St. Joseph's RCP School

Mathematical Vocabulary

Early Years
Foundation Stage

Without mathematics, there's nothing you can do.

Everything around you is mathematics.

Everything around you is numbers.

-Shakuntala Devi

Mathematics vocabulary list EYFS

Maths is its own language. Sometimes that language looks like the written word and sometimes it looks like symbols, but it is a language and it must be learned for mathematical fluency and competency. A child without a good understanding of key mathematical vocabulary, can be hindered in making good progress in maths and in other areas of the curriculum.

In St. Joseph's Foundation Stage, we explicitly teach maths vocabulary, giving it a context and allowing children to apply it in a variety of problems.

Listed below are the key mathematical terms your child will learn throughout the Foundation Stage. This is the minimum we expect children to learn; however, we know children are curious and will undoubtedly want to learn more and we encourage this.

One of the best ways our chidlren develop their breadth, understandign and use of mathematical vocab is through their play and understanding of the world – matehmatics is everywhere.

Vocabulary	Definition	Example
Number and Place Value		
Before	In front of or prior to.	*'The number 3 comes **before** 5 on the number track'.*
Between	A preposition that indicates location of an object with reference to two other objects, to the left of the first and the right of the second.	*'4 is **between** 3 and 5 on our number track'.*
Compare	Look for similarities and/or differences between at least two objects or sets.	*'Let me **compare** these two sets – there are more red cars than blue cars.'*
Count	Assigning one number name to each of a set of objects to determine how many there are.	*'I **counted** the children in the group – there are four so we will need four pencils.'*
Digit	A digit is a single symbol used to make numerals.	
Estimate	To find a value that is close enough to the right answer, usually with some thought or calculation involved.	*'Can you **estimate** how many counters are below?'*
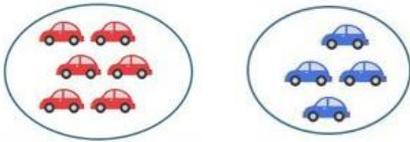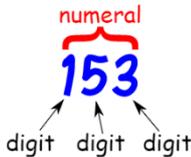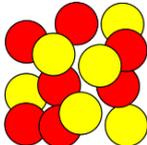
Fewer	A lesser amount – used when counting discrete objects, i.e. countable objects such as, pens, teddies, counters, etc.	*'The girl has **fewer** blocks than the boy'.*
First	Before anything else.	*'Fred is the **first** person in line'.*
First, second, third…	***'First, second, third, fourth, fifth, sixth, seventh, eighth, ninth, tenth'.***	
Greater	When a quantity or number is bigger or larger than the second or rest quantities or numbers.	*'10 is **greater** than 8'.*
How many?	What number.	*'**How many** counters are there on the 5 frame?'*
Is the same as…	Is equal to	*'4 is **the same as** 3 + 1. It is also **the same as** 2 + 2'*
Largest, greatest	The most in a set.	*'The **greatest** number in the following set, 6, 3, 9 is 9'.*
Last	Comes after all others in time or order.	*'Rory is the **last** person in the line'.*
Less	A smaller amount or not as much.	*'I have 9p and you have 3p. You have **less** money than me'.*
Next	Comes immediately after the present one in order.	*'The **next** shape in my pattern is a square'.*
Number	A count or measurement.	
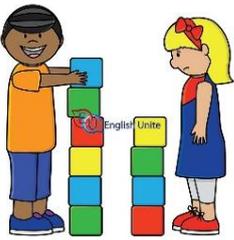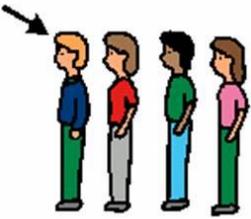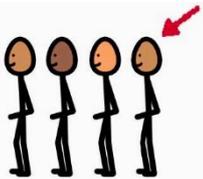
One, two, three…to twenty	*'One, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty.'*	
Ones Tens	*'Numbers, such as 12, have two digits. Each digit is a different place value. The left digit is the **tens**' place. It tells you that there is one **ten**. The last or right digit is the **ones**' place which is 2 in this example'.*	
Order	Describes the placement of items according to given criteria or in a pattern. As a verb, to place items according to given criteria or in a pattern.	*'I have **ordered** the chickens from biggest to smallest.'*
Pair	A set of two things used together.	*'Socks come in a **pair** – one for each foot'.*
Pattern	A systematic arrangement of numbers, shapes or other elements according to a rule.	*'The **pattern** is red, blue, red, blue, red blue'.*
Subitise	Instantly recognising the number of objects in a small group, without counting.	*'There are 9 dots here. I worked this out without counting. I **subitised**'.*
Zero	The number before one. It is neither positive nor negative.	*'**Zero** comes before one on the number track'.*
	Addition and subtraction	
Add	Carry out the process of addition.	*'I can **add** two numbers together to find a total.* *1 + 2 = 3''*
Addition	The operation to combine at least two numbers or quantities to form a further number or quantity, the sum or total. Addition is the inverse operation to subtraction.	*'eight plus three is equal to eleven. This is an **addition** question.'* Addition: $8 + 3 = 11$
Altogether	In total.	*'That will be £2 **altogether** please.'*
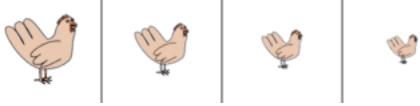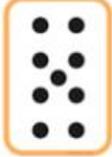
Commutative	Either of two laws relating to number operations of addition and multiplication, stated symbolically: a + b = b + a and ab = ba.	'6 + 3 equals the same as 3 + 6. This is the **commutative law**.' 6 + 3 = 3 + 6
Double	To multiply by two or add a value to itself.	'Four is **double** two.' Double 2 2 + 2 = 4
Less	A smaller amount or not as much.	'I have two footballs. You have 10 footballs. I have **less**'.
More	A greater amount.	'I have twenty apples and you have five. I have **more**.'
Sum	The result of one or more additions.	'The **sum** of five and three is eight.'
Take away	Used in the reduction structure of subtraction. To remove a number of items from a set.	'He ate three of the sweets so we need to **take away** three counters.'
Total	The sum found by adding.	'There are a **total** of five people at this table.'
Multiplication and division		
Doubling	To multiply by two or add a value to itself.	'Ten is **double** five.'
Halving	One of two equal parts of a shape, quantity or object.	What is half of 4 ? 4 - 2 = 2
Number patterns	A systematic arrangement of numbers, shapes or other elements according to a rule.	'The **number pattern** is 2, 4, 6, 8, 10.'
Sharing	To distribute fairly between a given number of recipients. This is one model for division.	'I will **share** the crayons equally between the people at the table.'
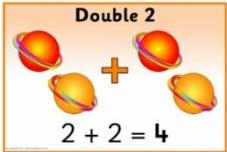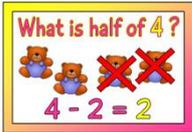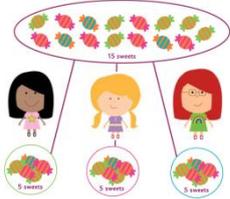
	Fractions	
Half	Either of two equal or corresponding parts into which something is or can be divided.	
Parts of a whole	A ratio or a fraction that represents a relationship between a part and its whole.	*'A cake has been split into two **parts**. One part has been eaten.'*
	Measurement	
Compare	Look for similarities and/or differences between at least two objects or sets.	*'I can **compare** these two sets – this set has more.'*
Guess	An estimate or conclusion	*'My **guess** is about 11'*
Measure	To find the size of something in a given unit.	*'How might we **measure** how much sand there is in the sand tray?'*
Size	An element's overall dimensions or magnitude.	*'The **size** of my shoe is smaller than my teacher's.'*
	Length	
Depth	The distance between the nearest end and farthest end of an object.	*'Can you measure the **depth** of this box?'*
Height	The vertical distance from the top to the base of the object.	*'The **height** of this object is 12 cubes.'*
Length	A linear measurement.	*'The **length** of my snake is shorter than yours.'*
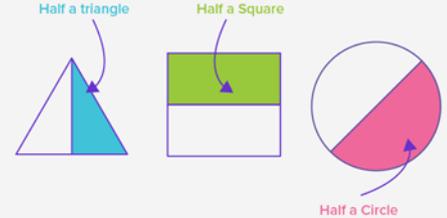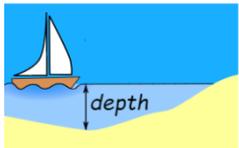
Long	An adjective used to describe length.	*'I have a **long** piece of string.'*
Short	An adjective used to describe length.	*'This bed is too **short**.'*
Tall	Measuring a specific distance from top to bottom.	*'The children are not as **tall** as the teacher.'*
Width	The measurement of the distance of a side of an object.	*'The **width** of this table is…'*
Weight		
Balances	A measuring tool used to weigh objects. It has two dishes hanging on a bar. Both dishes will be level when the contents weigh the same. Also, as a verb, indicates equivalence and equality.	*'The objects in the balance are unequal in weight because the dish on the right side is lower down that the dish on the left side. The two objects **balance** which means they have the same mass.'*
Heavy	Having a weight that is greater than that of another object.	*'That box is **heavy**.'*
Light	Having a weight that is less than that of another object.	*'The banana in the monkey's hand is **light**.'*

Scales	An instrument for weighing.	*'Can you use the **scales** to weigh the cubes?'*
Weigh	Find out how heavy something is.	*'I have **weighed** the Lego model'*
Weight	The force exerted on an object by gravity.	*'The **weight** of this book is heavier than the pencil.'*

Capacity and volume

Container	An object for holding or transporting something.	*'What **container** will hold the most water?'*
Empty	Containing nothing. Most commonly used in the context of measures.	*'There is no more water left in the jug – it is **empty.'***
Full	Contains/holds as much or as many as possible; has no empty space.	*'The juice carton is not **full** because I drank some.'*

Time

Afternoon	The time from noon or lunchtime to evening.	*'We are going to the forest this **afternoon.'***
Days of the week, Monday, Tuesday …	*'**Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday.'***	
Early	Near the beginning of a particular time or period.	*'You have arrived **early** today.'*
Evening	The period of time at the end of the day, usually from about 6 p.m. to bedtime.	*'You go to bed in the **evening.'***
First	Comes before all others in time or order.	*'The **first** thing we are going to do today is to wash our hands'.*
Hour	A period of time equivalent to 60 minutes.	*'We are having lunch in 1 **hour.'***
Last	Comes after all others in time or order.	*'The **last** thing we are going to do today is read a story.'*
Late	Doing something or taking place after the expected, proper, or usual time.	*'The teacher has arrived **later** than expected.'*

Morning	The period of time between midnight and noon.	'Good **morning** everyone'.
Night	The period from sunset to sunrise in each twenty-four hours.	'You can normally see the moon in the **night**.'
O'clock	'The time now is 1 **o'clock**.'	
Soon	In or after a short time.	'We are doing PE **soon**.'
Time	Related to duration. Measured in seconds, minutes, hours, days, weeks, months, years etc.	'After lunch it will be **time** for P.E.'
Today	The present day.	'The theatre are coming **today**'.
Tomorrow	The next day.	'**Tomorrow**, the weather will be snowy.'
Week	A period of seven days.	'Next **week**, we will be learning about farm animals.'
Yesterday	The previous day.	'Do you remember what we did **yesterday**?'
	Money	
Buy	Obtain in exchange for payment	'How much is that item to **buy**?'
Coin	A flat disc or piece of metal with an official stamp, used as money	'I have 5 **coins** here. I wonder how much I can buy from the shop...?'
Money	Any object that is generally accepted as payment for goods and services.	'That is a lot of **money!**'
Pay	Give (someone) money that is due for work done, goods received.	'How much have I got to **pay** you for that?'
Penny/pence	A small sum of money.	'That will be 3 **pence** please'.

Pound	Equal to 100 pence.	*'The cake will be one **pound** please'.*
Price	The amount an item costs.	*'What is the **price** of that please?'*
Sell	Give or hand over (something) in exchange for money.	*'I am not going to **sell** you this today'.*
Spend	Give (money) to pay for goods, services	*'How much money do you have to **spend**?'*
	Properties of shape	
Bigger, Larger	Of considerable size.	*'Which of these fish is the **biggest**?'*
Curved	A non-plane surface of a 3-D shape. Both cones and cylinders have curved surfaces.	*'This line is **curved**.'*
Flat	A level surface.	*'The table has a **flat** rectangular surface.'*
Hollow	Having a hole or empty space inside.	*'This box is **hollow**'.*
Pattern	A systematic arrangement of numbers, shapes or other elements according to a rule.	*'The **pattern** below is square, triangle, square, triangle.'*
Repeating pattern	A design for decorating a surface composed of a number of elements (motifs) arranged in a regular or formal manner.	*'Circle, rectangle, circle, rectangle…this is a **repeating pattern** of shapes'.*
Round	A circular piece of something.	*'This circle is **round**'.*
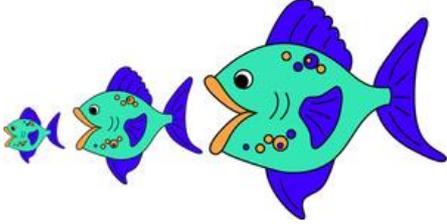
Shape	A geometric figure such as a square, triangle, or rectangle.	'Which of these **shapes** has four sides?'
Size	An element's overall dimensions or magnitude.	'The **size** of my shoe is smaller than my teacher's.'
Smaller	Of a size that is less than normal or usual.	'Which of these fish is the **smallest**?'
Solid	Having three dimensions.	'This cube is a **solid** shape'.
Sort	Arrange systematically in groups.	'How could we **sort** these shapes?'
Straight	A line or movement uniform in direction, without bends or curves.	'The edges of the table are **straight.**'
Symmetrical	A balanced and a proportionate similarity which is found in two halves of an object, that is, one-half is the mirror image of the other half.	'How can we see if this square is **symmetrical**? Let's fold it'.
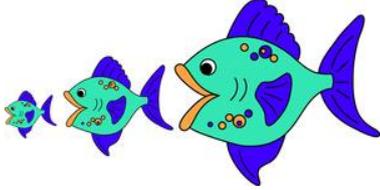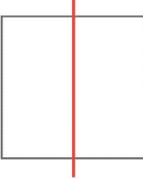
| *2d shape*		
Corner	A point where two or more lines meet. The correct mathematical term is vertex (vertices).	'The table has four **corners** (vertices).'
Circle	The name of a 2-D shape. A circle has a curved side.	
Rectangle	A quadrilateral with four right angles.	
Side	A straight line that forms part of the boundary of a shape.	'This shape has four straight **sides**.'

Square	A quadrilateral with four equal length sides and four right angles.	
Triangle	A polygon with three sides.	
3d shape		
Cone	A 3-D shape with one circular plane face, which tapers to an apex.	
Cube	A 3-D shape with six identical square faces.	
Cuboid	A 3-D shape with six rectangular faces.	
Cylinder	A 3-D shape with two circular faces joined by a curved surface.	
Edge	A line segment joining two vertices of a plane figure (2-D shape) and the intersection of two plane faces (in a 3-D shape).	*'A triangle has three **edges** and a cube has 12 **edges**'.*
Face	One of the plane surfaces of a solid shape.	*'A cube has six **faces**.'*
Pyramid	A 3-D shape with a polygonal base and otherwise triangular faces, which form edges with the base, and which meet at an apex.	
Sphere	A 3-D shape with a continuous surface, which is at all points equidistant from its centre. It has an infinite number of flat faces and straight edges.	*'A bowling ball is a **sphere**'.*
Vertex, vertices	The point at which two or more lines intersect.	*'This shape has five **vertices**'.*
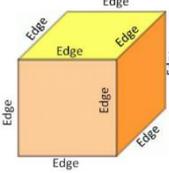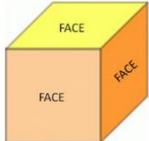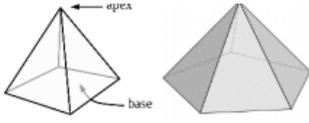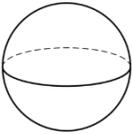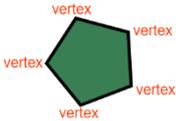
Position and direction	
Above	*'The ball is **above** the box'.*
Across	*'Walk **across** the road'.*
Along	*'The hare ran **alongside** the tortoise'.*
Apart	*'Move **apart** from each other'*
Around	*'The plane flew **around** the world'.*
Away from	*'If you see a snake, run **away from** it'.*
Back	*'Please come in through the **back** of the house'.*

Backwards	*'Move **backwards** until you reach the wall'.*
Behind	*'The cat was **behind** the box'.*
Below	*'**Below** the tree, sat a little boy'.*
Bend	*'**Bend** over and touch your toes'.*
Beside	*'The cat sat **beside** the chair'.*
Between	*'The red ball is **between** the two cardboard boxes'.*
Bottom	*'The little girl waved from the **bottom** of the classroom'.*
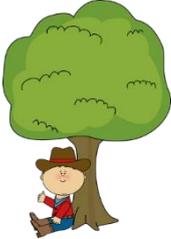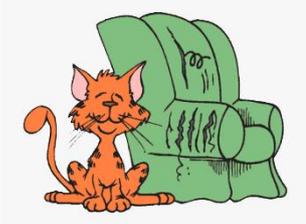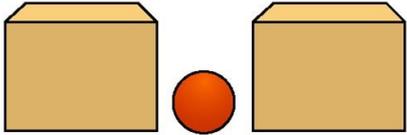
Close	*'The children ran to the playground **close** together'.*
Corner	*'Around the **corner** is the library'*
Direction	*'Which **direction** do you think the postman needs to take next?'*
Down	*'The girl slid **down** the slide'.*
Far	*'Birmingham is quite **far** away from our school.'*
Forwards	*'The girl walked **forward** through the corridor'.*
From	*'The man moved the boxes **from** the van to the school.'*
Front	*'The teacher was at the **front** of the class'.*

Half turn	A 180 degree rotation, i.e. ½ of a 360 degree or 'full' turn.	
In	*'The dog hid **in** the box'.* 	
Inside	*'The two boys slept **inside** their tents'.* 	
Left	*'The green car is to the **left** of the right car'.* 	
Middle	*'The archer hit the **middle** of the target'.* 	
Movement	*'Let's stretch our arms really high in the air. Let's make big **movements**'.*	
Near	*'The bear was near the tree'.* 	
Next to	*'The cat sat **next to** the ball of string'.* 	

On	*'The elephant balanced carefully **on** the ball'.*	
Opposite	*'The man was on the **opposite** side of the wall'.*	
Outside	*'The children played skipping **outside**'.*	
Over	*'The horse jumped **over** the fence'.*	
Position	Location, expressed either descriptively using positional prepositions, or specified by coordinates.	*'The book is on the table. The clock is hanging above the board. This is their **position**'.*
Right	*'The purple fish is to the **right** of the green fish'.*	
Roll	*'**Roll** the ball along the floor'.*	
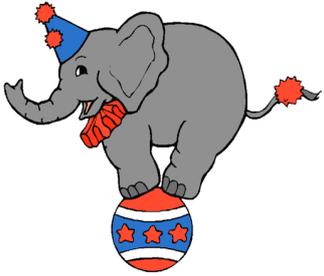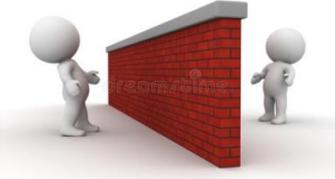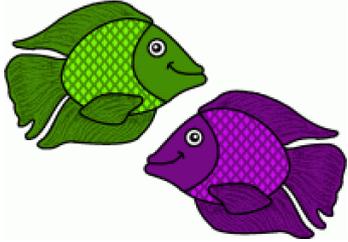
St. Joseph's RCP – EYFS

Sideways	*'Tilt your body **sideways**. Can you still balance?'*
Slide	*'In the dance, we need to **slide** to the right'.*
Stretch	*'Before any exercise, we must **stretch** our muscles'.*
Through	*'Chuck the ball **through** the hoop and into the net'.*
Top	*'The explorer climbed to the **top** of the mountain'*
Towards	*'The boy ran **towards** his mum at the end of the day'*

Turn	'The two girls were dancing and **turned** on the spot'.
Under	'The boy hid **under** his blanket and read his book'.
Up	'You can climb **up** the tree as long as an adult helps you'.

Whole turn	360 degrees turn.	

Statistics		
Count	Assigning one number name to each of a set of objects to determine how many there are.	'*I **counted** the children in the group – there are four so we will need four pencils.'*
Group	To make equal size groups.	'*I will **group** the crayons equally so that each person gets two.'*
Set	A defined group of objects, numbers or other elements.	'*I have placed all the purple counters in this **set** because they are all the same colour'.*
Sort	To organise a set of elements into specified categories.	'*I will **sort** these objects based on their size.'*