy, e.g.,

a group grab a handful of cubes each and find out who grabbed most / least, etc.,

by arranging them into a physical pictogram with adult support or by making a table of names and cubes grabbed.

Pictorial Representations

Understand the significance of the first digit in a two-digit number, supported by objects and pictorial representations, e.g.,

23 is a smaller number than 32.

Understand place value in two-digit numbers and partition them into tens and ones, e.g.,

count 15 straws, and bundle 10 together with an elastic band leaving 5 as single straws and relate this to the way that 15 is written.

Number Tracks, Number Lines and 100-Squares.

Find and compare two numbers on a number track or number line using mathematical language.

Compare numbers, knowing which is bigger / smaller using knowledge of where numbers lie on a number line, e.g.,

find numbers lying between 15 and 25.

Order a set of numbers up to 100, using understanding of place value, e.g.,

might refer to a number line or 100-square.

Position numbers on a number line.

Estimation.

Make estimates of a number of objects based on experience of visual patterns and arrays that can be checked by counting, e.g.,

having counted how many counters fit in an egg cup, use this to estimate how many counters will fit in a small tin.

Estimate how many there are in a larger number of objects and check by counting.

Read and write numbers from 1 to 20 in numerals and words.

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Count, read and write numbers to 100 in numerals. (Number: Place Value, Year 1)

Read numbers 1 to 20 in numerals, using number tracks, number lines and number squares to identify where they lie, individually or in blocks, e.g.,

point to 19 on the grid.

Write numerals for numbers to 20, understanding that numbers from 10 to 20 have two digits.

Use apparatus to make a teens number and record the tens and ones, e.g.,

they should know why they need to write 15 and not 51 for the number fifteen.

Read numbers to 20 in words, e.g.,

labels around the classroom.

Write numbers to 20 in words (this could be a writing activity), e.g.,

start counting, stop and pupil writes the next number on a whiteboard in words (and numerals).

Count to and across 100, forwards and backwards, beginning with 0 or 1, or from any given number.

Begin with counting within 10, then 20, then 100, then through the 100 boundary. There is no reason to begin or end at 0 or 1 each time once children are comfortable with these values.

Count whilst moving forwards and backwards, e.g.,

in the playground.

Count actions, e.g.,

claps, jumps, moving cubes.

Recite numbers starting / ending with 1 stopping at any point up to 100.

Recite numbers starting / ending with 0 stopping and any point up to 100.

Count forwards and backwards from 0 and 1 (or any other starting points), e.g.,

'Stop at 53' or 'Start counting at 96 and stop at 110.'

Order objects and say ordinal names, e.g.,

4 pupils sort themselves into height order. 'Who is third in the line?'

Children should be able to count in hundreds, thousands and millions, stopping at appropriate points. This extends counting in ones, allowing pupils to familiarise with large numbers.

Year 1 Mathematics Curriculum Objectives

Mathematics – Year 1
Addition & Subtraction

Read, write and interpret mathematical statements involving addition (+), subtraction (–) and equals (=) signs.
Understand that the = sign represents equality rather than the answer to a calculation and use the term 'equals' rather than 'makes'.
Understand that each side of an equation must balance / be equal, i.e., the total on each side must be the same, e.g.,
3 + 1 = 2 + 2.
Understand which operation is required when interpreting the addition (+) and subtraction (–) symbols.
Represent number stories and practical problems with number sentences using the +, - and = symbols.
Understand written calculations with the symbols in any possible order, e.g.,
1 + 6 = 7, 7 = 6 + 1, 7 - 1 = 6, 6 = 7 - 1.

Represent and use number bonds and related subtraction facts within 20.
Addition and subtraction should be presented alongside each other at every opportunity to establish links between them.
Identify and represent numbers using objects and pictorial representations . . .. (Number: Number and Place Value, Year 1)
Recognise and represent patterns in addition to 20 and talk about what has been done,
Find all the number bonds that equal the same answer, e.g.,
use Cuisenaire rod, two rods each time, to make a '5' wall showing 5 + 0 = 5, 4 + 1 =5, 3 + 2 = 5, etc.
Add the same number to each different starting number systematically (totals up to 20), e.g.,
make a series of steps with two parts in each step showing 1 + 1, 2 + 1, 3 + 1, etc.
Tell the story of 3, 4, 5 . . .
Understand that the order of numbers in a subtraction sentence matters, e.g.,
3 – 2 does not give the same outcome as 2 – 3 and, if using concrete objects, there are not enough objects to complete the task. (Don't express this to pupils by saying the calculation can't be done.)
Relate addition and subtraction, noticing the effect of adding a number and then subtracting the same number,
Find all related subtraction facts for a given number bond to 10, e.g.,
1 + 3 = 4 so, 4 - 1 = 3 and 4 - 3 = 1
Begin with 3 and add 2. Record the addition sentence 3 + 2 = 5. Now take away 2. What is left? Record the subtraction sentence 5 - 2 = 3. What do you notice about the two calculations?
Know that the order of two numbers in an addition calculation can be changed round and still give the same answer, e.g.,
use 3 red Multilink and 2 yellow Multilink and fasten them together to make a rod of 5. Make another with the red and yellow at different ends, laying them side-by-side for comparison and recognising that they both have 5 bricks.
Make number trio families by starting with a number bond, commuting the addition fact, and making two related subtraction facts, such as 7 + 10 = 17, 10 + 7 = 17, 17 – 7 = 10, 17 - 10 = 7, e.g.,
use strips of card with rubber bands around them and write two addition and two subtraction facts.
Recognise that doubles of numbers only have one addition and one subtraction fact associated with them and explain why, e.g.,
4 + 4 = 8 and 8 – 4 = 4.

Apply number bonds in problem solving (see below).
Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = □ – 9. (Number: Addition and Subtraction, Year 1)

Add and subtract one digit and two digit numbers to 20, including zero.
Given a number, identify one more and one less. (Number: Number and Place Value, Year 1)
Use practical and informal methods to:
Combine groups of concrete objects.

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Increase numbers by counting on, e.g.,

put 4 more bricks out / jump 4 forwards on the number line.

decrease numbers by removing concrete objects.

decrease numbers by counting back, e.g., take 3 hops back on the number line.

find the difference between two numbers by: e.g.,

matching objects and counting 'extras'; and

counting on on a number line.

Recognise that there is no change to the number of objects / outcome when zero is added or subtracted.

Use number bonds to 10 and their related subtraction facts in practical activities. e.g.,

2+3=5 so 12+3=15 or 5-2=3 so 15-2=13.

Use known number bonds to 10 to work out new number bonds and related subtraction facts to 20 by adding 10 to one of the numbers (working with base 10 apparatus would be helpful).

Practice all number bonds that have two single-digit numbers and their related subtraction facts, e.g.,

9+7=16 and 16-9=7 (These are the hardest to learn).

Add more than two numbers together, e.g.,

use Cuisenaire rods or colour squares in many different ways on grid paper to make the story of 6.

Subtract more than one number from a given number.

Improve counting strategies from counting in ones to counting in jumps of 2 and 10, e.g.,

12 + 6 could be illustrated on a number line in loops of 2 with a verbal count of 14, 16, 18 accompanying it.

Solve one step problems that involve addition and subtraction, using concrete objects and pictorial representations, and missing number problems such as 7 = ? – 9.

Solve one-step addition and subtraction problems using role play / concrete objects, e.g.:

Getting on and off the bus scenarios.

Coat hangers / pegs – adding, subtracting, hiding some.

Bead strings problems.

Floor number track, e.g.,

'Put yourself on the number track at 6. Take 3 steps the way the numbers are getting bigger. Where are you now?'

'Put yourself on the number track at 2. Take 3 steps the way the numbers are getting smaller (backwards). Where are you now?' (children should be able to handle the negative in a practical task.)

Solve one-step addition and subtraction problems using pictorial representations, e.g.:

There are four t-shirts on a washing line. Draw some more to equal seven altogether.

Use number lines and / or 100 squares to work out and record solutions, verbalising what has been done, such as, 16 subtract 2 is 14.

Undertake simple investigations, e.g.,

Explore patterns in pairs of numbers with a total of 10, Make Cuisenaire walls.

Break a rod of 12 cubes into three pieces. How many cubes are in each piece? Can you do it in different ways?

Recognise and create repeating patterns with objects / numbers, e.g.,

Make a simple pattern with dominoes.

Solve missing number problems and puzzles, e.g.,

7 = □ + 5, or 7 = □ – 9.

Make number trios, e.g., from triangles with related numbers in each corner.

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'How many birthday candles have been blown out since you were born?'

Present problem findings in own way with concrete objects, drawings and number sentences.

Represent and use number bonds and related subtraction facts within 20. (Number: Addition and Subtraction, Year 1)

Descriptor Gaps in Learning

Mathematics – Year 1
Multiplication & Division

Solve one step problems involving multiplication and division, by calculating the answer using concrete objects, pictorial representations and arrays with the support of the teacher.

Make and complete sequences of multiples of 2, 5 and 10., e.g.:

'How far can you count in fives?'

20, 18, 16. Describe the pattern. What comes next?

Hops forwards and backwards on number tiles / tracks. What numbers will you land on?

Solve problems with concrete objects, e.g.:

Exchange 2p, 5p or 10p coins for 10p, 20p, 50p, £1.

Share objects into equal groups.

Count repeated groups of objects, such as listening to 5p coins being dropped into a tin.

Solve problems by drawing diagrams / pictures, e.g.:

16 wheels, how many bicycles?

5 squares, how many corners?

Solve problems with arrays, e.g.:

Find different ways to arrange 12 counters in equal rows.

Doubling and Halving

Find the double of each number to 10, e.g.,

double dice throws (10-sided die).

Find half of each even number to 20, e.g.,

divide 12 spots equally on a ladybird.

Recognise, find and name a half as one of two equal parts of an object, shape or quantity. (Number: Fractions, Year 1)

Count in multiples of twos, fives and tens. (Number: Number and Place Value, Year 1)

Year 1 Mathematics Curriculum Objectives

Mathematics – Year 1
Fractions

Recognise, find and name a half as one of two equal parts of an object, shape or quantity.

Half of one
Find half of one object that can be broken / contents moved, e.g.,
playdough, container of water, string, piece of fruit, and piece of paper.
Find half of one object that cannot be broken, e.g.,
metre stick.

Half of a shape
Find half of a range of different paper shapes (different sizes and orientations).
Recognise / talk about an object that is half of something.
Make links between half a circle and half past on the clock face.
Know that two halves of a shape can combine to make one.
Know that half of one shape might be larger or smaller than half of another one.

Half of a quantity more than one
Find half of a quantity of objects that can be moved, e.g.,
counters.
Find half of a quantity that cannot be moved, e.g.,
objects in a picture.
Know that objects might not always share equally into two groups – there may be one left.
Find half in the context of measures and money, e.g.,
'Where is half way between 0 and 20 cm on the ruler?'

Half
Know the difference between half of one and half of a quantity.
Understand what the symbol ½ represents.
Solve one-step problems involving multiplication and division,. . .. (Number: Multiplication and Division, Year 1)

Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity.

Quarter of one
Find a quarter of one object that can be broken / contents moved, e.g.,
playdough, container of water, string, piece of fruit, and piece of paper.
Find a quarter of one object that cannot be broken, e.g.,
metre stick.

Quarter of a shape
Find a quarter of a range of different paper shapes (different sizes and orientations).
Recognise / talk about an object that is a quarter of something.
Make links between a quarter of a circle and quarter past and quarter to on the clock face.
Know that four quarters of a shape can combine to make one.

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Know that a quarter of one shape might be larger or smaller than a quarter of another one.	☒
Know that a quarter of the same shape, such as a rectangle, can be shown in different ways and they may look different from each other.	☒
Quarter of a quantity more than one	
Find a quarter of a quantity of objects that can be moved, e.g.,	☒
counters.	
Know that objects might not always share equally into four groups – there may be 1, 2 or 3 left.	☒
Find a quarter of a quantity that cannot be moved, e.g.,	☒
objects in a picture.	
Find a quarter in the context of measures and money, e.g., 'Where is a quarter of the way between 0 and 20 cm on the ruler?'	☒
Quarter	
Know the difference between a quarter of one and a quarter of a quantity.	☒
Understand what the symbol ¼ represents.	☒

Year 1 Mathematics Curriculum Objectives

Mathematics – Year 1
Measurement

Lengths and heights.
Measure an object / area with a non-standard unit, e.g.,
'How many counters cover the square?'
Measure one object with different non-standard measures and record outcomes, e.g.,
Find the length of a book with toy cars, counters and Multilink. Record by displaying the concrete objects.
Measure objects with the same non-standard unit and record, e.g.,
Measure the length of several objects with straws.
Draw objects with numbers beside or fill in a data table an adult has drawn.
Solve problems, e.g.,
Tell me two objects that are about the same length as each other.
Select the most appropriate tool to measure and object, e.g.,
ruler, metre stick, trundle wheel.
Estimate lengths and heights.
Use charts / diagrams to record findings, e.g.,
a group cut string lengths of feet and stick on a chart.

Lengths and heights [for example, long/short, longer/shorter, tall/short, double/half].
Describe objects using length words, e.g.,
''This straw is very short.'
Compare two objects / areas directly, e.g.,
'Which is bigger, the classroom or the playground?'
Find objects that are longer / shorter than another object starting from the same point, e.g.,
a ruler or a metre stick.
Compare, match and order two or more objects, order and describe what has been done, e.g.,
Match and order a set of gingerbread men and their napkins by height / size.
Compare lengths with a standard measure, such as a metre stick,
Explain why the same unit must be used to accurately compare the lengths of different objects. e.g.,
the drawers and the table.

Mass/weight [for example, heavy/light, heavier than, lighter than].
The pairs of terms: mass and weight are used interchangeably at this stage. e.g.,
'This box is heavy.'
Describe objects using weight words,
Compare two objects directly by feeling and balancing, pushing and lifting, including objects that are large and light, small and heavy.
Find objects that are heavier / lighter than a standard measure, e.g.,
a 100 g or a 1 kg weight.
Compare more than two objects, order and describe what has been done using weight words.

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Compare several objects in relation to a standard measure, such as a kilogram weight.
Explain why the same unit must be used to accurately compare the weights of different objects.
Recognise that a malleable object remains the same weight if it changes shape.

Capacity and volume [for example, full/empty, more than, less than, half, half full, quarter].

The pairs of terms volume and capacity are used interchangeably at this stage.
Describe objects using capacity and volume words, e.g.,
'This jug is less than half full.' or 'This tower takes up the space of 16 bricks.'
Compare two objects directly by packing and pouring.
Find objects that hold more / hold less than a standard measure, e.g.,
a litre jug.
Compare more than two objects, order and describe what has been done using capacity and volume words, e.g.,
match the contents of bowls of porridge to the three bears.
Compare several objects in relation to a standard measure, such as a litre.
Explain why the same unit must be used to accurately compare the capacity and volume of different objects.
Recognise that an amount of liquid remains the same when poured into a different container.

Time [for example, quicker, slower, earlier, later].

Describe events using time words, e.g.,
'I'm quicker at running than Maisie,' or 'That took a long time!'
Compare two events directly, e.g.,
'Who can do 20 jumps the quickest, you or Roy?
Compare two events with a non-standard unit, e.g.,
touching toes, walking to the door and back.
Compare two or more events in relation to a standard measure, e.g.,
a one-minute sand timer.

Time (hours, minutes, seconds).

Develop a sense of how long events take, e.g.,
Can they clear the table before 20 is counted.
Measure one event with different non-standard measures and record outcomes, e.g.,
'How many times can you clap / jump / how far can you count whilst Sam puts his pumps on?
Measure more than one event with the same non-standard unit and record informally.
Explain why the same unit must be used to compare how long different events take.
Be able to say what might take a few seconds, a minute, more than an hour, etc.
Record outcomes of tasks in a practical context, e.g.,
Talk about what has been done, or record with objects, numbers and units of measure.
Solve time problems in a practical context, e.g.:
'Draw a picture of your favourite time of day and a clock to show the time.'
It's 10 o'clock now. What time was it 3 hours ago? What time will it be in 1 hour? (Some of these questions could take the time across the noon boundary so take care with what is asked.)

Recognise and know the value of different denominations of coins and notes.

Year 1 Mathematics Curriculum Objectives

Recognise the value of different coins.
Exchange higher ranked coins for the correct amount of 1p coins.
Order a set of coins and notes by value.
Exchange a collection of 1p coins for a higher ranked coin.
Total two or more coins (might exchange for 1p coins to do this), e.g.,
In a money game collect coins up to 10p, the player with most wins.
Read and write prices such as 8p or £4, e.g.,
in role play.
Solve problems with money, e.g.:
'How many different ways could I pay for the rubber that costs 8p?'
'Which purse would you rather have and why?'

Sequence events in chronological order using language [for example, before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening].

Use time words correctly in context, e.g.,
first, today, yesterday, tomorrow, morning, afternoon, evening.
Sequence events correctly and describe what has been done, e.g.,
in familiar stories or day-time routines.

Recognise and use language relating to dates, including days of the week, weeks, months and years.

Know the days of the week in order, e.g., in story settings such as 'The Very Hungry Caterpillar.''
Know that some things occur at regular intervals, including:
daily;
weekly;
monthly;
yearly (annually).
Know that weekend days are Saturday and Sunday.
Know the months of the year in order.
Become familiar with a calendar in a class activity, e.g., Add special events to a class calendar that has a page for each month.
Know that each day has a date with a day, a month and a year that is only used once.

Mass/weight.

Measure an object with a non-standard unit, e.g.,
'How many big shells do you think will balance your shoe? See if you were right.'
Measure one object with different non-standard measures and record outcomes, e.g.,
Find how many toy cars / conkers / cubes balance a tennis ball.
Record by displaying the concrete objects.
Measure several objects with the same non-standard unit and record, e.g.,
Balance a selection of objects with shells.
Record by drawing objects with numbers beside or fill in a data table an adult has drawn.
Solve problems, e.g.,

Lucy's book balances with 15 bricks and Guy's balances with 18 bricks. What's the difference?

Select the most appropriate instrument for the object being weighed, e.g.,

scales or balance.

Estimate weights.

Use charts / diagrams to record findings, e.g.,

Carroll diagrams heavier than / not heavier than 1 kg.

Capacity and volume.

There are 2 elements involved here: how much space an object takes up; measuring liquids / pourable solids in containers.

Find the volume / capacity of one object, e.g.,

Find how many bricks can be packed into a bucket, how many cups of water fill a jug.

Measure one object with different non-standard measures and record outcomes, e.g.,

Fill a small bucket with a range of different objects such as beanbags and bricks and count them. Record with objects.

Measure objects with the same non-standard unit and record, e.g.,

Use spoonfuls of sand to fill different small containers. Draw objects with numbers beside or fill in a data table an adult has drawn.

Solve problems, e.g.,

'Here are 3 bowls of cereal. Which is for Daddy Bear? How can you be sure?'

Select the most appropriate container for liquids / pourable solids / objects being measured.

Estimate before finding capacities and volumes.

Use charts / diagrams to record findings, e.g.,

Carroll diagrams holds more than / does not hold more than half a litre.

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

Only use geared clocks when manipulating the hands to reinforce the concept of clockwise.

Become familiar with clocks in stories and rhymes, e.g., Hickory Dickory Dock, Mr Wolf's Week.

Know that there are different types of clocks that show us what time it is.

Know the features of an analogue clock: second hand, hour hand, minute hand and twelve numbers.

Know that it takes the minute hand one hour to make a full turn and at the same time the hour hand moves from one number to the next.

Describe position, direction and movement, including whole, half, quarter and three-quarter turns. (Geometry: Position and Direction, Year 1)

Know the meaning of clockwise ('the way the clock turns') and anti-clockwise, e.g.:

Routinely move clock hands in a clockwise direction;

Follow instructions to turn clockwise and anti-clockwise.

Tell / show the time on an analogue clock relating movement to amounts of turn for:

o'clock;

half past.

Recognise key times in the day on a clock and know what they are doing, e.g., going home, bedtime.

Year 1 Mathematics Curriculum Objectives

Mathematics – Year 1
Geometry: Properties of Shapes

2-D shapes [for example, rectangles (including squares), circles and triangles];
Name a shape correctly.
Recognise a shape in the environment in different positions and orientations, e.g., 'I Spy'.
Select a described shape from a set of shapes / objects.
Describe a shape e.g., Make pictures / models with shapes and talk about them.
Visualise a shape, e.g.:
Take part in feely bag activities.
Select a shape matching a description from a collection.
Describe a shape for a friend to select without using its proper name,
2-D shapes: including rectangle, square, circle, triangle.
Know that all triangles have 3 sides and recognise any shape with three sides as a triangle.
Know that rectangles have 4 sides and their corners are all the same size and recognise rectangles in a set of four-sided shapes.
3-D shapes: [for example, cuboids (including cubes), pyramids and spheres].
Name a shape correctly.
Recognise a shape in the environment in different positions and orientations, e.g., 'I Spy'.
Select a described shape from a set of shapes / objects.
Describe a shape e.g., Make pictures / models with shapes and talk about them.
Visualise a shape, e.g.:
Take part in feely bag activities.
Select a shape matching a description from a collection.
Describe a shape for a friend to select without using its proper name,
3-D shapes: including cuboid (rectangular prism), cube, pyramid and sphere.
Know that cuboids (rectangular prisms) have six faces that are all rectangles.
Know that a cube is a special cuboid where all its faces are square.
Know that pyramids can have different shapes on their base (except a circle) but all their other sides are triangles that meet at a point (apex).
Identify spheres in a set of mixed 3-D solids.
Solve shape problems, e.g.:
Sets of shapes will become more refined over time, e.g., from a set of different shapes altogether to a set of 4-sided shapes only.
Recognise and create repeating patterns with shapes, explaining what has been done.
Sort shapes and say how they have been selected.
Identify shapes that do not belong to a set, e.g., a square in a set of triangles.

Year 1 Mathematics Curriculum Objectives

Mathematics – Year 1
Geometry: Position & Direction
Describe position, direction and movement, including whole, half, quarter and three quarter turns.
Tell the time to the hour and quarter past the hour and draw the hands on a clock face to show these times. (Measurement, Year 1)
Position
Place objects according to instructions, e.g.:
Move play people in a scene.
Take part in 'behind the screen' – one child has pattern, describes it to friend who makes it, check if they look the same.
Describe objects by their position in everyday language, e.g., 'Tell me how I should arrange this plate, knife, fork, spoon and cup to lay the table properly.'
Respond to instructions correctly, e.g., 'Go and stand: under a light . . . in front of a window . . . beside the door.'
Be able to imagine the position of something, e.g., 'We can't see the hall, but what is next to the piano?'
Direction and Movement
Identify objects that turn:
about a point, e.g., scissors, number spinner;
about a line, e.g., a door, hand of a clock.
Make whole, half and quarter turns with objects, e.g., Place a doll on the carpet with four objects around it. Make the doll do quarter turns, half turns, three-quarter turns or whole turns and see which of the objects the doll is facing.
Know the meaning of left and right, e.g., 'Which is your left hand?'
Follow instructions for turning, e.g.:
In PE turn left, right, make whole turn, half turn, three-quarter turn.
In the outdoor area walk along the log, then make a half-turn and walk back.
Imagine you are facing the window, now turn half a turn . . . what are you facing now?
Use left, right, quarter turn, half turn, three quarter turn, straight line when talking about how they / objects have moved from one place to another. e.g.:
Give me directions that take me from here to the hopscotch grid.
Michelle and Solomon are going to take the register to the school office. Give them instructions to tell them how to get there.
Know the meaning of clockwise ('the way the clock turns') and anti-clockwise, e.g.,:
Routinely move clock hands in a clockwise direction (this must be a geared clock).
Use this language when giving instructions for movement.