Year 8-Mathematics

- **Links to careers/SMSC/Personal Development:**
- Maths in Nature is embedded in sequences, patterns and symmetry in year 8 students will explore the Fibonacci sequence and learn how many things follow similar number pattern
- Celebrate Pi day and show appreciation to Maths and Science
- UKMCT challenge for year 8 to develop problem solving skills
- World numeracy day to promote the love and appreciation of numeracy skills to use in daily life
- Maths related careers when specific topic is taught

LEARNING JOURNEY

Similar Shapes

Constructing Triangles and bearing

Project: Designing a School

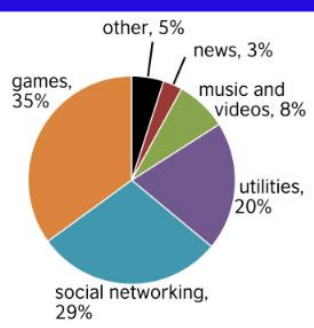
Angles in polygons

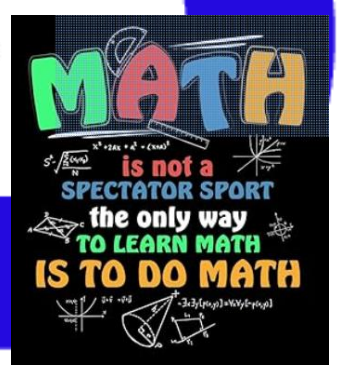
Angles in polygons

Angles on parallel lines

Volume of 3D shapes

Home learning : Weekly on Sparx





Percentage

Averages and data

Direct and inverse proportion

Assessments
- Fortnightly progress check
- End of term assessments

Statistical Representations

Surface Area of 3D shapes

United Kingdom Mathematics Trust

Understanding whole part relationships

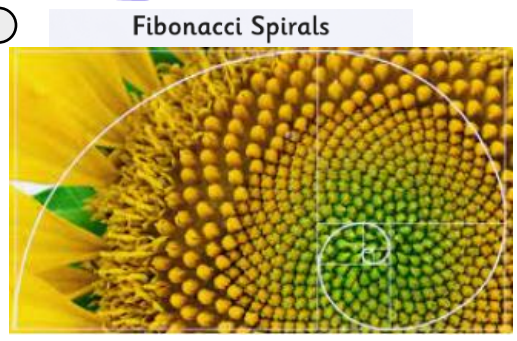
Ratio and change of rates

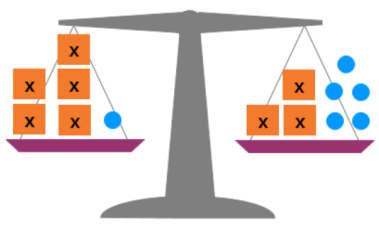
Fraction of an amount

Multiplicative relationships

Enrichment
- TTROCK Stars
- Chess Club

Fibonacci Spirals





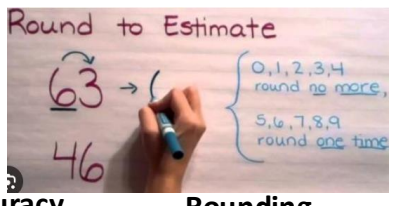
Simplifying Expressions

Understanding equations

Solving linear equations

Forming and Solving equations

Arithmetic Sequences



Number patterns

Degree of Accuracy

Rounding

Year 8 learning summary: Rationale

We believe these topics will have to be taught in year 8 to ensure students can access contents in year 9. For instant, the knowledge of expanding double brackets relies on the knowledge of expanding a single bracket. Year8 will be learning

- a strong sense of the size of numbers and be able to use various methods of rounding, especially when giving answers in context
- non-numerical (shape) and numerical sequences, noticed a pattern, described the pattern in words and found the next term in the sequence from the previous term
- generate and generalise linear sequences
- the Fibonacci sequence and its relevance in the world around us
- a variety of strategies to solve linear equations
- the use of percentages, fractions, proportionality and ratio in context
- the way to develop knowledge of calculating measures of central tendency to include the mode and median, work with grouped data, and be introduced to a measure of spread in statistics.
- how to investigate the surface area of prims and calculate their volumes
- how to develop angle reasoning in parallel lines and investigate the angles in polygons