

Subject:

Mathematics



HECKMONDWIKE
GRAMMAR SCHOOL

KS4 - Year 9 Curriculum Overview

Autumn Term

Topics being taught

- Sequences**
- Arithmetic and Quadratic
- Rates**
- Graphs involving rates of change
- Compound units e.g. Speed, Density
- Measures**
- Sectors, Cylinders and Spheres
- Bounds and limits of accuracy
- Fractions, Decimals and %**
- to include successive change
- Ratio and Proportion**
- Direct and Inverse Proportion
- Coordinate Geometry**
- Parallel and perpendicular lines
- Graphs of quadratic & cubic functions

Term 1

What you will be assessed on

Topic tests on each topic

Term 2

Synoptic test on everything up to Fractions, Decimals and %

Topic tests on each topic

How you can support at home

Ask your child about their *DrFrost* homework they get each week

Write flash cards for all the formulae in the Measures topic

Use Corbett Maths for revision
<https://corbettmaths.com/>

Use DESMOS, a free online graphical software to draw common functions

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Spring Term

Topics being taught

- Indices and Surds**
- Standard Form
- Negative and Fractional Indices
- Manipulation with surds
- Statistics**
- Grouped frequency
- Cumulative Frequency
- Box plots
- Equations and Inequalities**
- Graphical and algebraic methods
- Simultaneous Equations
- Probability**
- Frequency trees
- Tree Diagrams

Term 3

What you will be assessed on

Topic tests on each topic

Term 4

Synoptic test on everything up to Statistics

Topic tests on each topic

How you can support at home

Remind your child to show all steps of working in maths problems

Discuss misleading statistics you see in news articles

Use the reflections sheets from previous Milestones to revise key topics you have identified.

Watch a YouTube Maths video by Hannah Fry or Marcus du Sautoy

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Summer Term

Topics being taught

- Transformations**
- Congruency
- Similarity
- Trigonometry**
- Pythagoras' Theorem
- Trigonometric ratios
- Functions**
- Simplifying algebraic expressions
- Quadratic expressions
- Solve quadratic equations by factorising
- Change subject of a formula
- Graphs of quadratic functions
- Solve equations using trial and improvement

Term 5

What you will be assessed on

Topic tests on each topic

Term 6

Synoptic test on everything up to Trigonometry

How you can support at home

Ask your child about the homework in their blue books and the reflection comments they are writing in green pen.

Encourage your child to have a first go at a Higher Maths GCSE paper and see how many questions they can do

Ask your child to explain what Trigonometry is.

For Maths enrichment, do an intermediate UKMT challenge:
<https://www.ukmt.org.uk/>