**Southery Academy**



**Mathematical Vocabulary**

**Expectations by Year Group**

**Using the correct mathematical language is crucial for thinking, learning and communicating mathematically. We need to encourage children to explain what they are doing and why they are doing it. We must offer them opportunities to use mathematical vocabulary frequently. This will help children to learn new vocabulary, to use words which they already know and to express new ideas and thinking.**

**Using mathematical vocabulary can help all children to make links across areas of mathematics, across the curriculum as a whole and also real-life situations. It can especially support lower attainers, enabling them to build confidence, communicate and problem solve, so should be an integral part of every maths lesson.**

Reception

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number** | **Place Value** | **Estimating** | **Addition and subtraction** | **Multiplication and division** | **Fractions** |
| zeronumberone, two, three… to twenty and beyond,teens numberseleven, twelvenonehow many?count, count (up)to, count on (from, to) count back (from, to)count in ones, twos, fives, tens,is the same asmore, lessodd, even, few, pattern,pair | onestensdigitthe same number asas many asmore, larger, bigger, greater, fewer, smaller, less, fewest, smallest, least, most, biggest, largest, greatestone more, ten moreone less, ten lesscompare,ordersizefirst, second, third… twentiethlast, last but onebefore, afternextbetween | guesshow many…?estimatenearlyclose toabout the same asjust over, just undertoo many, too fewenough, not enough | add, more, andmake, sum, totalaltogetherdoubleone more, two more… ten morehow many more to make…?how many more is \_ than \_ ?how much more is \_?take awayhow many are left / left over?how many have gone?one less, two less… ten lesshow many fewer is \_ than \_?how much less is \_?difference between | sharingdoublinghalvingnumber patterns | parts of a wholehalfquarter |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Measurement** | **Length** | **Weight** | **Capacity and volume** | **Time** | **Money** |
| measuresizecompareguessestimateenough, not enoughtoo much, too littletoo many, too fewnearly, close to, about the same asjust over, just under | metrelengthheightwidthdepthlongshorttallhigh, lowwide, narrowthick, thinlonger, shorter, taller, higher etc.longest, shortest, tallest, highest etc.far, near, close | weighweighsbalancesheavylightheavier thanlighter thanheaviest, lightestscales | fullemptyhalf fullholdscontainer | timedays of the weekday, weekbirthday, holidaymorning, afternoon, evening, night, bedtime, dinner time, playtimetoday, yesterday, tomorrowbefore, afternext, lastnow, soonearly, latequick, quicker, quickest, quicklyslow, slower, slowest, slowlyold, older, oldest,new, newer, newesttakes longer, takes less timehouro’clockclock, watch hands | moneycoinpennypencepoundpricecostbuysellspendspentpay |
|  |  |  |  |  |  |
| **Properties of shape** | **2D shape** | **3D shape** | **Position and direction** | **Statistics** | **General** |
| shape patternflatcurvedstraightroundhollowsolidsortmakebuilddrawsizebiggerlargersmallersymmetricalpatternrepeating patternmatch | cornersiderectangle (including square)circletriangle | faceedgevertexverticescubepyramidspherecone | position, over, under, above, below, top, bottom, side, on, inoutside, insidearoundin front ofbehindfront, backbeside, next tooppositeapartbetweenmiddle, edge, cornerdirectionleft, rightup, downforwards, backwards, sidewaysacross next to, close, near, faralong, throughto, from, towards, away frommovementslide, roll, turn, stretch, bendwhole turn, half turn | countsortgroupsetlist | patternpuzzlewhat could we try next?how did you work it out?recognisedescribedrawcomparesort |

**Year 1**

As previous year and including the following new vocabulary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number** | **Place Value** | **Estimating** | **Addition and subtraction** | **Multiplication and division** | **Fractions** |
| numeraltwenty-one…one hundredforwards, backwardsequal toequivalent tomost, leastmanymultiple of | equal tohalf-way betweenabove, below | roughly | additionnear doublehalf, halvesubtractequalsis the same asnumber bonds/pairsmissing number | multiplicationmultiplymultiplied bymultipledivisiondividinggroupingarray | fractionequal partequal groupingequal sharingone of two equal partsone of four equal parts |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Measurement** | **Length** | **Weight** | **Capacity and volume** | **Time** | **Money** |
| measurementroughly | centimetrerulermetre stick | kilogramhalf kilogram | litre, half litrecapacity, volumemore thanless thanquarter full | months of the yearseasons: spring, summer, autumn, winterweekend, month, yearearlier, laterfirstmidnightdatehow long ago?how long will I be t…?how long will it take to…?how often?always, never, often, sometimesusuallyonce, twicehalf past, quarter pastquarter toclock facehour hand minute handhoursminutes | changedearcosts morecheapcosts lesscheapercosts the same ashow much…?how many…?total |
|  |  |  |  |  |  |
| **Properties of shape** | **2D shape** | **3D shape** | **Position and direction** | **Statistics** | **General** |
| symmetrysymmetrical pattern | pointpointed | cuboidcylinder | underneathcentrejourneyquarter turnthree-quarter turn | votetable | problemproblem solvingmentalmentallyexplain your thinking |

**Year 2**

As previous years and including the following new vocabulary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number** | **Place Value** | **Estimating** | **Addition and subtraction** | **Multiplication and division** | **Fractions** |
| two hundred… one thousandcount in threes, fours,tallysequencecontinuepredictrule> greater than< less than | hundredsone-, two- or three-digit numberplace, place valuestands forrepresentsexchangetwenty-first… | exactexactly | one hundred moreone hundred lessnumber factstens boundary | groups oftimesonce twice, three times… ten timesrepeated additiondividedivided by, divided intoshareshare equallyleft, left overone each, two each, three each… ten eachgroup in pairs, threes… tensequal groups ofrow, columnmultiplication tablemultiplication factdivision fact | equivalent fractionmixed numbernumeratordenominatortwo halvestwo quarters, three quartersone third, two thirdsone of three equal parts |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Measurement** | **Length** | **Weight** | **Capacity and volume** | **Time** | **Money** |
| measuring scale | further, furthesttape measure | gram | millilitrecontains | fortnight5, 10, 15… minutes pastdigital, analoguetimer | boughtsold |
| **Temperature**temperaturedegree |
|  |  |  |  |  |  |
| **Properties of shape** | **2D shape** | **3D shape** | **Position and direction** | **Statistics** | **General** |
| surfaceline symmetry | rectangularcircularpentagonhexagonoctagon |  | routehigher, lowerclockwiseanti-clockwiseright anglestraight line | tallygraphblock graphpictogramrepresentlabeltitlemost popular, most commonleast popular, lease common | show how you…explain your methoddescribe the patterndescribe the ruleinvestigatemental calculationwritten calculation |

**Year 3**

As previous years and including the following new vocabulary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number** | **Place Value** | **Estimating** | **Addition and subtraction** | **Multiplication and division** | **Fractions** |
| count on in eights, fifties, to hundreds…factor ofrelationshipRoman numerals | one hundred moreone hundred less | approximateapproximatelyroundnearestround to the nearest ten/hundredround up, round down | hundreds boundary | factorproductremainder | sixths, sevenths, eigths, tenths… |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Measurement** | **Length** | **Weight** | **Capacity and volume** | **Time** | **Money** |
| divisionapproximately | millimetre, kilometre, miledistance apart… between… to… from…perimeter |  | **Temperature**centigrade | centurycalendarearliest, latestampmRoman numerals12-hour clock time24-hour clock time |  |
|  |  |  |  |  |  |
| **Properties of shape** | **2D shape** | **3D shape** | **Position and direction** | **Statistics** | **General** |
| perimeter | pentagonalhexagonaloctagonalquadrilateralright angledparallelperpendicular | hemisphereprismtriangular prism | compass pointnorth, south, east, west, N,S,E,Whorizontal, vertical, diagonalangle… is a greater/ smaller angle thanacute angleobtuse angle | chart, bar chart, frequency tableCarroll diagram, Venn diagramaxis, axesdiagram | greatest value, least value, statement |

**Year 4**

As previous years and including the following new vocabulary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number** | **Place Value** | **Estimating** | **Addition and subtraction** | **Multiplication and division** | **Fractions** |
| ten thousand, hundred thousand, millioncount in sixes, sevens, nines, twenty fives to 100nextconsecutiveintegerpositive negativeabove/below zeromisusnegative numbers | one thousand moreone thousand less | round to the nearest thousand | inverse | inversesquare, squaredcube, cubed | hundredthsdecimal, decimal fraction, decimal point, decimal place, decimal equivalentproportion |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Measurement** | **Length** | **Weight** | **Capacity and volume** | **Time** | **Money** |
| unit, standard unitmetric unit | bredthedgearea, coverssquare centimetres cm² | massbig, biggersmall, smallerweight, heavy/ lightheavier / lighterheaviset / lightest | measuring cylinder | leap yearmillenniumnoondate of birthtimetablearrive depart |  |
|  |  |  |  |  |  |
| **Properties of shape** | **2D shape** | **3D shape** | **Position and direction** | **Statistics** | **General** |
| lineconstructsketchcentreangleright-angledbase, square basedreflect, reflectionregular, irregular | two dimensionaloblongrectilinearequilateral triangle, isosceles trianglescalene triangleheptagonparallelogramrhombustrapeziumpolygon | three- dimensionalsphericalcylindricaltetrahedronpolyhedron | north-eastnorth-westsouth-eastsouth-westNE, NW, SE, SWtranslate, translationrotaterotationdegreereflectionrulerset squareangle measurercompass | surveyquestionnairedata | justifymake a statement |

**Year 5**

As above and including the following new vocabulary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number** | **Place Value** | **Estimating** | **Addition and subtraction** | **Multiplication and division** | **Fractions** |
| factor pair≥ greater than or equal to≤ less than or equal toformuladivisibilitysquare numberprime numberascending/ descending order |  | round to the nearest ten thousand | ones boundarytenths boundary |  | proper / improper fractionequivalent, reduced to , cancelthousandthsin every, for everypercentage per cent % |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Measurement** | **Length** | **Weight** | **Capacity and volume** | **Time** | **Money** |
| imperial unit | square metre (m²)square millimetre (mm²) |  | pint, gallon |  | discountcurrency |
|  |  |  |  |  |  |
| **Properties of shape** | **2D shape** | **3D shape** | **Position and direction** | **Statistics** | **General** |
| radiusdiametercongruentaxis of symmetryreflective symmetry | x-axis, y-axis, quadrant | octahedron | coordinateprotractor | databasebar line chartline graphmaximum/ minimum valueoutcome | explain your reasoning |

**Year 6**

As previous years and including the following new vocabulary

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number** | **Place Value** | **Estimating** | **Addition and subtraction** | **Multiplication and division** | **Fractions** |
| factoriseprime factordigit total |  |  |  |  | ratio**Algebra**formulaequationunknownvariable |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Measurement** | **Length** | **Weight** | **Capacity and volume** | **Time** | **Money** |
|  | yardfootfeetinchinchescircumference | tonnepound, ounce | centilitrecubic centimetres (cm³)cubic metres (m³)cubic millimetres (mm³)cubic kilometres (km³) | Greenwich Mean Time, British Summer Time, International Date Line | profitloss |
|  |  |  |  |  |  |
| **Properties of shape** | **2D shape** | **3D shape** | **Position and direction** | **Statistics** | **General** |
| circumferenceconcentric arcnet, open, closedintersecting, intersection, planekite |  | dodecahedronnet, open, closed | reflex angle | pie chartmean (mode, median, range as estimates for this)statistics, distribution |  |