Teaching and Learning Content: Maths
Year Group: 7

Autumn Term

Key Questions: (A list of key questions)

- Topics:
- Place Value
- Four Operations
- Multiples, Factors, Squares
- Negative Numbers
- Co-ordinates
- Measuring Angles
- Angle facts
- Money
- Sequences

Students will: (A short description of outcomes)

- Identify place value, including decimal numbers.
- Round numbers to 10, 100, etc.
- Write whole numbers in words and figures.
- Add/Subtracts numbers up to 4 digits in rows and columns.
- Multiply/Divide by a single digit.
- Know/recall tables up to 10 x 10.
- Divide a number by a two-digit number
- Multiply a 3-digit number by a 2-digit number.
- Solve real problems using multiplication and division

- Recognise multiples of the first ten whole numbers.
- Find factors of numbers up to 100.
- Recognise square numbers up to 100.
- Answer problems involving multiplication/division by a single digit.
- Use Negative numbers in context
- Use negative numbers with inequalities
- Add/Subtract positive and negative numbers
- Plot points in the first quadrant
- Plot points in all four quadrants.
- Read off values from a conversion graph.
- Read measurements from scales different divisions of units.
- Be able to measure or draw angles using straight edge and protractor.
- Give directions as a compass point.
- Know the sum of angles at a point and on a line.
- Know how to find the exterior angle of a triangle or quadrilateral.
- Know the angle sum of triangles and quadrilaterals.
- Consolidate skills of basic arithmetic with whole numbers.
- Solve real problems involving money.
- Use a simple formula involving one or two operations.
- Show understanding of situations by describing them mathematically using symbols, words or diagrams.
- Use function machines to find the output/input or the operation.
- Give the next term in a sequence and describe how the pattern is building up.

Spring Term

Key Questions:

- Topics:
- Area and Perimeter
- Fractions and percentages
- Time
- Handling data- diagrams and averages

Students will:

- Find the area of a 2D shape by counting squares.
- Find the perimeter of a 2D shape.
- Solve simple real problems using area and/or perimeter of shapes.
- Recognise equivalent fractions, shading them where appropriate.
- Order simple fractions.
- Simplify fractions.
- Add and subtract simple fractions.
- Finding equivalent fractions, percentages and decimals.
- Calculate a simple percentage.
- Be confident in using 12- and 24- hour clock.
- Convert between the two measures of time.
- Know 60 seconds = 1 minute, etc.
- (extension)
- Find the angle between the two hands on a clock-face given the time in either 12- or 24- hour clock.
- Read information from bar charts, dual bar charts and pictograms.
- Use information to complete and interpret a Carroll or Venn diagram.
- Use a bar chart or pictogram to represent collected data.

- Compare data in bar charts.
- Interpret a simple pie chart.
- Find the mode, median and mean from a small list of data.
- Find the range of a list of numbers.
- Draw conclusions based on statistical measures and shapes of graphs.

Summer term

Key Questions:

- Topics:
- Algebra
- Symmetry
- Probability
- Volume

Students will:

- Use a formula expressed in words.
- Use letters to write a simple algebraic expression.
- Substitute numbers into expressions.
- Simplify expressions by collecting like terms.
- Solve simple equations such as 4x=12 or x-8=3.
- Draw lines of symmetry on basic 2D shapes.
- Find the order of rotational symmetry for basic shapes.
- Recognise congruent shapes.
- Know the names and properties of special triangles and quadrilaterals.
- Understand basic terms used to describe probability such as certain, impossible, etc.
- Understand the probability scale runs from 0 to 1.
- Calculate the probability of outcomes of events.

- Be able to find whether an event is biased or not
- Find the volume of simple 3D shapes by counting cubes.
- Name the basic 3D shapes.
- Recognise the net of a simple shape.

Suggested resources to support your child's learning:

My Maths