At High Well we have pupils who work at different stages of the curriculum.

The vocabulary below covers the content from the Primary curriculum.

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| **Reception**  | **Definition**  | **Example**  |
| Above  | Used to describe a higher position than another object.  | The Maths Meetings board is **above** the sink.  |
| Add  | Carry out the process of addition.  | I can **add** two numbers together to find a total.  |
| 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.  | Three plus seven is equal to ten. This is an **addition** equation.  |
| Altogether  | In total.  | That will be £2 **altogether** please.  |
| Balance  | 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.  |
| Before  | In front of or prior to.  | The number ‘3’ comes **before** ‘5’ on the number line.  |
| Below  | Used to describe a lower position than another object.  | The sink is **below** the Maths Meetings board.  |
| Between  | Indicates a position in relation to two other places or objects on either side.  | The teacher is standing **between** two tables.  |
| Capacity  | The amount of liquid a container can hold.  | This cup is full to **capacity** because it cannot hold any more water.  |
| Circle  | The name of a 2-D shape. A circle has a curved side.  |  |
| Clock  | A tool used to measure time.  | The **clock** shows us that the time is now 2 o’clock.  |
| Compare  | Look for similarities and/or differences between at least two objects or sets.  | I can **compare** these two sets – this set has more.  |

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| Corner  | A point where two or more lines meet. The correct mathematical term is vertex (vertices).  | The table has four **corners** (vertices).  |
| Cost  | A monetary value assigned to a good or service.  | This apple **costs** 10p. What coin could I use to pay for it?  |
| 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.  |
| Cube  | A 3-D shape with six identical square faces.  |  |
| Cuboid  | A 3-D shape with six rectangular faces.  |  |
| Curved surface  | A non-plane surface of a 3-D shape. Both cones and cylinders have curved surfaces.  | The cone has a **curved** surface.  |
| Cylinder  | A 3-D shape with two circular faces joined by a curved surface.  |  |
| 2-D  | Abbreviation for two-dimensional. A figure is two-dimensional if it lies on a plane.  | A square is a **2-D** shape.  |
| 3-D  | Abbreviation for threedimensional. A solid is threedimensional and occupies space.  | A cylinder is a **3-D** shape.  |
| Describe  | To express mathematical features, qualities and details in words.  | Can you **describe** the properties of a cube?  |
| Difference  | The numerical difference between two numbers or sets of objects. It is found by comparing the quantity of one set of objects with another.  | The **difference** between ten and six is four.  |
| Direction  | The orientation of a line in space.  | Which **direction** should we jump – forwards or backwards?  |
| Distance  | A measure between two points or things.  | The **distance** between my house and the school is longer than that between the school and the train station.  |
| Double  | To multiply by two or add a value to itself.  | Ten is **double** five.  |
| 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**.  |
| Empty  | Containing nothing. Most commonly used in the context of measures.  | There is no more water left in the jug – it is **empty**.  |
| Equal  | Indicates equivalence between two values and can be expressed with the symbol ‘=’. The symbol is read as ‘is equal to’ which means the  | My sets are **equal** because there are four bears in this set and there are four bears in this set.  |

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|  | same as. Expressions on either side of the symbol have the same value.  |  |
| Face  | One of the plane surfaces of a solid shape.  | A cube has six **faces**.  |
| Fewer  | A lesser amount – used when counting discrete objects, i.e. countable objects such as, pens, teddies, counters, etc.  | There are **fewer** buttons on my coat than yours.  |
| First  | Comes before all others in time or position.  | **First** I brush my teeth. Then I go to bed.  |
| Flat  | A level surface.  | The table has a **flat** rectangular surface.  |
| Full  | Contains/holds as much or as many as possible; has no empty space.  | The juice carton is not **full** because I drank some.  |
| Group  | To make equal size groups. This is one model for division.  | I will **group** the crayons equally so that each person gets two.  |
| Half  | One of two equal parts of a shape, quantity or object.  | I have shared the dolls into two equal groups – I have **half** and you have **half**.  |
| Intersection of sets  | Where the two subsets overlap in a Venn diagram. Objects or values which belong to both subsets are placed here.  | The number 4 belongs in the **intersection** because it is even *and* less than 5.  |
| Last  | Comes after all others in time or order.  | Rory is the **last** person in the line.  |
| Length  | A linear measurement.  | The **length** of my snake is shorter than yours.  |
| Less  | A smaller amount or not as much.  | I have 15p and you have 7p. you have **less** money than me.  |
| Line  | A set of adjacent points that has length but no width.  | I have drawn a **line** matching the number four with the four ducks.  |
| Long  | An adjective used to describe length.  | I have a **long** piece of string.  |
| Mass  | A measure relating to the amount of matter within a given object.  | The **mass** of the school bag is greater than the **mass** of the book.  |
| Measure  | To find the size of something in a given unit.  | How might we **measure** how much flour we need to bake a cake?  |
| Minus  | A name for the symbol ‘-’, which denotes the operation of subtraction.  | Three **minus** one is equal to two.  |
| More  | A greater amount.  | I have six apples and you have two. I have **more**.  |
| Next  | Comes immediately after the present one in order.  | The **next** shape in my pattern is a square.  |
| Number bond  | A pair of numbers with a given total.  | Five and four make a **number bond** to nine.  |
| Number line  | A linear, continuous representation of number. Each number occupies a point on the line, and there is an equal interval between each number.  | This **number line** starts at zero and ends at ten.  |

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| Number track  | A linear, discrete representation of number. Each number is positioned in a square on the track.  | I can count from one to ten, moving a counter along this **number track**.  |
| 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 bears from smallest to biggest.  |
| 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.  |
| Plus  | The word representing the operation of addition. It is also the name for the symbol ‘+’.  | Five apples **plus** two apples are equal to seven apples.  |
| Rectangle  | A quadrilateral with four right angles.  |  |
| Second  | 1. A unit of time.
2. An ordinal number.
 | Mohsin is **second** in the line today.  |
| Sequence  | A series of numbers or other elements which follow a rule.  | The number 3 is next in the **sequence** because each number is one less than the one before.  |
| 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.  |
| Share  | 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.  |
| Short  | An adjective used to describe length.  | This string will not reach to the door. It is too **short**.  |
| Side  | A straight line that forms part of the boundary of a shape.  | This shape has four straight **sides**.  |
| Size  | An element’s overall dimensions or magnitude.  | The **size** of my shoe is smaller than my teacher’s.  |
| Sort  | To organise a set of elements into specified categories.  | I will **sort** these objects based on their size.  |
| Square  | A quadrilateral with four equal length sides and four right angles.  |  |
| Straight  | A line or movement uniform in direction, without bends or curves.  | The walls of the school are **straight**.  |
| Subtract  | Carry out the process of subtraction.  | Nine **subtract** three is equal to six.  |
| Subtraction  | The inverse operation to addition.  | We are taking some away so it is a **subtraction** question.  |
| Sum  | The result of one or more additions.  | The **sum** of five and three is eight.  |
| Surface  | An outer boundary of a 3-D object.  | This cone has a curved **surface**.  |
| 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.  |
| Tall  | Measuring a specific distance from top to bottom.  | Our class teacher is not as **tall** as our head teacher.  |
| Time  | Related to duration. Measured in seconds, minutes, hours, days, weeks, months, years etc.  | After lunch it will be **time** for P.E.  |
| Total  | The sum found by adding.  | There are a **total** of five people at this table.  |
| Triangle  | A polygon with three sides.  |  |
| Venn diagram  | Two or more circles which represent given sets and intersect according these.  |   |
| Vertex (pl. vertices)  | The point at which two or more lines intersect.  | This shape has five **vertices**.  |
| Weight  | The force exerted on an object by gravity. Weight therefore changes with a change in gravitational force. Used interchangeably with mass until KS2.  | The **weight** of this book is heavier than the pencil.  |
| Zero  | The number before one. It is neither positive nor negative.  | **Zero** comes before one on the number track.  |

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| **Year 1**  | **Definition**  | **Example**  |
| Analogue clock  | A clock with a face and hands.  |   |
| Anticlockwise  | Movement in the opposite direction to the motion of the hands of a clock.  |   |
| Approximate  | The number is not exact but it is close.  | Our PSHE lesson lasts **approximately** half an hour.  |
| Array  | An arrangement of counters or numbers, in columns and rows, used to represent multiplication and division  | This **array** shows 3 × 4, 4 × 3, 12 ÷ 4 and 12 ÷ 3  |

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| Block graph  | The pre-cursor to the bar graph, this representation of data has an x- and y-axis and one block represents one item. Each block is adjoined to the adjacent block.  |   |
| Chart  | A table or graph.  | I will mark one day for the sun on our weather **chart**.  |
| Chronological  | In time order.  | I ordered the events in my day **chronologically**. I woke up, ate my breakfast, went to school then came home.  |
| Clockwise  | Movement in the direction of the hands of a clock.  |   |
| Cone  | A 3-D shape with one circular plane face, which tapers to an apex.  |   |
| Continuous surface  | An outer boundary of a 3-D object which is uninterrupted by any plane surfaces.  | A sphere has a **continuous surface**.  |
| Data  | Quantitative information which has been counted or measured.  | This block graph shows us **data** for the colour of the cars in the car park.  |
| Decreasing  | Becoming smaller in value. Used in relation to number sequences.  | 15, 14, 13, 12. This number pattern is **decreasing** by one each time.  |
| Diagram  | An illustration, drawing or representation.  | I will draw a **diagram** to show how I programed my floor toy to move.  |
| Digit  | One of the ten Arabic numerals 0 to 9, from which we compose numbers.  | The number 54 has the **digit** five in the tens column and the **digit** four in the ones. The **digit** five has a value of fifty.  |
| Divide  | To share or group into equal parts.  | I can **divide** 12 by three using grouping or sharing.  |
| Estimate  | An appropriately accurate guess, depending on the context and numbers involved.  | I **estimate** there are eight cubes in the cup because it looks about double four but fewer than ten.  |
| Even number  | A number with a 0, 2, 4, 6 or 8 in the ones and therefore exactly divisible by two.  | 32 is an **even number**.  |
| Facts  | Related to the four operations (+, -, ×, ÷). Pupils should be supported in achieving  | Number bonds to and within 10 and 20 are **facts**, e.g. 3 + 7 = 10.  |

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|  | fluency, i.e. very fast recall, in these facts. These then become **known facts**.  |  |
| Fraction  | 1. A part of a whole number, quantity or shape.
2. Expressing a division relationship between two integers in the

𝑎form . 𝑏 | I have shared my sweets into four equal parts. Everyone will get a **fraction** of the whole quantity of sweets. One group is a quarter of the whole.  |
| Half turn  | A 180 degree rotation, i.e.  of a 360 degree or ‘full’ turn.  |   |
| Hour  | A unit of time.  | There are 24 hours in one day.  |
| Increasing  | Becoming greater in value. Used in relation to number sequences.  | 2, 4, 6, 8. This number pattern is **increasing** by two each time.  |
| Kilogram  | A standard unit of mass, equal to 1000 grams.  | The book has a mass of two **kilograms**.   |
| Known fact  | A number fact which has been committed to memory (or very fast recall) and can be applied fluently to various calculation strategies.  | When I use the ‘Make ten’ strategy to add, I use **known facts** to partition the number I’m adding.  |
| Left  | Indicating the position or direction.  | Make a quarter turn **left** and walk forward three steps.  |
| Litre  | A standard unit of volume, equal to 1000 millilitres.  | The capacity of the jug is about half a **litre**. |
| Mental calculation  | A calculation performed without using a formal written strategy. Simple jottings may aid a mental calculation.  | 14 plus 5 is equal to 19. I completed this using a **mental calculation** and deriving facts because I know that four plus five is equal to nine.  |
| Metre  | A standard unit of measure, equal to 100 centimetres.  | I estimate that the table is about a **metre** tall.  |
| Minute  | A unit of time.  | We will have lunch in five **minutes.**  |
| Oblong  | A quadrilateral with two pairs of parallel sides of equal length.  |   |
| Odd number  | An integer which is not divisible by two without a remainder.  | All numbers which end in 1, 3, 5, 7 and 9 are **odd numbers**.  |
| Partition  | To split a number into two or more parts.  | The number 23 can be **canonically** **partitioned** (by place value) into 20 and 3, or **non-canonically** **partitioned** in many  |

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|  |  | different ways, including 18 and 5, 17 and 6, etc.  |
| Place value  | A system for writing numbers, in which the value of a digit is defined by its position within the number.  | In the number 452 written in base ten, the digit four has a value of 400, the five has a value of 50 and the two has a value of two.  |
| 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.  |
| Pound (sterling)  | The official currency of the United Kingdom.  | **Pounds sterling** are written using the £ symbol. There are 100 pence in one **pound** sterling.  |
| Property  | Any attribute.  | A **property** of a triangle is that it has three straight sides and three vertices, the sum of whose angles is 180 degrees.  |
| 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.  |   |
| Quantity  | An amount, in some cases given a numerical value.  | A **quantity** of apples is placed on the left-hand side of the balance. How many kilogram masses will we need to place on the right to balance the apples?  |
| Quarter  | One of four equal parts of a whole, quantity or object.  | I have shared the eight conkers into four equal groups – I have two conkers, which is one **quarter** of the whole.  |
| Quarter turn  | A 90-degree rotation, i.e.  of a 360 degree ‘full’ turn.  |  |
| Repeated addition  | A structure of multiplication where equal parts are added to make a whole.  | I can show 4 × 5 as **repeated addition**: 4 + 4 + 4 + 4 + 4.  |
| Repeated subtraction  | A structure of division, where equal parts are subtracted and the number of equal parts summed to calculate a quotient.  | I can use **repeated subtraction** to calculate 20 divided by four: 20 – 4 – 4 – 4 – 4 – 4.  |
| Represent  | To express or show a mathematical concept using words, numerals and symbols, pictures, diagrams, or concrete manipulatives.  | I have used three blue cubes to **represent** the three oranges in the question. I used a part-whole model to **represent** the addition question.  |
| Right  | Indicating the position or direction.  | The picture is on the **right**hand side of the board.  |
| Rule  | A consistent pattern which allows generalisation. Awareness of a rule allows a pupil to continue a sequence or generate a related sequence.  | 2, 5, 8, 11, 14… The **rule** is that each number is three greater than the previous number. Therefore, the next number in this sequence will be 17.  |
| Scales  | An object used to measure mass.  | The **scales** showed that the banana had a greater mass than the apple.  |
| Sign  | Synonymous with symbol in its mathematical context, e.g. +, -, ×, ÷, =.  | 20 5 = 4. What is the missing **sign**?  |
| Standard unit  | A uniform measure, agreed upon as standard.  | **Standard units** of mass include grams and kilograms. **Standard units** of length include centimetres, metres and kilometres. **Standard units** of volume and capacity include millilitres and litres.  |
| 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**.  |
| Symbol  | Synonymous with sign in its mathematical context, e.g. +, , ×, ÷, =.  | 20 5 = 4. What is the missing **symbol**?  |
| Table  | A structure organised into columns and rows, in which data can be recorded.  | The information for Thursday is not yet complete on the **table** because it is only Wednesday.  |
| Turn  | Rotati turn).  | on (see half and quarter  | A whole turn is 360 degrees. A half turn is 180 degrees. A quarter turn is 90 degrees.  |
| Unit  | 1. 2.  | An element considered as a single entity. Ten single cubes can be grouped together to make a unit of ten. A unit of measure, which can be standard or non-standard.  | I regrouped ten ones for one **unit** of ten.  Unifix cubes can be used as **units** of measure, but these are not **standard units**.  |
| Volume  | A quantity or amount of any substance and the 3-D space it fills.  | The bottle contains a **volume** of one litre but its capacity is two litres. The bottle is half full.  |

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| **Year 2**  | **Definition**  | **Example**  |

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| Angle | The amount of turn, measured in degrees.  | The **angle** is 60 degrees.  |
| Calculate  | To compute or work out mathematically.  | Can you **calculate** the answer to 13 + 4?  |
| Centimetre  | A metric unit of length.  | The book is 15 **centimetres** long.  |
| Column  | A vertical arrangement of numbers or objects.  | 23 has two tens – I will place them into the tens **column**.  |
| Commutative  | A property of addition and multiplication. It does not matter in which order the addends or factors are added or multiplied; the result will be the same.  | 4 + 6 = 10 6 + 4 = 10 This demonstrates that addition is **commutative**. Arrays demonstrate the **commutativity** of multiplication, i.e. 3 × 4 = 4 × 3  |
| Consecutive  | Following in order.  | 2, 3, 4, 5, 6 are **consecutive** numbers. 3, 6 and 9 are **consecutive** multiples of 3.  |
| Denominator  | The number written below the vinculum in a fraction. In a measure context, it indicates the number of equal parts into which the whole is divided. In a division context, it is the divisor.  | In the fraction one quarter, four is the **denominator**.  |
| Division  | The process of partitioning a whole into equal parts.  | 12 **divided** by 3 is equal to 4.  |
| Efficient  | Well-organised. Choosing an efficient computation strategy requires consideration of the numbers involved and will normally utilise ‘known facts’.  | I will use my number bonds knowledge to calculate 22 + 7 **efficiently**. I know that 2 + 7 is equal to 9, so the answer is 29. That’s more efficient that counting on seven.  |
| Frequency  | The number of times something occurs within a data set.  | 4 pupils have brown hair. The **frequency** of brown hair is 4.  |
| Gram  | A metric unit of mass.  | The pencil weighs 20 **grams**.  |
| Heptagon  | A polygon with seven sides and seven angles.  |  |
| Hexagon  | A polygon with six sides and six angles.  |  |
| Inverse operations  | Opposite operations that ‘undo’ each other.  | Addition and subtraction are **inverse** operations.  |
| Millilitre  | A metric unit of capacity/volume.  | The can of fizzy drink has a capacity of 330 **millilitres**.  |
| Multiple  | The result of multiplying a number by an integer, for example, 12 is a multiple of 3 and 4 because 3 × 4 = 12.  | 36 is a **multiple** of three because three multiplied by 12 is equal to 36. It is also a **multiple** of 12 for the same  |

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|  |  | reason (and 1, 2, 4, 6, 9, 18 and 36).  |
| Multiplication  | One of the four mathematical operations. Multiplication can be understood as repeated addition or scaling (introduced in Year 3).  | The **multiplication** symbol is ×.  |
| Multiply  | To increase a quantity by a given scale factor.  | I can **multiply** 3 by 4 which is equal to 12.  |
| Near double  | When two numbers involved in an addition are close in value, such as 23 + 22. The numbers can be treated as exact doubles, followed by compensating.  | To calculate 23 + 22, I can use the **near double** strategy. I can double 22 and then add one more.  |
| Non-unit fraction  | A fraction with a numerator greater than one.  | Two thirds is a **non-unit fraction.**  |
| Numerator  | The number written above the vinculum in a fraction. In a measure context, it indicates the specified number of parts out of the whole. In a division context, it is the dividend.  | In the fraction one quarter, one is the **numerator**.  |
| Octagon  | A polygon with eight sides and eight angles.  |  |
| Operation  | A mathematical process. The four mathematical operations are addition, subtraction, multiplication and division.  | 4 + 2 = 6. The **operation** is addition.  |
| Pentagon  | A polygon with five sides and five angles.  |  |
| Pictogram  | A representation of data using pictures or symbols.  |   |
| Quadrilateral  | A 2D shape with four sides and four angles. which add up to 360 degrees.  |  |
| Relationship  | The way in which two or more things are connected.  | The **relationship** between addition and subtraction is that they are the inverse of each other.  |
| Right angle  | An angle of 90 degrees.  | A square has four **right angles**.  |
| Rotation  | The act of rotating about an axis/centre.  | I will **rotate** the square 90 degrees clockwise.  |
| Scale  | Equally spaced markings on a measuring device which can be read to quantify a measurement.  | Using the **scale** on the ruler, the book measures 15cm.  |
| Symmetry  | A shape is symmetrical when it fits exactly onto itself when folded in half.  | This triangle has one line of **symmetry**.      |
| Tally  | A form of counting. Each tally is a vertical mark. After the fourth vertical mark, a fifth horizontal/diagonal mark is drawn to create a group of five.  | Four children have black hair; I will record this as four **tallies**.  |
| Temperature  | The measure of heat.  | Outside has a **temperature** of 15 degrees Celsius.  |
| Unit fraction  | A fraction with a numerator of one.  | One-third is a **unit fraction**.  |
| Vinculum  | A horizontal line that separates the numerator and the denominator in a fraction.  | 1 vinculum 4 |

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| **Year 3**  | **Definition**  | **Example**  |
| Acute angle  | An angle that is smaller than a right angle.  | It is smaller than my right angle checker so this must be an **acute angle**.  |
| Axis (plural: axes)  | A real or imaginary reference line. The y-axis (vertical) and x-axis (horizontal) on charts and graphs are used to show the measuring scale or labels for the variables.  | The y-**axis** on this bar graph shows you how many pupils preferred each colour.  |
| Bar graph  | A representation of data in which the frequencies are represented by the height or length of the bars.  | This **bar graph** shows us the preferred colours of the pupils in our Year 3 class.  |
| Columnar addition/subtraction  | The formal written algorithms for addition and subtraction that are exemplified in *Mathematics Appendix 1* of the 2014 national curriculum.  | Solve the following calculations by using the appropriate method of **columnar addition** or **subtraction**.  |
| Factor  | A number, that when multiplied with one or more other factors, makes a given number.  | The number six has four **factors**: 1, 2, 3 and 6.  |
| Formal written methods  | Exemplified in *Mathematics Appendix 1 (see above)*. As  | Pupils should only use **formal written methods**  |

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|  | well as including columnar addition and subtraction, these also consist of written algorithms for multiplication and division.  | for calculations that cannot be efficiently calculated using mental strategies (with or without jottings).  |
| Horizontal  | Horizontal refers to planes and line segments that are parallel to the horizon.  | The x-axis on a graph should be **horizontal**.  |
| Irregular  | In geometry, irregular is a term used to describe shapes that are not regular (see below).  | The sides and the angles of this pentagon are not all equal so the pentagon is **irregular**.   |
| Kilometre  | A metric unit measure of length that is equal to one thousand metres.  | The distance from the school to Arun’s house was exactly one **kilometre**.  |
| Millimetre  | A metric unit measure of length that is equal to one thousandth of one metre.  | The length of Philippa’s ruler is 300 **millimetre**s.  |
| Numeral  | A numeral is a symbol (or group of symbols) used to represent a number.  | Whole numbers can all be represented as **numerals** consisting of the digits 0 to 9.  |
| Obtuse angle  | An angle that is greater than a right angle but less than 180 degrees.  | It is greater than my right angle checker so this angle must be **obtuse**.  |
| Parallel  | Line segments that can be described as parallel must be on the same plane and will never meet, regardless of how far either or both line segments are extended.  | The opposite sides of a square are **parallel**.  |
| Perimeter  | The perimeter of a 2-D shape is the total distance around its exterior.  | I know that one side of this square is 2cm so it must have a **perimeter** of 8cm.  |
| Perpendicular  | A pair of line segments (or surfaces) can be described as perpendicular if they intersect at (or form) a right angle.  | The adjacent sides of a rectangle are **perpendicular**.  |
| Place holder  | A place holder is a zero used in any place value column (that contains a value of zero) to clarify the relative positions of the digits in other places.  | I need to use a **place holder** in the ones column to make it clear that my number is 320 and not 32.  |
| Prism  | A prism is a 3-D solid with two identical, parallel bases and otherwise rectangular faces.  | A triangular **prism** has five faces, consisting of three rectangles and two triangles which are parallel.  |
| Product  | The result you get when you multiply two numbers.  | 24 is the **product** of 3 and 8.  |
| Regular  | Regular 2-D shapes (regular polygons) have angles that  | A square is a **regular** 2-D shape because all four angles  |
|  | are all equal and side lengths that are all equal. Regular 3-D shapes (the Platonic Solids) are those that have congruent (exactly the same) faces of a single regular polygon.  | are right angles and all four sides are the same length. A cube is a **regular** 3-D shape with six identical square faces.  |
| Roman numeral  | Roman numerals are a system of symbols used to represent numbers that were developed and used by the Romans. They do not use a place value system.  | The number twelve on this clock is represented by the **Roman numerals** XII, which is 10 + 1 + 1.  |
| Round  | Approximate a number, normally to the nearest multiple of ten, to make it easier with which to calculate.  | I would **round** the number 17 to 20 because it is three away from 20 but seven away from 10.  |
| Square-based pyramid  | A pyramid is a 3-D shape with a 2-D shape (which gives the pyramid its name) as a base and triangular faces that taper to a point called a vertex or apex.  | This **square-based pyramid** has five faces; one square face and four triangular faces.  |
| Triangle-based pyramid  | This **triangle-based pyramid** has four triangular faces.  |

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| **Year 4**  | **Definition**  | **Example**  |
| Area  | The space a surface takes up inside its perimeter. Area is always measured in square units.  |  The **area** is 8 square units.  |
| Associative law  | No matter how the parts in an addition or multiplication equation are grouped, the answer will be the same.   | (6 + 3) + 2 = 11 6 + (3 + 2) = 11 Addition and multiplication are **associative**. Subtraction and division are not.  |
| Convert  | To change from one unit of measurement to another.  | 2 km can be **converted** to metres – it is equal to 2000 m.  |
| Coordinate  | The position of a point, usually described using pairs of numbers. Sometimes called Cartesian coordinates, after the mathematician Rene Descartes.  | The **coordinate** (3,4) describes a point that is 3 on the x axis and 4 on the y axis.  |
| Decimal fraction  | A fraction expressed in its decimal form.  | Half written as a decimal fraction is 0.5.  |
| Distributive law  | The process whereby adding some numbers and then multiplying the sum gives the same answer as  | 3 × (2 + 4) = (3 × 2) + (3 × 4) 3 × 12 = (3 × 10) + (3 × 2)   |

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|  | multiplying the numbers separately and then adding the products.  |  |
| Dividend  | The amount that you want to divide.  | In ‘12 ÷ 3 = 4’, 12 is the **dividend**.  |
| Divisor  | The number you divide by.  | In ‘12 ÷ 3 = 4’, 3 is the **divisor**.  |
| Equilateral  | Having all sides the same length.  | An **equilateral** triangle has three equal sides.  |
| Equivalent  | Equivalent means having the same value. Equivalent fractions have the same value.  | 2 1= 4 2  |
| Expression  | One or a group of numbers, symbols or operators. An expression does not use equality or inequality signs. *Using an equality or inequality sign will give an equation.*  | 2 × 3 4²   |
| Grid  | A series of evenly divided and equally spaced shapes, usually squares.  |   |   |  |
| Improper fraction  | A fraction where the numerator is bigger than the denominator. These fractions are therefore greater than one whole.  |  |
| Integer  | A whole number that can be positive or negative.  | 6 is an integer, 0.6 is not.  |
| Interval  | An interval on a graph’s axis lies between two values.  | If one point on an axis is 50 and the next 60, the **interval** is 10.  |
| Isosceles  | Having two sides of equal length. Isosceles triangles have two equal sides; isosceles trapezia have two equal, non-parallel sides.  |   |
| Kite  | A 2-D shape with two pairs of equal length adjacent sides. The diagonals intersect at right angles.  |   |
| Line graph  | A graph that uses lines to connect the points on a data chart. Used to present continuous data, such as change over time.  |

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| Temperature graph  |

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| Mixed numbers  | Numbers consisting of an integer and fractional part.  | 1 ; 3   |
| Negative number  | A number that is less than zero. (It is helpful to refer to these numbers as  | -1, -24, -o.5 etc.  |

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|  | ‘negative numbers’ rather than ‘minus’ to avoid confusion with the operation ‘minus’.)  |  |
| Parallelogram  | A 2-D shape that has two pairs of parallel sides and equal opposite angles.  |   |
| Plot  | To mark out a point on a graph or grid.  | ‘**Plot** the point (3,6)’ means to draw the precise location of that point, usually shown as a dot or a small cross.  |
| Point  | The precise location of a position on a 2-D plane.  | An exact place on a graph or on squared paper. A **point** is often represented by a capital letter.    |
| Positive number  | A number that is greater than zero. Zero is neither positive or negative.  | 3, 32, 0.5  |
| Proper fraction  | A fraction with a value less than one.  |  , ,    |
| Protractor  | A measuring device for measuring the size of an angle. Angles are measured in degrees (°).  |   |
| Quotient  | The result when the dividend is divided by the divisor.  | 15 ÷ 3 = **5** **5** is the **quotient**.  |
| Rectilinear  | A rectilinear shape has straight line edges which are perpendicular (all meet at right angles).  |  A rectangle. A straight-sided shape that can be divided up into other rectangles.  |
| Rhombus  | An equilateral parallelogram with four equal length sides.  |   |
| Scalene  | A scalene triangle has three unequal sides and three unequal angles.  |   |
| Short division  | A formal written layout where the quotient is calculated showing only one written step.  |   7 7 5 3 8 5    |
| Short multiplication  | A formal written layout where the multiplier is usually 9 or less.  |  782 × 9  7038   |
| Simplify  | To write a number or equation in its simplest form.  | I can **simplify**  to .  |
| Square centimetre  | A unit of measure for area equal to a square with the dimensions 1 cm by 1cm.  | Sometimes referred to as centimetre squared, abbreviated to **cm²**.  |
| Trapezium  | A quadrilateral with exactly one pair of parallel sides.  |   |

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| **Year 5**  | **Definition**  | **Example**  |
| Angle at a point  | Angles that meet at a point that sum to 360°.  |   |
| Angle on a line  | Angles formed on a straight line that sum to 180°.  |   |
| Average (mean)  | A measure of central tendency. The mean average of a set of data is the sum of the quantities divided by the number of quantities.  | The **mean average** of the set 4, 5, 5, 6 is 5 because (4 + 5 + 5 + 6) ÷ 4 = 5.  |
| Common factor  | A factor of two (or more) given numbers.  | A **common factor** of 12 and 9 is 3 because 3 × 4 = 12 and 3 × 3 = 12.  |
| Common multiple  | A multiple of two (or more) given numbers.  | A **common multiple** of 3 and 6 is 12 because 3 × 4 = 12 and 6 × 2 = 12.  |
| Congruent  | Used to describe two shapes or figures which are exactly the same size.  | The two triangles are **congruent**. If I place one on top of the other, there is no overlap.  |
| Cube number  | The product of three equal factors.  | Eight is a **cube number** because 8 = 2 × 2 × 2 = 23.  |
| Cubic centimetre  | A unit used to measure volume. The space taken up by a cube with edges of length 1 cm or which measures 1 cm × 1 cm × 1 cm.  | The volume of this multilink cube is eight **cubic centimetres.**  |
| Cubic metre  | A unit used to measure volume. The space taken up by a cube with edges of length 1 metre.  | The volume of this fridge is two **cubic metres.**  |
| Decagon  | A polygon with ten sides and ten angles.  |   |

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| Degree  | The unit of measure for angles.  | A right angle is 90 **degree**s.  |
| Diagonal  | A straight line segment that joins one vertex to another.  | The **diagonals** of a kite are perpendicular  |
| Divisible  | A number is said to be divisible by another if it can be divided by that number without a remainder.  | 24 is **divisible** by 8. When divided by 8 it gives a quotient of 3, with no remainder.  |
| Dodecagon  | A polygon with twelve sides and twelve angles.  |  |
| Long division  | The formal written algorithm that can be used to divide by a number with two or more digits.  |   |
| Long multiplication  | The formal written algorithm that can be used to multiply a number by a number with two or more digits.  |    |
| Negative integer  | A whole number with a value less than zero. Zero is neither positive nor negative.  | When the temperature falls below 0° a **negative integer** is used to record it.  |
| Nonagon  | A polygon with nine sides and nine angles.  |    |
| Percentage  | The number of parts per hundred which is written using the % symbol.  | 30% means for every 100 there are 30.  |
| Polygon  | A 2-D shape with three or more straight sides.  | Triangles and rectangles are examples of **polygons**.  |
| Polyhedron (pl. polyhedra)  | A 3-D shape with flat surfaces that are polygons.  | A cuboid is a **polyhedron**. A cylinder is not a **polyhedron** because it has a curved surface.  |
| Prime factor  | A factor that is a prime number.  | 3 and 2 are **prime** **factors** of 6.  |
| Prime number  | A whole number with only two factors, one and the number itself.  | 2, 3, 5, 7, 11, 13, 17 and 19 are the **prime** **numbers** less than 20.  |
| Remainder  | The amount remaining after division when a whole number answer is needed.  | 21 divided by four is equal to five with a **remainder** of 1.  |
| Reflection  | A mirror image that is equidistant from a mirror line.  | The shape has been **reflected** in the dotted mirror line.   |
| Reflex angle  | An angle that is greater than 180°.  |   |
| Scale (not to scale)   | The ratio of lengths, in a drawing, are in proportion to the measurements of the real object. The lengths are not in proportion when not to scale.  | The diagram was not drawn **to scale**. That means I can’t use a ruler to measure the sides, because they are not in proportion to the real object.  |
| Square metre  | A unit of measure for area. The surface covered by a square with sides of length one metre.  | The area of the floor in a room might be measured in **square metres**.  |
| Square number  | The product of two equal factors.  | 9 is a **square number** because 9 = 3 × 3 = 32.  |
| Tetrahedron  | A 3-D shape with four triangular faces.  |   |
| Transformation   | A collective term for the ways that shapes can be changed, resulting in congruent or similar shapes, i.e. translation, reflection, rotation or enlargement.  | Translations and reflections are types of **transformations**.  |
| Translation  | When a shape moves so that it is in a different position but retains the same size, area, angles and side length and so is congruent.  | Triangle C has been translated three right and two down resulting in triangle D.   |

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| **Year 6**  | **Definition**  | **Example**  |
| Arc  | A portion of the circumference of a circle  |  |

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| Brackets  | The symbols ( ) used to separate parts of a multi-step calculation.  | **(**10 – 2**)** × 3 = 21  |
| Centre  | In a circle, the centre refers to one point that is equidistant to all points around the circumference of the circle.  | To draw a circle, I place the point of my pair of compasses at the **centre**.  |
| Circumference  | The perimeter/boundary of a circle.  |     |
| Compasses  | A tool for creating curved lines, arcs and circles.  | I can use a pair of **compasses** to draw a circle with a radius of 4 cm.  |
| Common fraction  | A fraction written with a numerator and denominator separated by a vinculum.  | One quarter can be written as 𝟏 a common fraction,. 𝟒 |
| Degree of accuracy  | A description of how accurately a value is communicated.  | The **degree of accuracy** needed for the answer is one decimal place.  |
| Diameter  | A line from one point of the circumference of a circle to another on the opposite side, which must pass through the centre of the circle.  | The circumference of a circle is the **diameter** multiplied by pi.    |
| Equivalent expression  | An expression, which can be algebraic, which is equal in value to another expression.  | Find an **equivalent expression** to 17 + 10. 18 + 9 is an **equivalent expression** to 17 + 10.  |
| Factorise  | To identify factors of a given number. To express a number as factors.  | I can **factorise** 12 by looking at its factor pairs. 1 × 12 = 12, 2 × 6 = 12, 3 × 4 = 12. So the factors of 12 are 1, 2, 3, 4, 6 and 12.  |
| Foot/feet  | An imperial unit of measure of length.  | I am approximately five **feet** tall.  |
| Formula  | An algebraic expression of a rule.  | The area of a rectangle can be found by multiplying the width and height. **a = w × h**  |
| Gallon  | An imperial unit of measure of volume/capacity.  | A **gallon** is approximately 4.5 litres  |
| Imperial unit  | A unit of measure once officially used in the UK but is now used less often, except in the context of length. Includes miles, pounds and pints.  | Miles are an **imperial unit** to measure length.  |

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| Inch  | An imperial unit of measure.  | An **inch** is approximately 2.2 cm.  |
| Intersect  | The point at which two (or more) lines meet is where they intersect.  | The x and y axes **intersect** at (0,0)  |
| Metric unit  | A standard unit of measure used in the UK and Europe. Includes centimetres, litres and kilograms.  | Litres are a **metric unit** used to measure volume.  |
| Mile  | An imperial unit of measure of length.  | Five **miles** is equivalent to eight kilometres.  |
| Net  | A group of 2-D shapes which, when folded and connected, forms a 3-D polyhedron.  | The **net** of a cube is comprised of six connected squares.  |
| Order of operations  | The internationally agreed order to complete operations in a multi-step equation with multiple operations.  | (3 + 4) × 2 = □ The **order of operations** dictates that the operation within the brackets is completed first.  |
| Origin  | The point at which axes in a coordinates grid cross; the point (0,0).  |  The **origin** is indicated by the blue dot. |
| Ounce  | An imperial unit of measure of mass.  | The newborn baby had a mass of 6 pounds and 3 **ounces**.  |
| Pie chart  | A representation of a set of data where each segment represents one group in proportion to the whole.  |   **Nationality of Astronauts** **on Board ISS January** **2017**RussiaUSAFrance |
| Pint  | An imperial unit of measure.  | I found a **pint** of milk on my doorstep.  |
| Pound (mass)  | An imperial unit of measure of mass.  | The new-born baby had a mass of 6 **pounds** and 3 ounces.  |
| Proportion  | A comparison between two or more parts of a whole or group. Proportion expresses a part-whole relationship. This may be represented as a fraction, a percentage or a decimal.  | Two thirds of a class were boys. The **proportion** of the class that is girls is one third.  |
| Quadrant  | One of four regions into which a coordinates grid is divided.  |   |
| Radius  | A line from one point of the circumference of a circle to the centre of the circle.  |    |
| Ratio  | A comparison between two or more parts of a whole or group. Ratio expresses a partpart relationship. This is usually represented in the form a:b.  | For every 4 tulips there are 7 daffodils. The **ratio** of tulips to daffodils is 4:7.  |
| Similar  | Similar shapes are those which have the same internal angles and where the side lengths are in the same ratio or proportion. Enlarging a shape by a scale factor (for example by doubling all side lengths) creates a similar shape.  | All squares are **similar** to one another.    |
| Square millimetre  | The area of a square with sides 1 mm.  | The smallest squares on graph paper have an area of one **square millimetre.**  |
| Square kilometre  | The area of a square with sides 1 km.  | The area of England is 130 279 **square kilometres.**  |
| Vertically opposite angles  | Angles which are positioned opposite to one another when two lines intersect.  |  The purple angles indicated are **vertically opposite angles.**  |