

Year 6 Maths

Areas of Learning

- Number: place value up to 10 000 000; addition, subtraction, multiplication & division multi-step problems; short & long written methods of multiplication & division; simplifying fractions, finding equivalents; adding, subtracting, multiplying & dividing fractions; division of decimals by 10, 100 & 1000; multiplying decimals by whole numbers; equivalences between fractions, decimals & percentages; problems involving percentages; negative numbers.
- Geometry: properties of shapes; recognising & making 3D shapes; describing positions; translating shapes; drawing 2D shapes from dimensions & angles; drawing 2D shapes on the coordinate grid.
- Measurement: solve problems involving calculations & conversions of units of measurement; use, read, write & convert between smaller & larger units of measurements; formulae of area & perimeter of shapes.
- Algebra: use simple formulae; linear number sequences; missing number problems; equations with two unknowns.
- Statistics: interpret & construct pie charts & line graphs to solve problems; mean & average.
- Ratio & Proportion: recognise proportionality for quantities in the same ratio; solving problems of relative sizes using multiplication & division; problems involving similar shapes where scale factor is known.

Approaches to learning

- Number: partitioning numbers; mental calculation strategies; knowledge of multiplication & division facts; identifying mathematical vocabulary; reasoning skills; rounding, estimating & using inverse operations to check for accuracy; formal written methods.
- Geometry: making models of 3D shapes & classifying them, identifying them from nets; use coordinates to describe positions of shapes; plot shapes on grids; translate & reflect shapes on a grid; using measuring tools draw 2D shapes using dimensions & angles; find missing angles in shapes; identify properties of angles; draw & name parts of circles & their properties.
- Measurement: converting smaller to larger units of measurement & use these to solve problems; calculating speed & link it to science; recognise that shapes with same areas have different perimeters; recognising when to use formulae to calculate area of shapes; understand the link between the area of rectangles & the area of triangles & parallelograms; estimate, calculate & compare volume of cubes & cuboids using standard units
- Statistics: interpret & construct pie charts & line graphs to solve problems; calculating & interpreting mean as an average.
- Algebra: use simple formulae; generate & describe linear number sequences; express missing number problems algebraically; find pairs of numbers that satisfy an equation with two unknowns.
- Ratio & Proportion: recognise & solve proportion problems; understand & use ratio to solve problems using numbers, shapes & scale drawings; solve problems with shapes using a scale factor.

Examples of learning

Pupils use a wide variety of materials & ICT resources. Paired & small group work allows for peer-to-peer checking. Emphasis on “real world” problems & mental calculation strategies.

References

Primary Curriculum 2014

Mathematics: made to measure, Ofsted, May 2012

Collins Connect: Busy Ant Maths