

# MATHS: Year 8 Stage 8 Course Outline



| Half term                  | TOPIC   | CONTENT   | Suggestions for enrichment activities<br>(eg: films, websites, books, museums and activity centres) |
|----------------------------|---|---|---|
| 1                          | Numbers and the numbers system                  | Use prime factor factorisation<br>Standard form   | <a href="http://nrich.maths.org/1308">http://nrich.maths.org/1308</a>                               |
|                            | Calculating                                     | Calculating negative numbers<br>Correct order of operations   | <a href="http://nrich.maths.org/9919">http://nrich.maths.org/9919</a>                               |
| OCTOBER HALF TERM HOLIDAY  |   |   |   |
| 2                          | Visualising and constructing                    | Enlargement of 2D shapes, scale drawings, interpret bearings  | <a href="http://nrich.maths.org/5461">http://nrich.maths.org/5461</a>                               |
|                            | Understanding risk I                            | Explore experiments and outcomes, develop understanding of probability  | <a href="http://nrich.maths.org/6717">http://nrich.maths.org/6717</a>                               |
|                            | Algebraic proficiency: tinkering                | Understand notation of algebra, manipulate algebraic expressions, evaluate algebraic statements                                     | <a href="http://nrich.maths.org/5608">http://nrich.maths.org/5608</a>                               |
| CHRISTMAS HOLIDAYS         |   |   |   |
| 3                          | Exploring fractions, decimals and percentages   | Explore links between fractions, decimals and percentages   | <a href="http://nrich.maths.org/1249">http://nrich.maths.org/1249</a>                               |
|                            | Proportional reasoning                          | Explore uses of ratio, connections between ratio and proportion, solve problems involving proportional reasoning and compound units | <a href="http://nrich.maths.org/1372">http://nrich.maths.org/1372</a>                               |
|                            | Pattern sniffing                                | Explore sequences   | <a href="http://nrich.maths.org/2338">http://nrich.maths.org/2338</a>                               |
| FEBRUARY HALF TERM HOLIDAY |   |   |   |
| 4                          | Investigating angles                            | Explore geometrical situations involving parallel lines   | <a href="http://nrich.maths.org/712">http://nrich.maths.org/712</a>                                 |
|                            | Calculating fractions, decimals and percentages | Identifying multipliers for percentage increase and decrease  | <a href="http://nrich.maths.org/5704">http://nrich.maths.org/5704</a>                               |
|                            | Solving equations and inequalities              | Linear equations with unknown on one and both sides, connections between graphs and equations                                       | <a href="http://nrich.maths.org/1170">http://nrich.maths.org/1170</a>                               |
| EASTER HOLIDAYS            |   |   |   |
| 5                          | Calculating space                               | Investigate circles, discover Pi, prisms and cylinders, solve problems involving circles  | <a href="http://nrich.maths.org/809">http://nrich.maths.org/809</a>                                 |
|                            | Algebraic proficiency: visualising              | Plot linear and quadratic graphs, model real situations using linear graphs   | <a href="http://nrich.maths.org/7454">http://nrich.maths.org/7454</a>                               |
| MAY HALF TERM HOLIDAY      |   |   |   |
| 6                          | Understanding risk II                           | Explore experiments and outcomes, use probability to make predictions   | <a href="http://nrich.maths.org/9843">http://nrich.maths.org/9843</a>                               |
|                            | Presentation of data                            | Explore types of data, select and construct appropriate graphs  | <a href="http://nrich.maths.org/5933">http://nrich.maths.org/5933</a>                               |
|                            | Measuring data                                  | Investigate averages, ways of summarising and analysing data  | <a href="http://nrich.maths.org/10999">http://nrich.maths.org/10999</a>                             |
|                            | Assessment                                      | End of year 8 test  | MyMaths revision packs  |