

# Subject Policy

## Mathematics



CAPELLA HOUSE

Author:	Muge Acar
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Required to publish on the website?	No

## **Intent – What is Capella House aiming to achieve through its Mathematics curriculum?**

- Present an environment where all students can learn and enjoy Mathematics to the best of their ability and where all students' needs are addressed positively and sensitively.
- Build a pupil's confidence in their own ability and develop mathematical skills for their usefulness and applicability in the real world.
- Set realistic yet challenging targets, with high expectations for all students.
- Offer a variety of approaches to teaching and learning to engage and motivate students, encouraging their active participation in Mathematics.
- Provide students with techniques so that they can investigate and solve problems in school Mathematics and other curricular areas.
- Develop and extend a pupil's ability to express themselves clearly; to reason logically and to be able to generalise.
- Develop mathematical knowledge and oral, written and practical skills that encourage confidence and enjoyment.
- Within the context of mathematics, we recognise that not all students will achieve at the same rate or attain the same level, but our aim is always to enable our students to become numerate and able to use maths functionally in real-life situations and prepare for further education.
- To ensure all students leave Capella House with a Mathematics qualification which reflects the best of their ability.

## **Implementation – How is the Capella House Mathematics curriculum delivered?**

### **Curriculum Delivery**

- Students have full access to the Ready To Progress/ Mathematics National Curriculum which is differentiated to meet students' learning needs, abilities and styles.
- The mathematics curriculum is designed to be challenging, appropriate to each pupil's stage of development.
- The Mathematics Curriculum offers opportunities for cross-curricular learning, to ensure students make significant personal development for example using map skills in geography, using fractions, conversion of measures in food technology etc.
- We use a holistic approach in the teaching of mathematics including:
  - ✓ Mathematics Theme days
  - ✓ Mathematics Challenge Board
  - ✓ SaLT strategies/Word Aware/Words Wall to highlight key vocabulary, integrated into teaching
  - ✓ OT strategies/Mathematics themed movement breaks
  - ✓ Modelling and encouraging appropriate speaking and listening skills and encouraging students to interact with one another, extend and reflect on their responses
  - ✓ Encouraging focused questioning and discussion skills/skilled speaking, active listening
  - ✓ Improving students' reasoning and problem-solving skill
  - ✓ Use calculators and other ICT resources appropriately and effectively to solve problem
  - ✓ Developing students' skills in handling information effectively and using the internet appropriately as a learning tool to find things out, develop ideas and exchange and share

information

- The KS3 Mathematics curriculum is taught through 5 hours per week (21% curriculum time).
- The KS4 Mathematics curriculum is taught through 5 hours per week (21% curriculum time).
- Catch up sessions are available during enrichment periods for all students who need extra time (3 days a week) as well as intervention lessons which focus mainly on Mathematics and English. The topics and subjects covered are based on the school's data, teacher observation and assessments.
- Because our students require additional time and input to acquire the relevant knowledge, skills and understanding in this subject the Mathematics curriculum is designed to build and expand on previous skills and subject knowledge based on Department for Education's recommended "Ready to progress criteria", over a 5-year period. This publication identifies the most important conceptual knowledge and understanding that students need.

Within this structure there is flexibility so that teachers use their professional judgements if they feel that a particular teaching issue is either too difficult or too easy, they can look back or forward within the structure.

- The curriculum also plans for opportunities for repetition to embed knowledge, increasing the chance of information recall and to integrate new knowledge into larger ideas (view our Mathematics curriculum map in appendix).
- We offer a wide range of qualifications in Mathematics, these pathways are selected to appropriately challenge, based on each pupil's stage of development, including:
  - ✓ Pathway 3: Mathematics (GCSE, AQA)
  - ✓ Pathway 2: Mathematics Functional Skills (AQA)
  - ✓ Pathway 1: Mathematics Entry Level (AQA)
  - ✓ Non-Qualification Mathematics Units for learners below Entry Level (AQA Unit Award Scheme)

## Teaching and Learning

- Differentiation is key at Capella House.
- Regardless of their age, students are taught in 6 different ability sets in 3 pathways. (3 groups for KS3, 3 groups for KS4) Differentiation is still available within sets based on their abilities, learning styles and behaviour needs.
- Lessons will have clear learning objectives or intentions for students.
- Mathematics activities and online resources are available if they want to practice at home.
- All classes are supported by a teaching assistant (TA)
- Classes have a maximum of 9 students to ensure there is a high level of support available from the teacher and TA
- Integrated speech, language and communication support; students are supported either directly or indirectly by speech and language and occupational therapists.
- Teaching styles include:
  - Wide variety of interesting resources – to interact with
  - Demonstration – showing how
  - Explanation – giving examples
  - Questioning – challenging understanding
  - Discussion and evaluation – talking about it
  - Directing – encouraging independent work or copying adult model
  - Practicing – basic skills learnt

- Scaffolding
- Recap, starters and review using flashbacks

Lessons should:

- Be highly motivating and relevant to students' abilities and actively demonstrate their relevance to real life as experienced by students.
- Be practical and experimental, where appropriate.
- Be student
- paced offering plenty of opportunity for consolidation and practice, extension and differentiation.
- Foster autonomy rather than dependence.
- Recognise and value the importance of social interaction.
- Acknowledge cross-curricular links.
- Use accessible materials.
- Move generally from the concrete to the abstract only if and when appropriate.
- Foster the development of multiple strategies.
- Where possible work from examples to investigate the rule

## Assessment

- Students collate Mathematics Books, where they showcase their best work and progress over time in Mathematics.
- Mathematics teachers use a range of formative and summative assessment procedures to assess progress and attainment, including:

- ✓ Mathematics (MALT) age assessment (twice a year, end of autumn and end of summer terms)
- ✓ Unit assessments (half termly, end of each unit)
- ✓ Daily marking
- ✓ Self/peer assessment
- ✓ Verbal feedback

- Assessments are recorded on Earwig
- MaLT assessment results and maths ages are recorded in a spreadsheet twice a year , that's when their sets are decided.

Guidance for Malt tests:

- ✓ Read the questions to the students who need support with reading. However, please do not give any help beyond reading.
- ✓ Students who need extra time are allowed up to 50% additional time to complete the test. Please take a note of the extra time given on the paper.
- ✓ For lower-ability students, it is recommended that they complete the paper over several days. Encourage them to complete a portion of the test each day.

The Auriga Academy Trust - Equalities Policy can be found here:

<https://www.aurigaacademytrust.org.uk/attachments/download.asp?file=170&type=pdf>

Quality first teaching in mathematics- using Rosenshine's Principles (this [document](#) contains information which teachers use as a main reference while planning and teaching )

**Impact – *What difference is the Capella House Mathematics curriculum making on students?***

- Functional skills and life-skills are embedded throughout the Mathematics curriculum and are personalised for each student. This supports students in making the step to post-16 provision and meets their needs when entering the world of work.
- Students understand the relevance and importance of what they are learning about real life concepts.
- They will have a deeper understanding of mathematics, develop lifelong transferable skills and are able to use their Mathematical skills to solve real life problems.
- Numeracy is embedded across the school and feeds into other subjects. Excellent progress in Mathematics has a significant benefit for students in other subjects.
- The vast majority of students usually make progress in Mathematics and leave Capella House with at least one formally recognised Mathematics qualification.
- Students are well-prepared for the next stage of their education