Design and Technology Vision

*Inspiring innovation and creativity to positively change the lives of our community and the wider world*

Our department endeavours to give our students the opportunity to develop their imagination and creativity using a wide range of materials and techniques. We want students to be able to define design problems for themselves, address the solutions to them, in order to become the innovators of the future

Food and Nutrition Vision

*Enriching pupil’s health and wellbeing through a love of food and cooking*

At the Academy, we use food as a way of developing knowledge of cultural, moral, economic, environmental and health related issues. Through teaching our student’s practical cookery skills we aim to instil a love of learning through what we consider to be one of the greatest expressions of human creativity

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| Year | Term  | Topic | Types of assessment |
| 7  | 1 | FOOD* Introduction to food, cooking and nutrition Preventing hazards in the food room.
* Introduction to the Eatwell guide and a balanced diet
* Commodities– fruits and vegetables
* Commodities – starchy carbohydrates
* Commodities – protein
* Practical skills: knife skills, using the grill, weighing and measuring, combining and mixing and using the oven
 | End of units written assessment on theory topicsAssessment of practical skills at the end of the rotationPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
|  | 2 | TEXTILES* Introduction to textiles and using equipment safely
* Examining the work of the designer John Burgerman
* Design work (John Burgerman inspired design ideas)
* Practical skills and techniques: thrusting a needle, cutting fabric, embroidery stitches and appliqué
 | End of units written assessment on theory topicsAssessment of practical skills at the end of the rotationPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
|  | 3 | DT ( RESISTANT MATERIALS)* Introduction to the workshop and using equipment safely
* Natural and man-made timbers
* Identifying tools and wood joints
* Practical skills: using a range of hand and power tools, woodworking joints
 | End of units written assessment on theory topicsAssessment of practical skills at the end of the rotationPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
| 8 | 1 | FOOD* Food safety
* Principles of nutrition (macro and micronutrients)
* Making the right food choices – food labelling, allergies, and intolerances
* Practical skills: weighing and measuring, rubbing in, forming a dough, shaping, and cutting, preparing meat and fish, using the hob oven and grill
 | End of units written assessment on theory topicsAssessment of practical skills at the end of the rotationPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
|  | 2 | TEXTILES* Introduction to the Cushion project
* Decorative textile techniques
* Product analysis
* Design ideas
* Skills: decorative textile techniques (tie-dye, fabric crayons and pens) advanced embroidery techniques and appliqué
 | End of units written assessment on theory topicsAssessment of practical skills at the end of the rotationPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
|  | 3 | DT ( RESISTANT MATERIALS)* Recap of working safely within the workshop
* Sustainability
* Plastics
* Practical skills: using a range of hand and power tools, developing more complex woodworking joints. Working with materials such as acrylic.
 | End of units written assessment on theory topicsAssessment of practical skills at the end of the rotationPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
| 9 | 1 | FOOD * Temperature control, conditions for bacterial growth and how to prevent bacterial growth
* Where food comes from – farming methods
* Seasonality
* British cuisine
* International cuisine
* Practical tasks: weighing and measuring, nice tiles, use of the hob (simmering), preparing meat, fish and alternatives, making sources, use of the oven and using the hob
 | End of units written assessment on theory topicsAssessment of practical skills at the end of the rotationPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
|  | 2 | TEXTILES* Overview and introduction to art textiles project
* Observational drawing
* Repeat patterns (Stella McCartney)
* Decorative textiles techniques (Bresso, batik, appliqué)
 | End of units written assessment on theory topicsAssessment of practical skills at the end of the rotationPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
|  | 3 | CONSTRUCTION * Overview and introduction to the project (recap on Health and safety)
* Pan stand project ( with joints, tiling, tile cutting, painting and decorating)
* Construction skills – electrics (wiring a plug)
* Construction skills – plumbing (pipe measuring and cutting)
 | End of units written assessment on theory topicsAssessment of practical skills at the end of the rotationPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |

KS4 programme of study overview

GCSE FOOD PREPARATION, COOKING AND NUTRITION

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| Year | Term  | Topic | Types of assessment |
| 10 | 1 | Commodities* Meat
* Eggs
* Alternative protein
* Fish and seafood
* Cereals
* Fatw and oils
* Dairy foods

Practical skills – students will practice and develop the 20 key skills as identified by EDUQAS through a variety of practical activities | End of units written assessment on theory topicsPractical assessment at the end of the unit, in exam conditionsPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
|  | 2 | Diet and good health* Principles of nutrition - macronutrients (source, function and effect of deficiency and excess)
* Principles of nutrition – micro nutrients (source, function and effect of deficiency and excess)
* Healthy eating guidelines
* Age and nutritional requirements
* Religion and nutritional requirements
* Specific dietary needs and illnesses

Practical skills – students will practice and develop the 20 key skills as identified by EDUQAS through a variety of practical activities | End of units written assessment on theory topicsPractical assessment at the end of the unit, in exam conditionsPeer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
|  | 3 | Food science* The effects of cooking on food
* Preserving nutritive value
* Positive micro-organisms
* Working characteristics of ingredients

Practical skills – students will practice and develop the 20 key skills as identified by EDUQAS through a variety of practical activities | Mock NEA 1 (The food science investigation) and MOCK NEA 2 ( The food preparation assessment) |
| 11 | 1 | NEA 1 – The Food Science Investigation  | NEA 1 – Practical and supporting written work |
|  | 2 | NEA 2 – The Food Preparation Assessment  | NEA 2 - Practical and supporting written work |
|  | 3 | Where food comes from* Food provenance
* Food packaging
* Stain ability
* Food security
* Food manufacturing
* General revision of theory topics
 | Self and teacher assessment of practice exam questionsWritten examination in the summer term |

CONSTRUCTION TECHNICAL AWARD

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| Year | Term  | Topic | Types of assessment |
| 10 | 1 | Health and safety in the construction industry* Summarise responsibilities of health and safety legislation
* Identify safety signs used by the construction industry
* Anti-fire fire extinguishers used in different situations
* Describe the role of the health and safety executive
* Students will practice and develop a variety of construction skills including joinery, plumbing, tiling and painting and decorating
 | End of unit written assessment on theory topicsOngoing assessment of practical skills Peer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
|  | 2 | Hazards in the construction industry* Identify hazards to health and safety in different situations
* Describe the potential effects of hazards in different situations
* Explain the risk of harm in different situations
* Explain existing health and safety control measures in different situations
 | End of unit written assessment on theory topicsOngoing assessment of practical skills Peer and self-assessment of booklet work (including spelling tests and low stakes quizzes) |
|  | 3 | Safety and security in the construction industry* Recommend health and safety control measures in different situations
* Identify risks to security in construction in different situations
* Describe the measures used in construction to minimise risks to security
* Revision of all topics in preparation for Unit one exam
 | End of unit written assessment on theory topicsOngoing assessment of practical skills Peer and self-assessment of booklet work (including spelling tests and low stakes quizzes)Unit one written exam in summer term (students are allowed two attempts at this exam and the highest mark is cashing in their final year) |
| 11 | 1 | Unit Two Assessment - Developing construction projectsPlanning and preparation | Student demonstrates their understanding of construction projects by carrying out a variety of practical skills with supporting coursework |
|  | 2 | Unit Two Assessment - Developing construction projectsApplying techniques and evaluating them | Student demonstrates their understanding of construction projects by carrying out a variety of practical skills with supporting coursework |
|  | 3 | Unit Three Assessment – Planning construction projects* Describe the activities and responsibilities of those involved in construction
* Describe outputs of those involved in realising construction projects
* Calculate resources to meet requirements for built environment development projects
* Describe processes using the built environment development projects
* The potential effects of factors on project success
* Interpret technical sources of information
 | Written examination in the summer term |