



# OUR MATHS JOURNEY



Think logically. Solve problems. Shape your future.

YEAR 9

## APPLYING MATHEMATICS

Apply mathematics to complex and real-world problems.

|                                         |                                              |                                                              |                                                      |                                                                                |                                                  |                                                  |                                            |
|-----------------------------------------|----------------------------------------------|--------------------------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------|--------------------------------------------|
|                                         | $1.23 \times 10^5$                           | $ x  < 3$                                                    |                                                      |                                                                                | $3:2$                                            |                                                  |                                            |
| PROBABILITY                             | STANDARD FORM                                | INEQUALITIES                                                 | QUADRATICS                                           | PYTHAGORAS                                                                     | RATIO & PROPORTION                               | GRAPHS & FUNCTIONS                               | COMPOUND MEASURES                          |
| Understand chance and make predictions. | Work with very large and very small numbers. | Solve inequalities and represent solutions on a number line. | Explore quadratic expressions, equations and graphs. | Use Pythagoras' Theorem to calculate missing sides in a right angled triangle. | Solve ratio, proportion and best value problems. | Draw and interpret linear and non-linear graphs. | Work with area, volume, speed and density. |

## BIG MATHEMATICAL IDEAS

- 13 Number
- X Algebra
- Ratio
- Geometry
- Statistics
- Probability
- Mathematical Reasoning

## SKILLS DEVELOPED

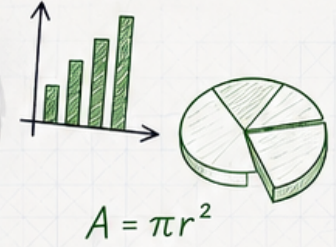
- Fluency
- Reasoning
- Problem Solving
- Mathematical Communication
- Logical Thinking
- Resilience

YEAR 8

## DEVELOPING MATHEMATICAL THINKING

Develop reasoning and problem-solving skills.

|                                            |                                                     |                                                         |                                                        |                                              |                                                                |
|--------------------------------------------|-----------------------------------------------------|---------------------------------------------------------|--------------------------------------------------------|----------------------------------------------|----------------------------------------------------------------|
| %                                          | $2n+1$                                              | $3:4$                                                   |                                                        |                                              |                                                                |
| PERCENTAGES & FINANCE                      | ALGEBRA & SEQUENCES                                 | RATIO & PROPORTION                                      | GEOMETRY & CIRCLES                                     | GRAPHS & COORDINATES                         | STATISTICS                                                     |
| Work with percentages, interest and money. | Use algebraic expressions and find number patterns. | Solve problems involving ratio, proportion and scaling. | Explore angle facts, circles and geometric properties. | Plot and interpret graphs in two dimensions. | Represent and analyse data using a range of charts and graphs. |



## WHERE MATHS CAN TAKE YOU

- Engineering
- Architecture
- Finance
- Data Science
- Computing
- Medicine
- Economics
- Teaching
- Research
- ...and many more!

YEAR 7

## BUILDING MATHEMATICAL FOUNDATIONS

Build confidence with core mathematical skills.

|                                                                   |                                                                        |                                                           |                                                           |                                               |                                                                   |
|-------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------|-------------------------------------------------------------------|
| $\frac{2+1}{4-5} \frac{0.5}{1+2}$                                 | $\frac{1}{2}$                                                          | $x+3$                                                     |                                                           |                                               |                                                                   |
| NUMBER & CALCULATION                                              | FRACTIONS, DECIMALS & PERCENTAGES                                      | ALGEBRA BASICS                                            | SHAPE & SPACE                                             | MEASURES                                      | DATA & PROBABILITY                                                |
| Use integers, place value and perform operations with confidence. | Compare, calculate and understand fractions, decimals and percentages. | Use letters, form expressions and solve simple equations. | Explore shapes, angles, symmetry and geometric reasoning. | Work with length, area, time and conversions. | Collect, represent and interpret data and understand probability. |



$y = x^2$   $A = \frac{1}{2}bh$   $\pi \approx 3.1416$