



Woodkirk Academy

MATHEMATICS

How we Identify More Academically Able students.

Students are tested within the first half term of arriving at the academy and MAA students are identified from this with input from the class teacher.

Students are deemed MAA within Maths if their results are consistently within the top 10% of the year group, or demonstrate exceptional ability.

How we identify Upper Ability students.

A secondary school student is considered to be Upper Ability (**UA**) if the average level he/she achieved in his/her Key Stage 2 English and Mathematics SATs is Level 5 or above. Year 7 students who completed the new Key Stage 2 exams in 2016 have been identified using an equivalent measure.

Skills

In Mathematics we ensure that all students are stretched within lessons via detailed schemes of work which are tailored to different abilities. Students are encouraged to attend extra curricula sessions to develop their problem solving capabilities. More Academically Able (**MAA**) and UA students are encouraged to devise their own ways of tackling a problem using higher order thinking skills.

- Looking for patterns, identifying connections across topics.
- Experimenting and discovering their own methods to find solutions.
- Evaluation of own understanding and working independently to overcome misconceptions.
- Analysis of data to explain correlations and criticise methods.
- Solving key calculations and equations, choosing appropriate ways of displaying data in different situations.
- Extending their own learning at home.

Strategies for Success

The provision for MAA and UA students is:

- They have homework tasks that are specifically designed for their level.
- Students are encouraged to complete the super learner/mastery zone tasks.
- Accelerated courses, year 11 students complete additional GCSE courses that bridge the gap between GCSE and A-Level.
- For Key Stage 3 we have various after school clubs designed to stretch and challenge students.
- Students are entered to complete the UKMT Maths Challenge.
- We work closely with the FMSP who deliver sessions that focus on UA/MAA students.

Challenges for UA in Mathematics and how to overcome these

Challenge	Overcome
Learning and revising a lot of extra content for the new GCSE specification, including memorizing new formulae.	Use revision guide, flashcards and after school support to revise content proactively throughout the course.
Tackling the new problem style exam questions in context.	See exemplar material of what 9/A* solutions look like.

How can Parents help?

Assist with assessed homework tasks, use www.mymaths.com to find the topic of the homework. There is an online lesson that you can work through with the student before attempting the online task to check understanding.

Similarly examples can be found on bbc bitesize or you can find worked solutions on www.youtube.com

More details about the UK Maths Challenge can be found at <http://www.ukmt.org.uk/individual-competitions/>

Encourage students to complete all assessed homework tasks to the best of their ability and revisit them throughout the year to consolidate understanding.

Encourage students to prepare thoroughly for each end of term assessment to keep them 'on track' to meet their aspirational targets.

Share in their love of maths with puzzles and other maths games.