



## Maths at The Cedar School

At The Cedar School, we believe in delivering a curriculum that engages, sparks curiosity and is meaningful to our pupils, their needs and their lives. Through our maths curriculum, our children explore concepts in a practical way, have opportunities to apply their learning to contexts appropriate to them and give them the tools they will need to be independent, mathematical thinkers. The aim of our maths curriculum is for our pupils to develop a positive and confident attitude towards maths and to understand mathematical concepts at a level commensurate to their development and ability.

Our hopes for a Cedar child are for them to be prepared for adulthood and develop the skills they will need to lead successful lives:

**Communication:** Children are empowered to develop their communication skills through being taught how to use mathematical language effectively and accurately. They are questioned effectively during their maths lessons to promote mathematical thinking and verbalising their understanding.

**Empowerment:** Through teaching knowledge and skills in maths, our children are empowered to apply mathematical concepts in different contexts independently, make links between what they have learned, and solve problems for themselves.

**Discovery:** Learning through practical opportunities with access to physical resources, our children are able to discover mathematical concepts and gain a secure understanding through having the experience of maths.

**Aspiration:** Maths at Cedar allows our children the opportunity to consolidate understanding their understanding and then build upon it at their own pace. We promote 'grappling' with maths to build confidence and encourage the desire to continue to learn and progress.

**Resilience:** Children are taught to be confident and resilient mathematicians through the learning they access. We promote the excitement of new learning where it is safe to make mistakes, get stuck, require support, and find activities challenging.



Name \_\_\_\_\_

## Maths Stage 1

| Numbers and the number system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Place value and ordering                                                                                                                                                                                                  | Calculations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Solving Problems                                                                                                                                                                                                                                                                                                                                | Problems involving real life, money or measures                                                                                                                                                                                                                                                                                                                                                                                                                                         | Measures, shapes and space                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <p>A) To be part of a group listening to number songs.</p> <p>B) Tolerates listening to number songs.</p> <p>C) Begins to respond to adult initiated maths activities.</p> <p>D) Begins to show enjoyment in number games and songs.</p> <p>E) Turns to number songs.</p> <p>F) Reacts to familiar no. songs/music.</p> <p>G) Becomes excited in the midst of social maths games.</p> <p>H) Activates a switch with a number/numbers (with assistance)</p> <p>I) Co-actively makes hand actions to no rhymes/songs/stories.</p> | <p>A) Explores both single and groups of things and hears adult's comment on groups.</p> <p>B) Experiences groups of brightly coloured objects.</p> <p>C) Allows a short series of objects to be touched in sequence.</p> | <p>A) Shows a passive interest in one visually attractive object.</p> <p>B) Focuses on familiar objects with adult encouragement.</p> <p>C) Fixates on one object.</p> <p>D) Moves arms/legs ind.ly (is helped to clap/stamp feet, whilst adult counts 1,2).</p> <p>E) Attends to an object.</p> <p>F) Sustains a grasp on an object placed in the hand for a short period of time.</p> <p>G) Transfers attention from 1 object to another.</p> <p>H) Drops objects of reference into box, 1,2,3.</p> | <p>A) Moves hands through different mediums.</p> <p>B) Responds to light patterns/sequences – watches disco lights spinning round.</p> <p>C) Responds to cause and effect by visually focusing on an object-activating disco lights/bubble machine.</p> <p>D) Begins to locate objects in localised environment (tray/table/standing frame)</p> | <p>A) Experiences activities that begin to encourage a response of sequential changes in the environment.</p> <p>B) Experiences the weight and size of different objects placed in their hand.</p> <p>C) Tolerates and experiences different kinds of spaces.</p> <p>D) Begins to show awareness of items being placed or stacked on tray/table.</p> <p>E) Reaches across to retrieve toy of interest from left or right.</p> <p>F) Feels the edges, curves or flatness of objects.</p> | <p>A) Experiences patterns of sound – adult beats out repeating rhythm, long, short, slow, quick.</p> <p>B) Be part of a group making objects – using 3D shapes/materials.</p> <p>C) Shows awareness of objects as they are placed against their hands, face or other body parts (TacPac).</p> <p>D) Experiences different body positions.</p> <p>E) Shows response at feeling differing lengths being pulled gently through their fingers/hands. Adult to draw attention to length and encourage participation.</p> <p>F) Focuses on strong patterns.</p> |

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## Maths Stage 2

| Numbers and the number system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Place value and ordering                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Calculations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Solving Problems                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Problems involving real life, money or measures                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Measures, shapes and space                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <p>A) Takes turn to attempt vocalisation of numbers with an adult.</p> <p>B) Anticipates familiar phrases: 1,2,3.</p> <p>C) Reacts when a familiar number song stops.</p> <p>D) Anticipates and sometimes vocalises their turn during math games.</p> <p>E) Shows interest in beginning and end of number rhymes.</p> <p>F) Watches other children playing maths games.</p> <p>G) Sometimes attempts to imitate number sounds.</p> <p>H) Co-actively joins in maths games.</p> <p>I) Explore wooden/plastic numerals.</p> | <p>A) Co-actively operates a switch programmed to speak a repetitive number sequence, e.g. 1,2,3,4,5.</p> <p>B) Looks from one object to another in maths games/rhymes/activities, adult uses language: numbers, more, gone, none.</p> <p>C) Tracks adult pointing and counting objects.</p> <p>D) Maintains attention and begins to show awareness of sequence of events. E.g. 5 fat sausages – 1<sup>st</sup> hold up pan, 2<sup>nd</sup> drop 2 sausages in, 3<sup>rd</sup> there is a pop and a bang.</p> <p>E) Co-operates with supported participation to push down fingers/having fingers touched – and associate it with counting.</p> | <p>A) Responds to collections of objects being separated.</p> <p>B) Will co-operate with adults/peers giving and taking and experiencing language associated with increase and decrease.</p> <p>C) Maintains a hold of an object.</p> <p>D) Reaches out for an object when prompted – adult uses language: next one, again, more, 1, 2, etc.</p> <p>E) Reaches out for objects left on tray/table.</p> <p>F) Holds objects in both hands.</p> <p>G) Shows anticipation of changing quantities during number games.</p> | <p>A) Anticipates falling down of towers or something being taken from them.</p> <p>B) Responds to collections of objects being separated.</p> <p>C) Will co-operate with adult/peers giving and taking and experiencing language associated with increase and decrease.</p> <p>D) With help drops objects into another container.</p> <p>E) Looks for objects that have been moved from line of vision.</p> <p>F) Expresses approval/disapproval of an object being removed.</p> | <p>A) Shows a response to an environment.</p> <p>B) Visually tracks moving objects.</p> <p>C) Shows an interest at computer screen showing maths songs/games – while being activated by an adult.</p> <p>D) Experiences range of mark making materials on a surface.</p> <p>E) Experience holding/touching items in sequence or turn.</p> <p>F) Collects objects on tray and experiences number words.</p> <p>G) Releases 1 object to reach for another.</p> <p>H) Repeats an action that has an effect.</p> | <p>A) Anticipates familiar sequences: ready, steady, go.</p> <p>B) Watches an object as it falls in front of them.</p> <p>C) Explores objects and textures of different size/shape and manipulates with adult help</p> <p>D) Experiences changing in size – e.g. balloon blown up/let down.</p> <p>E) Co-actively claps beats of a number song.</p> <p>F) Places hand in box/bag to experience different shapes- takes out and explores.</p> <p>G) Carries out sorting activities. H) Explores a variety of 2D and 3D shapes.</p> |

Name \_\_\_\_\_

## Maths Stage 3

| Numbers and the number system                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Place value and ordering                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Calculations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Solving Problems                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Problems involving real life, money or measures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Measures, shapes and space                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <p>A) Watches number songs/games/activities with interest.</p> <p>B) Makes scribbling marks on different surfaces.</p> <p>C) Sometimes anticipates an event during a number rhyme/game.</p> <p>D) Chooses a number/counting book and with help turns the pages</p> <p>E) Shows enjoyment of counting and number rhymes.</p> <p>F) Uses big mac to add last word in number rhyme.</p> <p>G) Begins to use symbols to choose number song.</p> <p>H) Shows an interest in number activities and counting.</p> | <p>A) Chooses between 2 items.</p> <p>B) Anticipates repetitive phrases, e.g. 1,2,3,4,5.</p> <p>C) Imitates clapping/stamping, 1,2.</p> <p>D) Recognises difference in groups of objects, e.g. one button and lots of buttons.</p> <p>E) Joins in with simple counting rhymes and songs by copying actions, signing, speech or gesturing the next number/action/object.</p> <p>F) Anticipates the end of familiar sequences.</p> <p>G) Takes parts in games that include scoring and counting.</p> | <p>A) Bangs toys together.</p> <p>B) Puts one object on top of another.</p> <p>C) Will take objects offered, intended as tallies.</p> <p>D) Will receive skittles knocked over by ball and experience adult counting.</p> <p>E) Responds to intonation of loss or gain.</p> <p>F) Will add 1 or more objects into a pot/box.</p> <p>G) Collects objects together &amp; co-actively places in containers e.g. sorting activity encouraging 1 at a time, using num words/sequencing.</p> <p>H) Frequently points to objects using an extended index finger.</p> <p>I) Aware of cause and effect in mathematical activities.</p> <p>J) Explores more than one object at a time.</p> <p>K) Responds to give me some more and take some away.</p> <p>L) Experiences losing and having items taken away.</p> | <p>A) Place smaller object into larger object with help.</p> <p>B) Puts hands into bag to feel set of similar objects.</p> <p>C) Deliberately drops objects and knocks down towers.</p> <p>D) Participates as a member of a group, e.g. stacking and knocking down games.</p> <p>E) Initiates repetitions of events, e.g. rolling ball down a ramp to knock over skittles, whilst adult counts.</p> <p>F) Shows awareness of changes in shape, position or quantity.</p> | <p>A) Reaches out and feels for objects as tactile cues to events.</p> <p>B) Looks for objects that are hidden.</p> <p>C) Follows the sequence of a familiar daily routine.</p> <p>D) Joins in more independently by copying repeated actions when meeting familiar parts in number rhymes.</p> <p>E) Holds a pencil to make a mark.</p> <p>F) Co-operates in simple maths games.</p> <p>G) Chooses from two switches.</p> <p>H) Activates more than one switch.</p> <p>I) Anticipates, follows and joins in mathematical activities when given a contextual clue, e.g. foam dice and snakes and ladders mat.</p> | <p>A) Feels items of different lengths – some rigid, some flexible.</p> <p>B) Imitates actions of adult with hand over hand help if necessary – sequential sound making on a drum, tambourine – 1,2,1,2.</p> <p>C) Participates attentively while adult helps them trace finger over a variety of shapes, tally marks, numbers, etc.</p> <p>D) Beginning to search for objects that have gone out of sight, hearing or touch.</p> <p>E) Demonstrates interest in position and the relationship between objects.</p> |



Name \_\_\_\_\_

## Maths Stage 4 (Including Pre-key stage standards- Standard 1)

| Numbers and the number system                                                                                                                                             | Place value and ordering                                                                                                                                                                                                                                                                                                                                                                                                                         | Calculations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Solving Problems                                                                                                                           | Problems involving real life, money or measures                                                                                                                                                                                                                                                                                                        | Measures, shapes and space                                                                                                                                                                                                                                                                                                                                                                                                 |
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| <p>A) Responds to and joins in with familiar number rhymes, stories, songs and games, by saying, signing at least one of the numbers.</p> <p>B) Indicates one or two.</p> | <p>A) Makes groups of objects with help, e.g. indicates one car/lots of cars.</p> <p>B) Through games and rhymes, begins to appreciate that number names/numerals refer to a specific quantity.</p> <p>C) Able to sequence and indicate one or two, e.g. holds up one/two objects on request.</p> <p><b>D) Demonstrate an understanding of the concept of transaction.</b> (e.g. by exchanging a coin for an item, or one item for another).</p> | <p>A) Indicates one or two.</p> <p>B) Makes groups of two, using familiar pairs, e.g. shoes, socks, etc.</p> <p>C) Shows and names one finger and then shows another and names it two.</p> <p>D) Strikes two beats on a drum following one beat.</p> <p><b>E) Distinguish between 'one' and 'lots', when shown an example of a single object and a group of objects.</b></p> <p><b>F) Demonstrate an understanding of the concept of 1:1 correspondence</b> (e.g. giving one cup to each pupil).</p> | <p>A) Matches pairs of objects or pictures with support.</p> <p>B) Searches for objects in their usual place or indicates where to go.</p> | <p>A) Beginning to sort sets of objects according to a single attribute, e.g. colour, size, shape.</p> <p>B) Makes small sets the same.</p> <p>C) Puts all balls, hoops, toys, equipment away.</p> <p>D) Puts two sweets, toys, cups, etc, in each box.</p> <p>E) Experiences comparing weights.</p> <p>F) Carries out activities against a clock.</p> | <p>A) Compare size of objects where there is a marked difference.</p> <p>B) Finds big/large and small object on request.</p> <p>C) Indicates which item is longer/shorter.</p> <p>D) Compares height and indicates which is taller.</p> <p>E) Indicates the correct position of an object, e.g. milk/fridge, hat/head.</p> <p>F) Explores positions of objects e.g. inside, outside, in front, behind, in a line, etc.</p> |

Name \_\_\_\_\_

## Maths Stage 5 (Including Pre-key stage standards- Standard 2)

| Numbers and the number system                                                                                                                                                                                                                                                                                           | Place value and ordering                                                                                       | Calculations                                                                                                                                                                                                                         | Solving Problems                                                                                                                                                                                                                                                                                                                 | Problems involving real life, money or measures                                                                                                                                                                | Measures, shapes and space                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
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| <p>A) Joins in with new number rhymes, songs, stories and games.</p> <p><b>B) Say the number names to 5 in the correct order</b> (e.g. in a song or by joining in with the teacher).</p> <p>C) Aware when there are too few/many for 1-1 matching.</p> <p>D) Counts reliably to 3.</p> <p>E) Makes sets of up to 3.</p> | <p>A) Understands more/fewer, e.g. indicates that more cups are required, which hoop has fewer/more balls.</p> | <p>A) Demonstrates their understanding of 1-1 correspondence in a range of contexts.</p> <p><b>B) Demonstrate an understanding of the concept of numbers up to 5 by putting together the right number of objects when asked.</b></p> | <p>A) Copies simple patterns or sequences using 2 colours/shapes/sizes.</p> <p>B) Copies a pattern of repeated movements.</p> <p><b>C) Copy and continue simple patterns using real-life materials</b> (e.g. apple, orange, apple, orange, etc.).</p> <p>D) Makes a chain of dominoes matching dot patterns for numbers 1-3.</p> | <p>A) Sorts objects/materials according to given criteria.</p> <p>B) Identifies odd one out.</p> <p>C) Uses 1p coins.</p> <p>D) Role plays shop.</p> <p>E) Gives 1 coin for 1 item (up to 4 coins/4 items)</p> | <p>A) Shows awareness of more/less.</p> <p>B) Compares overall size of objects where the difference is not great.</p> <p><b>C) Identify the big or small object from a selection of two.</b></p> <p>D) Gives large or small items on request.</p> <p>E) Uses 3D shapes.</p> <p>F) Searches for objects not found in their usual place.</p> <p>G) Shows understanding of position words, e.g. top, inside, under, behind.</p> <p><b>H) Sort objects according to a stated characteristic</b> (e.g. group all the small balls together, sort the shapes into triangles and circles).</p> |

Name \_\_\_\_\_

## Maths Stage 6 (Including Pre-key stage standards- Standard 3)

| Numbers and the number system                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Place value and ordering                                                                                                                                                                                                                                                                                                                                   | Calculations                                                                                                                                                                                                                                                                                                         | Solving Problems                                                                             | Problems involving real life, money or measures                                                                                                                                              | Measures, shapes and space                                                                                                                                                                                                                                                                                          |
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| <p>A) Joins in rote counting to 10.</p> <p>B) Points to or steps on numbers on a number line, as the numbers are said.</p> <p>C) Counts to 5 reliably.</p> <p>D) Begins to recognise numerals 1-5.</p> <p>E) Matches numerals to dot patterns on a dice.</p> <p>F) Uses tally marks to 5.</p> <p>G) Creates dot patterns with stickers and associates them with numerals.</p> <p><b>H) Identify how many objects there are in a group of up to 10 objects, recognising smaller groups on sight and counting the objects in larger groups up to 10.</b></p> | <p>A) Uses sets of objects with large differences, can identify which has more/less.</p> <p><b>B) Demonstrate an understanding that the last number counted represents the total number of the count.</b></p> <p><b>C) Copy and continue more advanced patterns using real-life materials (e.g. apple, apple, orange, apple, apple, orange, etc.).</b></p> | <p>A) Responds to 'How many?'.</p> <p>B) Responds to put 2 pencils in the box and add 3 more.</p> <p>C) In practical situations responds to add 1/take 1.</p> <p><b>D) Use real-life materials (e.g. apples or crayons) to add and subtract 1 from a group of objects and indicate how many are now present.</b></p> | <p>A) Collects items into sorting draw and indicates to an adult what to put on a label.</p> | <p>A) Respond to 'how many?'</p> <p>B) Completes a range of classification activities using given criteria, e.g. by size, colour, shape, name of coin.</p> <p>C) Identifies odd one out.</p> | <p>A) Uses familiar words to compare size, e.g. bigger, longer, taller.</p> <p>B) Starts to pick out named shapes from a collection.</p> <p>C) Beginning to respond to forwards and backwards.</p> <p>D) Uses familiar words to describe position.</p> <p>E) Can say where an object is in relation to another.</p> |

Name \_\_\_\_\_

## Maths Stage 7 (Including Pre-key stage standards- Standard 4)

| Numbers and the number system                                                                                                                                                     | Place value and ordering                                                                                                                                          | Calculations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Solving Problems                                                                                                                                                                                                | Problems involving real life, money or measures                                                                                                                                                | Measures, shapes and space                                                                                                                                                                                                                                            |
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| <p>A) Joins in rote counting to beyond 10.</p> <p>B) Says/indicates number names, in order from 1-10.</p> <p>C) Continues the rote count onwards from a given smaller number.</p> | <p>A) Beginning to recognise numerals from 1-9 and relate them to sets of objects.</p> <p>B) Compares 2 given numbers of objects and says which is more/less.</p> | <p>A) Can add/take away one from a number of objects.</p> <p>B) Can use number lines to 10 to find the number before/after/one more/one less.</p> <p><b>C) Count to 20, demonstrating that the next number in the count is one more and the previous number is one less.</b></p> <p>D) Using objects placed on a number line can add 1 more to 3 objects in a line and say how many objects are now in the line; take 1 away and say how many are left.</p> <p><b>E) Demonstrate an understanding of the mathematical symbol of add, subtract and equal to.</b></p> | <p>A) Recognises that there are 2 colours used in a simple pattern and continues the pattern, e.g. red, green, red, green.</p> <p>B) Watches an adult make a simple sequence of actions, then repeats them.</p> | <p>A) Uses tokens or marks to tally events or scoring in games.</p> <p>B) Uses ordinal words to describe positions and turns, e.g. first turn left, second walk forward, third turn right.</p> | <p>A) Compares directly 2 lengths or heights where there is a marked difference and can say the tall/long one.</p> <p>B) Finds an object that is longer, heavier, shorter than, etc.</p> <p>C) Shows some familiarity of days of the week and times in their day.</p> |



Name \_\_\_\_\_

## Maths Stage 8 (Including Pre-key stage standards- Standard 4)

| Numbers and the number system                                                                             | Place value and ordering                                                                                                                                                                       | Calculations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Solving Problems                                                                                         | Problems involving real life, money or measures                                                                                                                                                               | Measures, shapes and space                                                                                                                                                                                                                                                     |
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| <p>A) Beginning to count up to 10 objects.</p> <p>B) Estimates a small number and checks by counting.</p> | <p>A) Beginning to use ordinal numbers (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>).</p> <p>B) Follows 3 instructions in order.</p> <p>C) Read and write numbers in numerals from 0-9.</p> | <p>A) Demonstrate an understanding of the composition of numbers to 5 and a developing ability to recall number bonds to and within 5 (e.g. <math>2+2=4</math> and <math>3+1=4</math>).</p> <p>B) Demonstrate an understanding of the commutative law (e.g. <math>3+2=5</math>, therefore <math>2+3=5</math>).</p> <p>C) Demonstrate an understanding of inverse relationships involving addition and subtraction (e.g. of <math>3+2=5</math>, then <math>5-2=3</math>).</p> <p>D) Demonstrate an understanding that the total number of objects changes when objects are added or taken away.</p> <p>E) Demonstrate an understanding that the number of objects remains the same when they are rearranged, providing nothing has been added or taken away.</p> | <p>A) Solve number problems involving the addition and subtraction of single-digit numbers up to 10.</p> | <p>A) Beginning to make simple estimates, such as how many cubes will fit into the box.</p> <p>B) Uses counting skills to tell how many more items are needed, e.g. cups for every pupil to have a drink.</p> | <p>A) Sequences 4 pictures of daily events.</p> <p>B) Beginning to use straight, larger, shape names, to describe 2D and 3D shapes.</p> <p>C) Uses 2D shapes/stamps to make pictures/patterns on paper, sand, play dough, etc.</p> <p>D) Recognise some common 2-D shapes.</p> |

Name \_\_\_\_\_ **Maths Stage 9 including Standard 5 (working towards the KS1 expected standard)**

| Number and Place Value                                                                                                                           | Number Addition and Subtraction                                                                                                                                                 | Number Multiplication and Division                                                                                                                                                     | Number Fractions                                                                          | Measurement                                                                                                                                                                                                                                                                                                                                                                                          | Geometry Properties of Shape                                                                                                                                                                                                | Geometry Position and Direction |
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| Count to and across 100; Count forwards and backwards from 0,1 or any given number                                                               | Read, write and interpret mathematical statements involving addition (+),                                                                                                       | 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. | Recognise, find and name a half as one of two equal parts of an object, shape or quantity | Compare, describe and solve practical problems for: <ul style="list-style-type: none"> <li>Lengths and heights e.g. long/short, longer/shorter, tall/short, double/half</li> <li>Mass/weight e.g. heavy/light, heavier than, lighter than</li> <li>Capacity and volume e.g. full/empty, more than, less than, half, half full, quarter</li> <li>Time e.g. quicker, slower, earlier, later</li> </ul> | <b>Name some common 2-D and 3D shapes from a group of shapes or from pictures of the shapes and describe some of their properties</b> (e.g. triangles, rectangles, squares, circles, cuboids, cubes, pyramids and spheres). |                                 |
| <b>Count in multiples of twos, fives and tens from 0 and use this to solve problems</b>                                                          | Read, write and interpret mathematical statements involving subtraction (-)                                                                                                     |                                                                                                                                                                                        |                                                                                           | Measure and begin to record the following: <ul style="list-style-type: none"> <li>Lengths and heights</li> <li>Mass/weight</li> <li>Capacity and volume</li> <li>Time (hours, minutes, seconds)</li> </ul>                                                                                                                                                                                           |                                                                                                                                                                                                                             |                                 |
| Given a number, identify one more and one less                                                                                                   | Read, write and interpret mathematical statements involving equals (=)                                                                                                          |                                                                                                                                                                                        |                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                             |                                 |
| <b>Partition a two-digit number into tens and ones to demonstrate an understanding of place value using structured resources to support them</b> | <b>Recall at least four of the six number bonds for 10 and reason about associated facts (e.g. <math>6+4=10</math>, therefore <math>4+6=10</math> AND <math>10-6=4</math>).</b> |                                                                                                                                                                                        |                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                             |                                 |

Name \_\_\_\_\_ **Maths Stage 10 including Standard 5 (working towards the KS1 expected standard)**

| Number and Place Value                                                                               | Number Addition and Subtraction                                                                                                                                                                                        | Number Multiplication and Division | Number Fractions                                                                              | Measurement                                                                                                                                           | Geometry Properties of Shape | Geometry Position and Direction                                                                    |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------------------------------------------------------------------------------------------|
| Identify and represent numbers using objects and pictorial representations including the number line | <b>Add and subtract two-digit numbers and ones, and two-digit numbers and tens, where no regrouping is required, explaining their method verbally, in pictures or using apparatus (e.g. 23+5; 46+20; 16-5; 88-30).</b> |                                    | Recognise, find and name a quarter as one of four equal parts of an object, shape or quantity | <b>Know the value of different coins</b>                                                                                                              |                              | Describe position, direction and movement, including whole, half, quarter and three-quarter turns. |
| Use the language of: equal to, more than, less than (fewer), most, least                             | Solve one-step problems that involve addition and subtraction, using concrete objects and pictorial representations,                                                                                                   |                                    |                                                                                               | Sequence events in chronological order using language e.g.: before and after, next, first, today, yesterday, tomorrow, morning, afternoon and evening |                              |                                                                                                    |
| Read and write numbers from 1 to 20 in numerals                                                      | Solve one-step problems that involve missing number problems such as $7 = \square - 9$ .                                                                                                                               |                                    |                                                                                               | Tell the time to the hour and half past the hour and draw the hands on a clock face to show these times.                                              |                              |                                                                                                    |
| Read and write numbers from 1 to 20 in words.                                                        |                                                                                                                                                                                                                        |                                    |                                                                                               |                                                                                                                                                       |                              |                                                                                                    |
| <b>Read and write numbers in numerals up to 100</b>                                                  |                                                                                                                                                                                                                        |                                    |                                                                                               |                                                                                                                                                       |                              |                                                                                                    |

Name \_\_\_\_\_

## Maths stage 11 (Y2)

| Number and Place Value                                                                              | Number Addition and Subtraction                                                                                                                                                                                                                                                               | Number Multiplication and Division                                                                                                                                                                | Number Fractions                                                                                                                                 | Measurement                                                                                                                                                                                                                                                                                                                                                     | Geometry Properties of Shape                                                                                           | Geometry Position and Direction                                                           |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Recognise the place value of each digit in a two-digit number (tens, ones)                          | Solve problems with addition and subtraction: <ul style="list-style-type: none"> <li>Using concrete objects and pictorial representations, including those involving numbers, quantities and measures;</li> <li>Applying their increasing knowledge of mental and written methods.</li> </ul> | Recall and use multiplication and division facts for the 2, 5 and 10 multiplication tables, including recognising odd and even numbers                                                            | Recognise, find, name and write fractions $\frac{1}{3}$ $\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ of a length, shape, set of objects or quantity | Choose and use appropriate standard units to estimate and measure: <ul style="list-style-type: none"> <li>length/height in any direction (m/cm);</li> <li>mass (kg/g);</li> <li>temperature (<math>^{\circ}\text{C}</math>);</li> <li>capacity (litres/ml)</li> </ul> to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels | Identify and describe the properties of 2-D shapes, including the number of sides and line symmetry in a vertical line | Order and arrange combinations of mathematical objects in patterns and sequences          |
| Count in steps of 2, 3, and 5 from 0, and in tens from any number, forward and backward             | Recall and use addition and subtraction facts to 20 fluently, and derive and use related facts up to 100                                                                                                                                                                                      | Calculate mathematical statements for multiplication and division within the multiplication tables and write them using the multiplication ( $\times$ ), division ( $\div$ ) and equals (=) signs |                                                                                                                                                  | Compare and order lengths, mass, volume/capacity and record the results using $>$ , $<$ and $=$                                                                                                                                                                                                                                                                 | Identify and describe the properties of 3-D shapes, including the number of edges, vertices and faces                  | <b>Statistics</b>                                                                         |
| Identify, represent and estimate numbers using different representations, including the number line |                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                   |                                                                                                                                                  | Recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value                                                                                                                                                                                                                                                              |                                                                                                                        |                                                                                           |
|                                                                                                     |                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                   |                                                                                                                                                  | Find different combinations of coins that equal the same amounts of money                                                                                                                                                                                                                                                                                       |                                                                                                                        | Interpret and construct simple pictograms, tally charts, block diagrams and simple tables |

Name \_\_\_\_\_

## Maths stage 12 (Y2)

| Number and Place Value                                           | Number Addition and Subtraction                                                                                                                                                                                                                                         | Number Multiplication and Division                                                                                                                                                       | Number Fractions                                                                                                           | Measurement                                                                                                                        | Geometry Properties of Shape                                                                              | Geometry Position and Direction                                                                                                                                                                                                                                      |
|------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compare and order numbers from 0 up to 100; use <, > and = signs | Add and subtract numbers using concrete objects, pictorial representations, and mentally: <ul style="list-style-type: none"> <li>a two-digit number and ones;</li> <li>a two-digit number and tens;</li> <li>two two-digit numbers;</li> </ul> three one-digit numbers. | Show that multiplication of two numbers can be done in any order (commutative) and division of one number by another cannot                                                              | Write simple fractions for example $\frac{1}{2}$ of 6 = 3 and recognise the equivalence of $\frac{2}{4}$ and $\frac{1}{2}$ | Solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change | Identify 2-D shapes on the surface of 3-D shapes, e.g. a circle on a cylinder and a triangle on a pyramid | Use mathematical vocabulary to describe position, direction and movement, including movement in a straight line and distinguishing between rotation as a turn and in terms of right angles for quarter, half and three-quarter turns (clockwise and anti-clockwise). |
|                                                                  |                                                                                                                                                                                                                                                                         |                                                                                                                                                                                          |                                                                                                                            | Compare and sequence intervals of time                                                                                             |                                                                                                           |                                                                                                                                                                                                                                                                      |
| Read and write numbers to at least 100 in numerals               | Show that addition of two numbers can be done in any order (commutative) and subtraction of one number from another cannot                                                                                                                                              | Solve problems involving multiplication and division, using materials, arrays, repeated addition, mental methods, and multiplication and division facts, including problems in contexts. |                                                                                                                            | Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times | Compare and sort common 2-D and 3-D shapes and everyday objects.                                          | <b>Statistics</b><br>Ask and answer simple questions by counting the number of objects in each category and sorting the categories by quantity                                                                                                                       |
| Read and write numbers to at least 100 in words                  |                                                                                                                                                                                                                                                                         |                                                                                                                                                                                          |                                                                                                                            | Know the number of minutes in an hour and the number of hours in a day                                                             |                                                                                                           | Ask and answer questions about totaling and comparing categorical data.                                                                                                                                                                                              |
| Use place value and number facts to solve problems.              |                                                                                                                                                                                                                                                                         |                                                                                                                                                                                          |                                                                                                                            |                                                                                                                                    |                                                                                                           |                                                                                                                                                                                                                                                                      |



Name \_\_\_\_\_

## Maths stage 13 (Y3)

| Number and Place Value                                                                         | Number Addition and Subtraction                                                                                                                                                                                 | Number Multiplication and Division                                                                                                                                                                                                                                                                  | Number Fractions                                                                                                                                           | Measurement                                                                                                                                                    | Geometry Properties of Shape                                     | Geometry Position and Direction                                                                                                        |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Recognise the place value of each digit in a three-digit number (hundreds, tens, ones)         | Add and subtract numbers mentally, including: <ul style="list-style-type: none"> <li>a three-digit number and ones</li> <li>a three-digit number and tens</li> <li>a three-digit number and hundreds</li> </ul> | Recall and use multiplication and division facts for the 3, 4 and 8 multiplication tables                                                                                                                                                                                                           | Count up and down in tenths; Recognise that tenths arise from dividing an object into 10 equal parts and in dividing one-digit numbers or quantities by 10 | Measure, compare, add and subtract: <ul style="list-style-type: none"> <li>lengths (m/cm/mm);</li> <li>mass (kg/g);</li> <li>volume/capacity (l/ml)</li> </ul> | Draw 2-D shapes and make 3-D shapes using modelling materials;   | Recognise angles as a property of shape or a description of a turn                                                                     |
| Count from 0 in multiples of 4, 8, 50 and 100; find 10 or 100 more or less than a given number | Add and subtract numbers with up to three digits, using formal written methods of columnar addition and subtraction                                                                                             | Write and calculate mathematical statements for multiplication and division using the multiplication tables that they know, including for two-digit numbers times one-digit numbers, using: <ul style="list-style-type: none"> <li>mental</li> <li>progressing to formal written methods</li> </ul> | Recognise, find and write fractions of a discrete set of objects: unit fractions and non-unit fractions with small denominators                            | Measure the perimeter of simple 2-D shapes                                                                                                                     | Recognise 3-D shapes in different orientations and describe them | Identify right angles, recognise that two right angles make a half-turn, three make three quarters of a turn and four a complete turn; |
|                                                                                                |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                     |                                                                                                                                                            | Add and subtract amounts of money to give change, using both £ and p in practical contexts                                                                     |                                                                  |                                                                                                                                        |
| Identify, represent and estimate numbers using different representations                       |                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                     | Recognise and use fractions as numbers: unit fractions and non-unit fractions with small denominators                                                      | Tell and write the time from an analogue clock, including: Using Roman numerals from I to XII; 12-hour clocks; 24-hour clocks                                  |                                                                  |                                                                                                                                        |

Name \_\_\_\_\_

## Maths stage 14 (Y3)

| Number and Place Value                                              | Number Addition and Subtraction                                                                                                | Number Multiplication and Division                                                                                                                                                                               | Number Fractions                                                                                                              | Measurement                                                                                          | Geometry Properties of Shape                                                          | Geometry Position and Direction                                                                                                                                         |
|---------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compare and order numbers up to 1000                                | Estimate the answer to a calculation                                                                                           | Solve problems, including missing number problems, involving multiplication and division, including positive integer scaling problems and correspondence problems in which n objects are connected to m objects. | Add and subtract fractions with the same denominator within one whole: for example, $\frac{5}{7} + \frac{1}{7} = \frac{6}{7}$ | Estimate and read time with increasing accuracy to the nearest minute                                | Identify whether angles are greater than or less than a right angle                   | Identify whether angles are greater than or less than a right angle                                                                                                     |
| Read and write numbers up to 1000 in numerals                       | Use inverse operations to check answers                                                                                        |                                                                                                                                                                                                                  | Compare and order unit fractions, and fractions with the same denominators                                                    | Record and compare time in terms of seconds, minutes and hours                                       | Identify horizontal and vertical lines and pairs of perpendicular and parallel lines. | Identify horizontal and vertical lines and pairs of perpendicular and parallel lines.                                                                                   |
| Read and write numbers up to 1000 in words                          | Solve problems, including missing number problems, using number facts, place value, and more complex addition and subtraction. |                                                                                                                                                                                                                  | Solve problems that involve all of the above.                                                                                 | Use vocabulary such as o'clock, a.m./p.m. morning, afternoon, noon and midnight                      | Identify pairs of perpendicular and parallel lines.                                   | <b>Statistics</b>                                                                                                                                                       |
| Solve number problems and practical problems involving these ideas. |                                                                                                                                |                                                                                                                                                                                                                  |                                                                                                                               | Know the number of seconds in a minute and the number of days in each month, year and leap year      |                                                                                       | Interpret and present data using: <ul style="list-style-type: none"> <li>• bar charts</li> <li>• pictograms</li> </ul> tables                                           |
|                                                                     |                                                                                                                                |                                                                                                                                                                                                                  |                                                                                                                               | Compare durations of events [for example to calculate the time taken by particular events or tasks]. |                                                                                       | Solve one-step and two-step questions [for example, 'How many more?' and 'How many fewer?'] using information presented in scaled bar charts and pictograms and tables. |

Name \_\_\_\_\_

## Maths stage 15 (Y4)

| Number and Place Value                                                                               | Number Addition and Subtraction                                                                                                      | Number Multiplication and Division                                                                                                                                                                                                     | Number Fractions inc decimals                                                                                                                                                       | Measurement                                                                                               | Geometry Properties of Shape                                                                                       | Geometry Position and Direction                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Recognise the place value of each digit in a four-digit number (thousands, hundreds, tens, and ones) | Add and subtract numbers with up to 4 digits using the formal written methods of columnar addition and subtraction where appropriate | Recall multiplication and division facts for multiplication tables up to $12 \times 12$                                                                                                                                                | Count up and down in hundredths; recognise that hundredths arise when dividing an object by one hundred and dividing tenths by ten.                                                 | Convert between different units of measure [for example, kilometre to metre; hour to minute]              | Compare and classify geometric shapes, including quadrilaterals and triangles, based on their properties and sizes | Describe positions on a 2-D grid as coordinates in the first quadrant                                                                                                                                       |
| Count in multiples of 6, 7, 9, 25 and 1000                                                           | Estimate the answer to a calculation                                                                                                 | Use place value, known and derived facts to multiply and divide mentally, including: <ul style="list-style-type: none"> <li>• Multiplying by 0 and 1</li> <li>• Dividing by 1</li> <li>• Multiplying together three numbers</li> </ul> | Recognise and show, using diagrams, families of common equivalent fractions                                                                                                         | Measure and calculate the perimeter of a rectilinear figure (including squares) in centimetres and metres | Identify acute and obtuse angles                                                                                   | Describe movements between positions as translations of a given unit to the left/right and up/down                                                                                                          |
| Count backwards through zero to include negative numbers                                             | Use inverse operations to check answers                                                                                              | Recognise and use factor pairs and commutativity in mental calculations                                                                                                                                                                | Solve problems involving increasingly harder fractions to calculate quantities, and fractions to divide quantities, including non-unit fractions where the answer is a whole number | Find the area of rectilinear shapes by counting squares                                                   |                                                                                                                    | Plot specified points and draw sides to complete a given polygon.                                                                                                                                           |
| Identify, represent and estimate numbers using different representations                             |                                                                                                                                      |                                                                                                                                                                                                                                        | Add and subtract fractions with the same denominator                                                                                                                                |                                                                                                           |                                                                                                                    | <b>Statistics</b><br>Interpret and present discrete and continuous data using appropriate graphical methods, including: <ul style="list-style-type: none"> <li>• bar charts</li> <li>time graphs</li> </ul> |

Name \_\_\_\_\_

## Maths stage 16 (Y4)

| Number and Place Value                                                                                                                 | Number Addition and Subtraction                                                                                     | Number Multiplication and Division                                                                                                                                                                                                          | Number Fractions inc decimals                                                                                                                          | Measurement                                                                                                                                                                                  | Geometry Properties of Shape                                                   | Geometry Position and Direction                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Order and compare numbers beyond 1000                                                                                                  | Solve addition and subtraction two-step problems in contexts, deciding which operations and methods to use and why. | Multiply two-digit by a one-digit number using formal written layout                                                                                                                                                                        | Recognise and write decimal equivalents to $\frac{1}{2}$ , $\frac{1}{4}$ , $\frac{3}{4}$                                                               | Estimate, compare and calculate different measures, including money in pounds and pence                                                                                                      | Compare and order angles up to two right angles by size                        | Describe movements between positions as translations of a given unit to the left/right and up/down                            |
| Find 1000 more or less than a given number                                                                                             |                                                                                                                     | Multiply three-digit numbers by a one-digit number using formal written layout                                                                                                                                                              | Find the effect of dividing a one- or two-digit number by 10 and 100, identifying the value of the digits in the answer as ones, tenths and hundredths | Read, write and convert time between analogue and digital 12- and 24-hour clocks                                                                                                             | Identify lines of symmetry in 2-D shapes presented in different orientations   | Plot specified points and draw sides to complete a given polygon.                                                             |
| Round any number to the nearest 10, 100 or 1000                                                                                        |                                                                                                                     | Solve problems involving multiplying and adding, including using the distributive law to multiply two digit numbers by one digit, integer scaling problems and harder correspondence problems such as n objects are connected to m objects. | Round decimals with one decimal place to the nearest whole number                                                                                      | Solve problems involving converting from: <ul style="list-style-type: none"> <li>hours to minutes;</li> <li>minutes to seconds;</li> <li>years to months;</li> <li>weeks to days.</li> </ul> | Complete a simple symmetric figure with respect to a specific line of symmetry | <b>Statistics</b>                                                                                                             |
| Solve number and practical problems that involve all of the above and with increasingly large positive numbers                         |                                                                                                                     |                                                                                                                                                                                                                                             | Compare numbers with the same number of decimal places up to two decimal places                                                                        |                                                                                                                                                                                              |                                                                                | Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs. |
| Read Roman numerals to 100 (I to C) and know that over time, the numeral system changed to include the concept of zero and place value |                                                                                                                     |                                                                                                                                                                                                                                             | Solve simple measure and money problems involving fractions and decimals to two decimal places.                                                        |                                                                                                                                                                                              |                                                                                |                                                                                                                               |

Name \_\_\_\_\_

## Maths stage 17 (Y5)

| Number and Place Value                                                                             | Number Addition and Subtraction                                                                                                    | Number Multiplication and Division                                                                                                               | Number Fractions inc decimals                                                                                                                                                                                            | Measurement                                                                                                                                                                                                             | Geometry Properties of Shape                                                              | Geometry Position and Direction                                                           |
|----------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit | Add and subtract whole numbers with more than 4 digits, including using formal written methods (columnar addition and subtraction) | Identify multiples and factors, including finding all factor pairs of a number, and common factors of two numbers                                | Compare and order fractions whose denominators are all multiples of the same number                                                                                                                                      | Convert between different units of metric measure (for example, kilometre and metre; centimetre and metre; centimetre and millimetre; gram and kilogram; litre and millilitre)                                          | Identify 3-D shapes, including cubes and other cuboids, from 2-D representations          |                                                                                           |
| Count forwards or backwards in steps of powers of 10 for any given number up to 1 000 000          | Add and subtract numbers mentally with increasingly large numbers                                                                  | Know and use the vocabulary of prime numbers, prime factors and composite (non- prime) numbers                                                   | Identify, name and write equivalent fractions of a given fraction, represented visually, including tenths and hundredths                                                                                                 | Understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints                                                                                             | Know angles are measured in degrees: estimate and compare acute, obtuse and reflex angles | <b>Statistics</b>                                                                         |
|                                                                                                    |                                                                                                                                    | Establish whether a number up to 100 is prime and recall prime numbers up to 19                                                                  | Recognise mixed numbers and improper fractions and convert from one form to the other and write mathematical statements $> 1$ as a mixed number [for example, $\frac{2}{5} + \frac{4}{5} = \frac{5}{5} = 1\frac{1}{5}$ ] | Measure and calculate the perimeter of composite rectilinear shapes in centimetres and metres                                                                                                                           | Draw given angles, and measure them in degrees ( $^{\circ}$ )                             | Solve comparison, sum and difference problems using information presented in a line graph |
|                                                                                                    |                                                                                                                                    | Multiply numbers up to 4 digits by a one- or two-digit number using a formal written method, including long multiplication for two-digit numbers | Add and subtract fractions with the same denominator and denominators that are multiples of the same number                                                                                                              | Calculate and compare the area of rectangles (including squares), and including using standard units, square centimetres ( $\text{cm}^2$ ) and square metres ( $\text{m}^2$ ) and estimate the area of irregular shapes |                                                                                           | Complete, read and interpret information in tables, including timetables.                 |
|                                                                                                    |                                                                                                                                    | Multiply and divide numbers mentally drawing upon known facts                                                                                    | Multiply proper fractions and mixed numbers by whole numbers                                                                                                                                                             |                                                                                                                                                                                                                         |                                                                                           |                                                                                           |



Name \_\_\_\_\_

## Maths stage 18 (Y5)

| Number and Place Value                                                                                                               | Number Addition and Subtraction                                                                                       | Number Multiplication and Division                                                                                                                           | Number Fractions inc decimals                                                                                                                                                        | Measurement                                                                                                                                       | Geometry Properties of Shape                                                                                                                                                                                                                                                   | Geometry Position and Direction                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Interpret negative numbers in context, count forwards and backwards with positive and negative whole numbers, including through zero | Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy          | Divide numbers up to 4 digits by a one-digit number using the formal written method of short division and interpret remainders appropriately for the context | Read and write decimal numbers as fractions [for example, $0.71 = \frac{71}{100}$ ]<br>Recognise and use thousandths and relate them to tenths, hundredths and decimal equivalents   | Estimate volume [for example, using $1 \text{ cm}^3$ blocks to build cuboids (including cubes)] and capacity [for example, using water]           | Identify: <ul style="list-style-type: none"> <li>Angles at a point and one whole turn (total <math>360^\circ</math>)</li> <li>Angles at a point on a straight line and <math>\frac{1}{2}</math> a turn (total <math>180^\circ</math>)</li> </ul> Other multiples of $90^\circ$ | Identify, describe and represent the position of a shape following a reflection or translation, using the appropriate language, and know that the shape has not changed. |
| Round any number up to 1 000 000 to the nearest 10, 100, 1000, 10 000 and 100 000                                                    | Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why. | Multiply and divide whole numbers and those involving decimals by 10, 100 and 1000                                                                           | Round decimals with two decimal places to the nearest whole number and to one decimal place                                                                                          | Solve problems involving converting between units of time                                                                                         | Use the properties of rectangles to deduce related facts and find missing lengths and angles                                                                                                                                                                                   |                                                                                                                                                                          |
| Read Roman numerals to 1000 (M) and recognize years written in Roman numerals.                                                       |                                                                                                                       | Recognise and use square numbers and cube numbers, and the notation for squared (2) and cubed (3)                                                            | Read, write, order and compare numbers with up to three decimal places<br>Solve problems involving number up to three decimal places                                                 | Use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. | Distinguish between regular and irregular polygons based on reasoning about equal sides and angles.                                                                                                                                                                            | <b>Statistics</b>                                                                                                                                                        |
|                                                                                                                                      |                                                                                                                       | Solve problems involving multiplication and division including using their knowledge of factors and multiples, squares and cubes                             | Recognise the per cent symbol (%) and understand that per cent relates to 'number of parts per hundred', and write percentages as a fraction with denominator 100, and as a decimal. |                                                                                                                                                   |                                                                                                                                                                                                                                                                                |                                                                                                                                                                          |

Name \_\_\_\_\_

## Maths stage 19 (Y6)

| Number and Place Value                                                                        | Number Addition<br>Subtraction<br>Multiplication and Division                                                                                                                                                              | Number fractions (Including decimals)                                                                                                             | Ratio and Proportion                                                                                                                                 | Measurement                                                                                                                                                                                                                             | Geometry Properties of Shape                                                                                                                             | Geometry Position and Direction                                                                         |
|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| Read, write, order and compare numbers up to 10 000 000 and determine the value of each digit | Multiply multi-digit numbers up to 4 digits by a two-digit whole number using the formal written method of long multiplication                                                                                             | Use common factors to simplify fractions; use common multiples to express fractions in the same denomination                                      | Solve problems involving the relative sizes of two quantities where missing values can be found by using integer multiplication and division facts   | Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate recognise that shapes with the same areas can have different perimeters and vice versa | Draw 2-D shapes using given dimensions and angles                                                                                                        | Describe positions on the full coordinate grid (all four quadrants)                                     |
|                                                                                               | Divide numbers up to 4 digits by a two-digit whole number using the formal written method of long division, and interpret remainders as whole number remainders, fractions, or by rounding, as appropriate for the context | Compare and order fractions, including fractions $> 1$                                                                                            |                                                                                                                                                      |                                                                                                                                                                                                                                         |                                                                                                                                                          |                                                                                                         |
| Round any whole number to a required degree of accuracy                                       | Divide numbers up to 4 digits by a two-digit number using the formal written method of short division where appropriate, interpreting remainders according to the context                                                  | Add and subtract fractions with different denominators and mixed numbers, using the concept of equivalent fractions                               | Solve problems involving the calculation of percentages [for example, of measures, and such as 15% of 360] and the use of percentages for comparison | Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places     | Recognise, describe and build simple 3-D shapes, including making nets                                                                                   | <b>Statistics</b><br>Interpret and construct pie charts and line graphs and use these to solve problems |
|                                                                                               |                                                                                                                                                                                                                            | Multiply simple pairs of proper fractions, writing the answer in its simplest form [for example: $\frac{1}{4} \times \frac{1}{2} = \frac{1}{8}$ ] | <b>Algebra</b><br>Use simple formulae                                                                                                                |                                                                                                                                                                                                                                         |                                                                                                                                                          |                                                                                                         |
|                                                                                               | Perform mental calculations, including with mixed operations and large numbers                                                                                                                                             | Divide proper fractions by whole numbers [for example, $\frac{1}{3} \div 2 = \frac{1}{6}$ ]                                                       | Generate and describe linear number sequences                                                                                                        | Convert between miles and kilometres                                                                                                                                                                                                    | Compare and classify geometric shapes based on their properties and sizes and find unknown angles in any triangles, quadrilaterals, and regular polygons |                                                                                                         |
|                                                                                               |                                                                                                                                                                                                                            |                                                                                                                                                   | Express missing number problems algebraically                                                                                                        |                                                                                                                                                                                                                                         |                                                                                                                                                          |                                                                                                         |

Name \_\_\_\_\_

## Maths stage 20 (Y6)

| Number and Place Value                                               | Number Addition<br>Subtraction<br>Multiplication and<br>Division                                                               | Number fractions<br>(Including<br>decimals)                                                                                                                             | Ratio and<br>Proportion                                                                          | Measurement                                                                                                                                                                                                                                      | Geometry<br>Properties of<br>Shape                                                                                                | Geometry<br>Position and<br>Direction                                                   |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| Use negative numbers in context, and calculate intervals across zero | Identify common factors, common multiples and prime numbers                                                                    | Associate a fraction with division and calculate decimal fraction equivalents [for example, 0.375] for a simple fraction [for example, $\frac{3}{8}$ ]                  | Solve problems involving similar shapes where the scale factor is known or can be found          | Recognise when it is possible to use formulae for area and volume of shapes                                                                                                                                                                      | Illustrate and name parts of circles, including radius, diameter and circumference and know that the diameter is twice the radius | Draw and translate simple shapes on the coordinate plane, and reflect them in the axes. |
| Solve number and practical problems that involve all of the above.   | Use their knowledge of the order of operations to carry out calculations involving the four operations                         | Identify the value of each digit in numbers given to three decimal places and multiply and divide numbers by 10, 100 and 1000 giving answers up to three decimal places | Solve problems involving unequal sharing and grouping using knowledge of fractions and multiples | Calculate the area of parallelograms and triangles                                                                                                                                                                                               | Recognise angles where they meet at a point, are on a straight line, or are vertically opposite, and find missing angles.         |                                                                                         |
|                                                                      | Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why           | Multiply one-digit numbers with up to two decimal places by whole numbers<br>□ use written division methods in cases where the answer has up to two decimal places      | <b>Algebra</b>                                                                                   | Calculate, estimate and compare volume of cubes and cuboids using standard units, including cubic centimetres ( $\text{cm}^3$ ) and cubic metres ( $\text{m}^3$ ), and extending to other units [for example, $\text{mm}^3$ and $\text{km}^3$ ]. |                                                                                                                                   | <b>Statistics</b>                                                                       |
|                                                                      | Solve problems involving addition, subtraction, multiplication and division                                                    | Solve problems which require answers to be rounded to specified degrees of accuracy                                                                                     | Find pairs of numbers that satisfy an equation with two unknowns                                 |                                                                                                                                                                                                                                                  |                                                                                                                                   | Calculate and interpret the mean as an average.                                         |
|                                                                      | Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy. | Recall and use equivalences between simple fractions, decimals and percentages, including in different contexts.                                                        | Enumerate possibilities of combinations of two variables.                                        |                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                         |

