Design and Technology

Subject Intent **In Design & Technology and Food & Nutrition, we aim to ensure that all pupils develop the creative, technical, and practical expertise needed to perform everyday tasks confidently. To participate successfully in an increasingly technological world, build and apply a repertoire of knowledge, understanding and skills to design and make high-quality prototypes and products for a wide range of users. To critique, evaluate and test ideas and products and the work of others.**

What will students be studying?

Pupils follow the Key Stage 3 National Curriculum throughout Year 7, 8 and 9. Disciplinary knowledge and skills are repeated each cycle and year to ensure all pupils are GCSE ready at the end of Year 9.

Cycle 1 – Graphics (Drawing and CAD)

- Drawing techniques - oblique, isometric, 1-point perspective, 2-point perspective, crating and rendering.
- Cad and Cam –TinkerCad (3D), 2D Design (2D) and the laser cutter

Cycle 2 – Table tennis bat

- Ergonomics and anthropometrics
- Timbers
- Design skills
- Workshop safety
- Tools and machinery to use with timbers and textiles.
- Evaluation

Cycle 3 – Introduction Food

- Safety and Hygiene
- Food Miles
- Wheat, Flour and Grains
- The Eatwell Guide
- Food Safety and the 4C's
- Veggies and Vegans
- Ambient and chilled food

How are teaching groups organised?

Students are taught in mixed ability groups and receive five Science lessons each week

How will students be assessed?

Key Assessment Tests (KATs) take place at the end of the cycle. These KATs consist of multiple choice, extended question and skill test.

Key Learning Task (KLT) take place once per cycle and this will be based on a skill or extended writing task that tests students' knowledge that has been developed.

Verbal feedback is given in lessons to support students' learning.

How will we challenge/support students' learning?

Combining high expectations with guidance and encouragement.

Students are encouraged to develop their critical thinking through theoretical and practical skills.

Feedback is given frequently to .

Threshold Concepts

TC1: Research Purposefully: select and use sources.

TC2: Visual Communication: Demonstrate innovation and creativity using a range of 2D and 3D techniques.

TC3: Safe working Practice: Select and use tools and equipment safely.

TC4: Critical Reflection: Demonstrate the ability to reflect critically throughout the design process.

TC5: Impact on Society: Understand developments in Design and Technology, their ecological and social footprint with an awareness of the impact on society.

How is homework set?

Students will complete a minimum of 4 homework tasks per cycle, which should include: Spelling test, Literacy task about careers, Extended task (research/drawing/writing etc) and Revision for test

Useful resources, website and extra curricular links to support learning.

BBC Bitesize - Design and technology resources