



Design & Technology

Leaders in creative thinking

CURRICULUM MAPS
2022



Rotation Grabber Project

IMPACT:

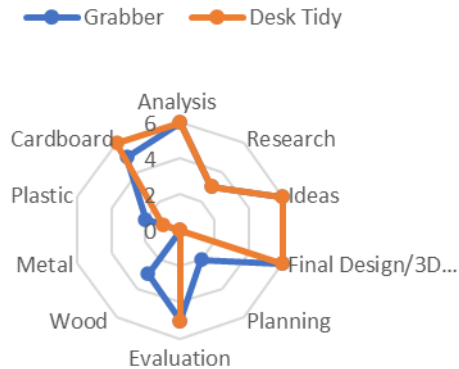
Students produce a unique grabbing product that's supported by a range of research and design development within their folder. Knowledge is evidenced in the final outcome and design drawings.

An end of project evaluation of their folder and product is evidenced through the live class marking and will support final summative grade.

A deeper appreciation for issues relating to litter and the impact on the environment. This builds into the departments ethos of developing students understanding of sustainability.

Core Areas covered

Year 7 D&T Theory



Rotation Desk Tidy

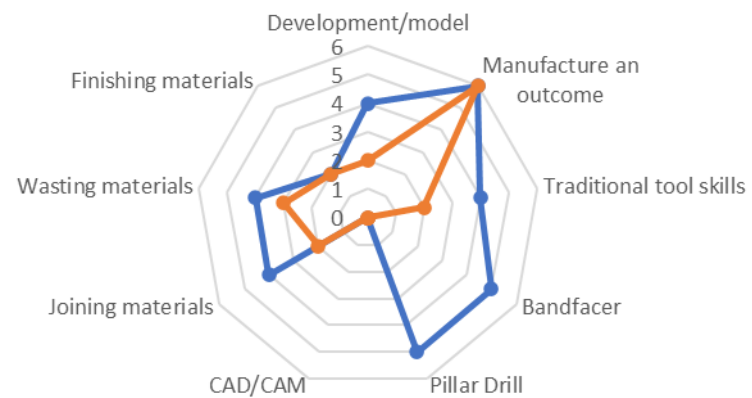
IMPACT:

Students produce a unique desk tidy product that's supported by a range of research and design development within their folder. Knowledge is evidenced in the final outcome and design drawing.

An end of project evaluation of their folder and product is evidenced through the live class marking and will support final summative grades.

A deeper appreciation for recycling and its uses builds into the departments ethos of developing students understanding of sustainability.

Year 7 D&T Practical



INTENT

- Practical problem solving and recognising failure can be beneficial. In the Foundation years learning is embedded through practical application or design and make activities.
- Discussions on sustainability and the impact of waste on the environment.
- Cultural influences and social impacts of design within the current social & economic climate; explored using videos and discussions on environmental impact of designs and materials.
- Recognising others views and preferences/empathy.
- Understanding the importance of risk taking with a programme to support student leadership



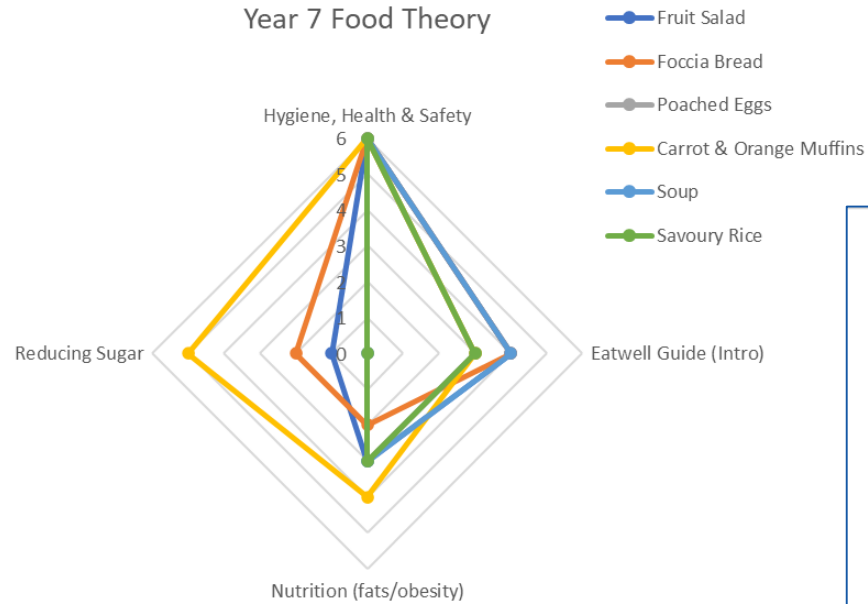
Rotation Food Technology

IMPACT:

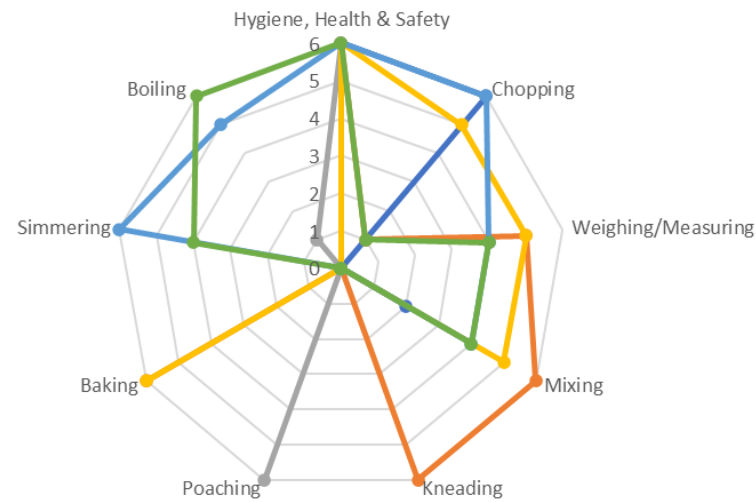
This project will introduce pupils to kitchen hygiene/safety and develop strong practical routines to implement these. Practical sessions will familiarize pupils with basic kitchen equipment, including the oven/hob. Students will start to develop basic practical skills such as kneading, frying and knife skills, and grow confidence within practical sessions. The theory lessons will provide a basic overall introduction to healthy eating, including the Eatwell Guide- linking in to the KS3 National Curriculum and feeding into Unit 2:LO1 of the KS4 qualification should they choose to take this on.

Core Areas covered

Year 7 Food Theory



Year 7 Food Practical



INTENT

The project will equip students with a good knowledge of balanced diet and healthy eating, highlighting some of the main dangers young people face as a result of poor diet such as obesity and type 2 diabetes.

Practical lessons will equip them with skills to cook healthy and nutritious meals in future.

Rotation Graphic Skills

IMPACT:

Students learn about a range of technical drawing skills and practice these skills. They will recognise the sustainable and visual impact of logo and branding in graphic design. Students will produce several drawings showing perspective drawing, isometric drawing, crating an orthographic projection. **Technical drawing development and practice will support further understanding of designing techniques in other areas of DT within the rotation and in latter years.**

Rotation USB Lamp Project

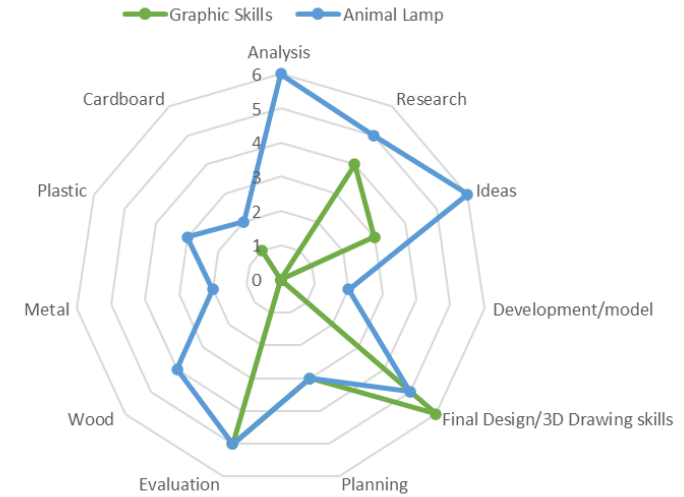
IMPACT:

Students produce an animal themed USB Lamp product that's supported by a range of research and design development within their folder. Knowledge is evidenced in the outcome and live class assessments and class feedback sheets. **A continuation of the understanding from yr7 for issues relating to recycling and the impact on the environment. This builds into the departments ethos of developing students understanding of sustainability, particularly the 6Rs.**

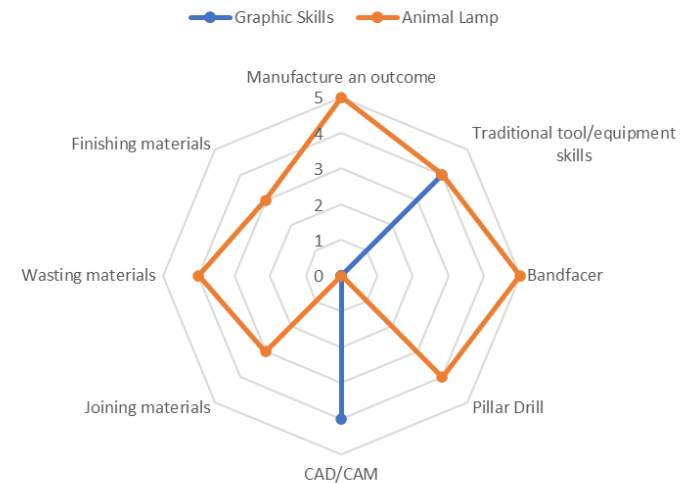
INTENT

- Practical problem solving and recognising failure can be beneficial. In the Foundation years learning is embedded through practical application or design and make activities.
- Discussions on recognising the sustainable and visual impact of logo and branding in graphic design.
- Graphical skills and examples given with support from visualiser tutorials, videos and discussions in class.
- Discussions on recognising the sustainable and financial impacts of products on society.
- Environmental impacts of design explored through real world examples with support from videos and discussions on materials, energy and natural resources.
- Recognising others' views and preferences through peer assessment and collaboration opportunities.
- Understanding the importance of risk taking with opportunities to reflect and improve skills.

Theory Year 8 Design & Technology



Practical Year 8 Design & Technology



Rotation Food Technology

IMPACT:

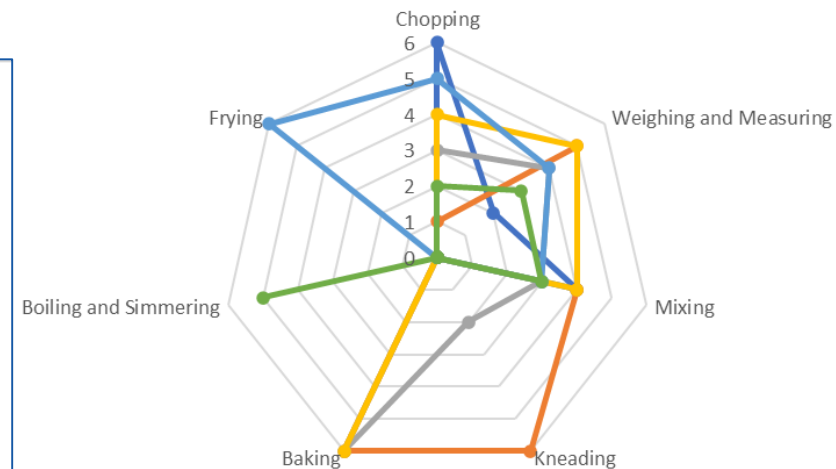
Students will be exposed to different food cultures from around the world, and also be introduced to special diets such as Halal diets and Vegan preferences. This rotation will reinforce practical skills learnt in year 7 and start to grow pupil's confidence and get them to begin to work independently.

A number of skills and knowledge will be assessed through live class marking and summative assessments.

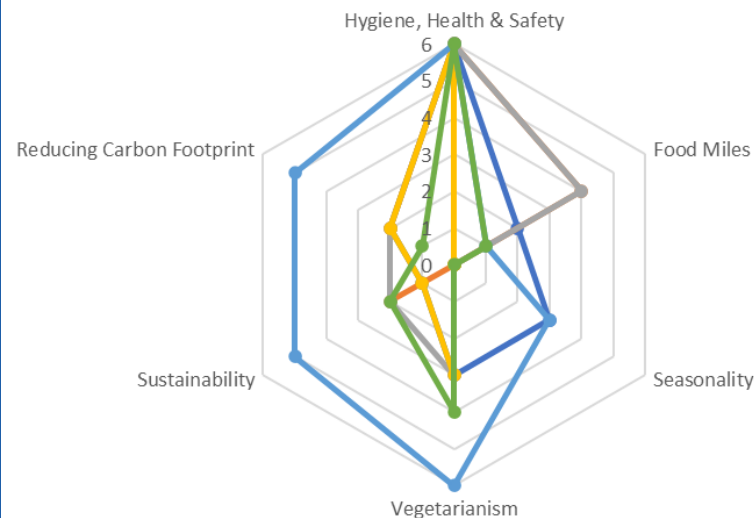
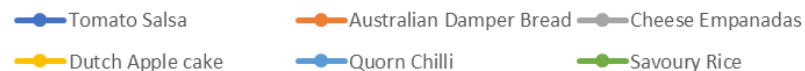
INTENT

- The rotation will also reinforce knowledge such as hygiene and safety practices and nutritional impact of certain food groups, for example, fats and sugars.
- Practical sessions will feature recipes from different geographical origins around the world, introducing a cultural awareness to lessons.
- Theory work will focus on introducing sustainability and sourcing in food production, linking to the KS3 National Curriculum with the introduction of food miles and feeding in. Unit 6: 2019-2021, Unit 184 qualification should they choose to take

Practical Yr8 Food Technology



Theory Yr8 Food Technology



Grand Designs Project

IMPACT:

Students produce a model that shows unique exterior or interior design that's supported by a range of research and design development within their folder. Modelling skills and design knowledge developed from yrs7/8 are evidenced within work, with students refining their dexterity skills using modelling tools.

Knowledge is evidenced in the Yr9 Live class marking and summative project assessments.

Theory Year 9 Design & Technology



INTENT

- Practical problem solving and recognising failure can be beneficial.
- In the yr9 Transition years learning is embedded through practical application and design and make activities.
- Discussions on recognising the sustainable and financial impacts of design on society.
- Technical drawing theory recapped and explored further from yr8.
- This recognises the benefit of CAD and traditional floorplan modelling methods that can further influence product requirements, for example the use of 2D design software.
- Electronic theory is developed to support basic circuit manufacture.
- Recognising others views and preferences through peer assessment and collaboration opportunities.
- Understanding the importance of moral and ethical designing and using evaluative techniques to test a final prototype.

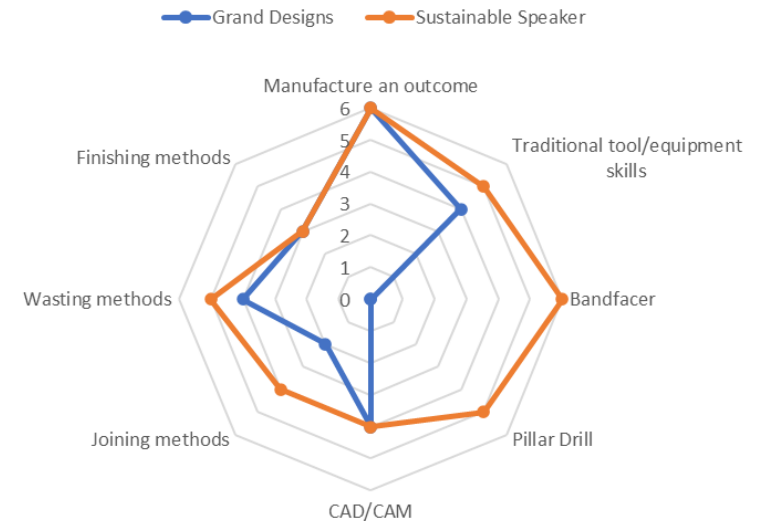
Recycled Bluetooth Speaker Project

IMPACT:

Students produce a unique Speaker product that uses a range of recycled material. It will include skills that allow them to design a customized case and soldering skills that will produce the electronic circuit. The folder work is supported by a range of research and design development within their folder.

Knowledge is evidenced in the Yr9 Live class marking and summative project assessments.

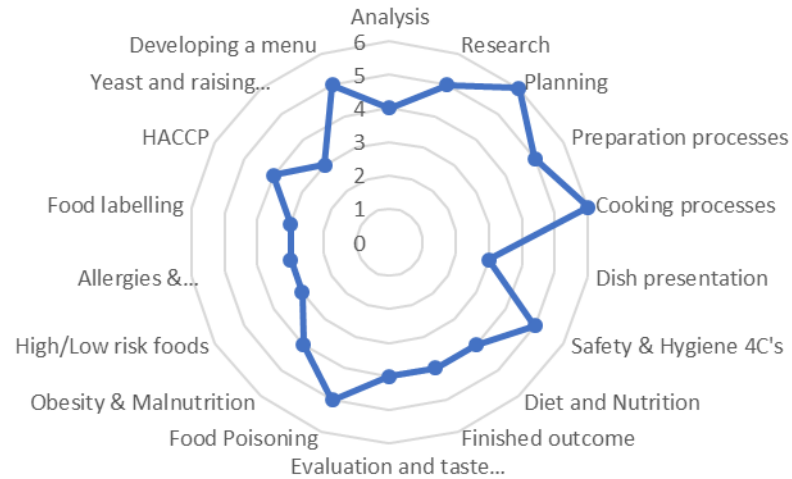
Practical Year 9 Design & Technology



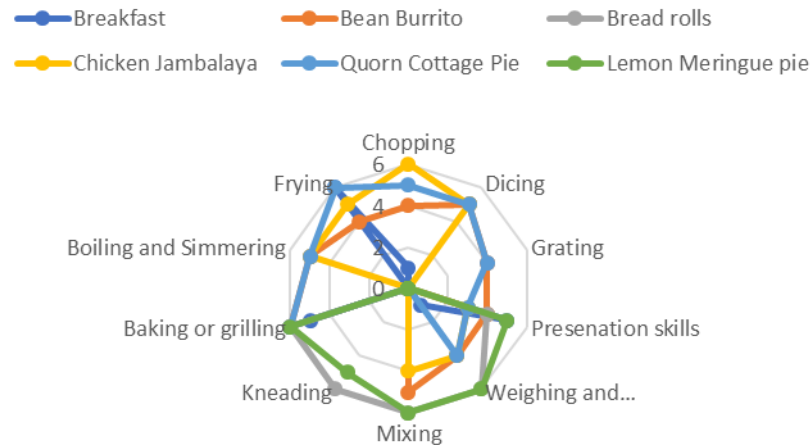
INTENT

- Students will be learning a programme of study related to how food can cause ill health, they will be investigating and exploring food safety hazards in a range of situations.
- Within practical lessons they will be carrying out control measures and carry out food safety regulations so that they get first-hand experience of preventing food poisoning.
- Students will continue to develop their knowledge of balanced diets, nutrients before, during and after cooking and factors affecting food choice.
- The developing a menu focus will be on different dietary requirements and addressing the needs of particular people and allergies.
- Students will learn about the variety of hospitality and catering establishments, focusing on success, the food they serve, and the job roles involved in the establishment.

Yr9 Theory Food



Yr9 Practical Food



IMPACT:

In preparation for Yr10 Unit 1 topics, Students will be made aware of foods that can cause ill health prior to cooking which links to food safety. They will start to understand the importance of nutrition when planning meals. Students will start to learn about the environment in which hospitality and catering providers operate. In preparation for Yr10 Unit 2 topics, students will be improving skills learnt in yr7/8. Students will develop a range of skills and techniques using different pieces of equipment; with an emphasis on food safety and hygiene. Students will prepare and cook a range of high-risk dishes and follow the principles they have learnt in the theory lessons. They will be learning to make links to specific groups, including special dietary needs and allergies.

Knowledge is evidenced in the Yr9 Live class marking and summative assessments.

Yr10-

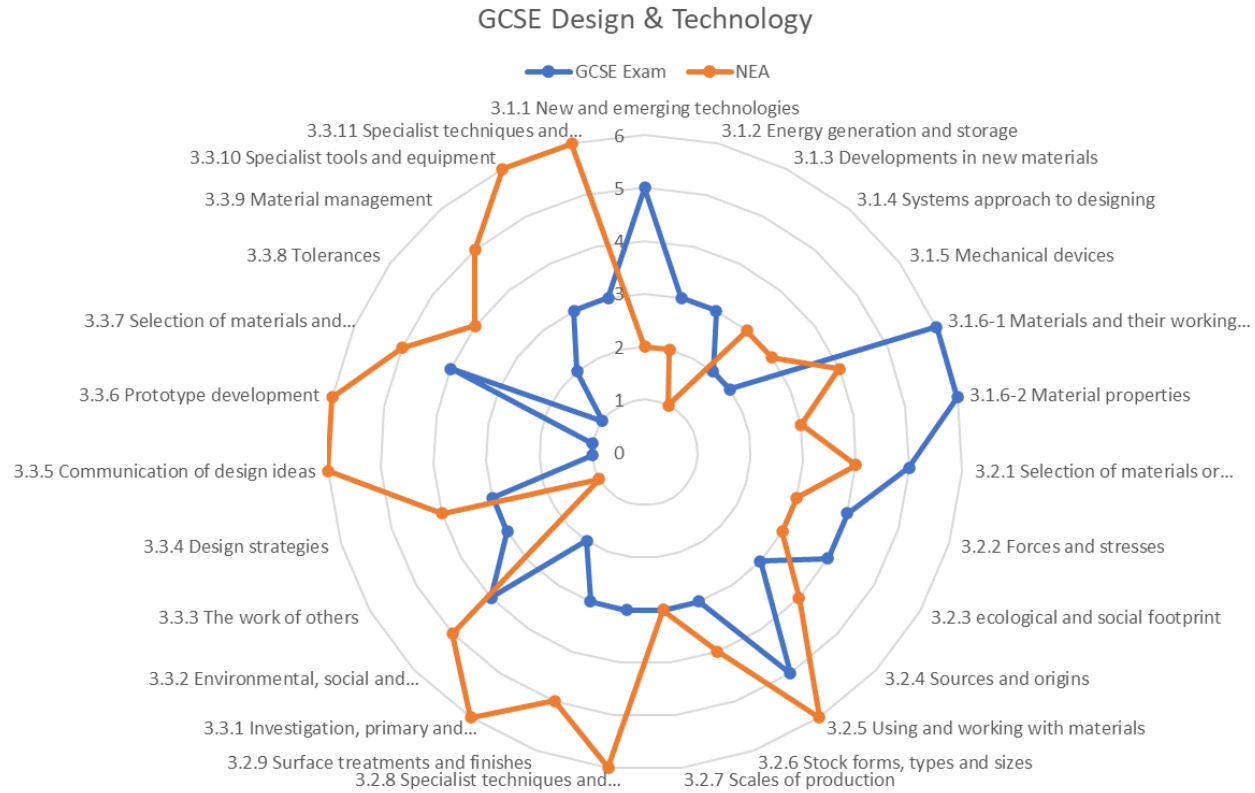
11

GCSE

Design & Technology

INTENT

- Practical problem solving and recognising failure can be beneficial.
- Knowledge recall is evidenced from the Transition years learning.
- The core and specialist units are embedded through practical research and application activities.
- Discussions on recognising the links with the user and manufacturing in design and the impacts of products on society.
- Electronic theory recapped and explored further from yr9 amplifier project..
- Recognising Technological developments in CAD/CAM that can further influence product requirements for example the use of 3D design software Tinkercad.
- Recognising others views and preferences through peer assessment and collaboration opportunities.
- NEA Contexts offer real world problems that support the importance of risk taking with design choices.



IMPACT:

Students produce a range of theory notes based of knowledge delivered through ppt, video and practical resources, which all link to the AQA GCSE Core Technical & Specialist Principles. Throughout the year students will get to develop their practical skills by working on mini practical projects that encompass a range of hand tool and machining skills. The NEA is started at the end of year 10 when contexts are released from the exam boards. These allow students to investigate real world problems and think about developing designs based on very open contexts.

Knowledge is evidenced through the Live class feedback and end of topic assessments.

Yr10-

11

NCFE L1/2 Technical Award in Engineering



INTENT

- To understand engineering disciplines
- To understand how science and maths are applied in engineering
- To understand how to read engineering drawings
- To understand properties and characteristics of engineering materials and know why specific materials are selected for engineering applications
- To understand engineering tools, equipment and machines
- To produce hand-drawn engineering drawings
- To produce Computer Aided Design engineering drawings
- To demonstrate production planning techniques
- To demonstrate processing skills and techniques applied to materials for a manufacturing task
- Practical machining and tool skills developed through double lessons

IMPACT:

It encourages the learner to use knowledge and practical tools to focus on developing transferrable skills in practical engineering scenarios. This is accompanied by the theoretical knowledge to help with progression into employment and onto further education. Students will be encouraged to learn how to apply maths and science to solve real world problems. This involves an understanding of the different disciplines of engineering and how they have shaped the products and projects of the modern world.

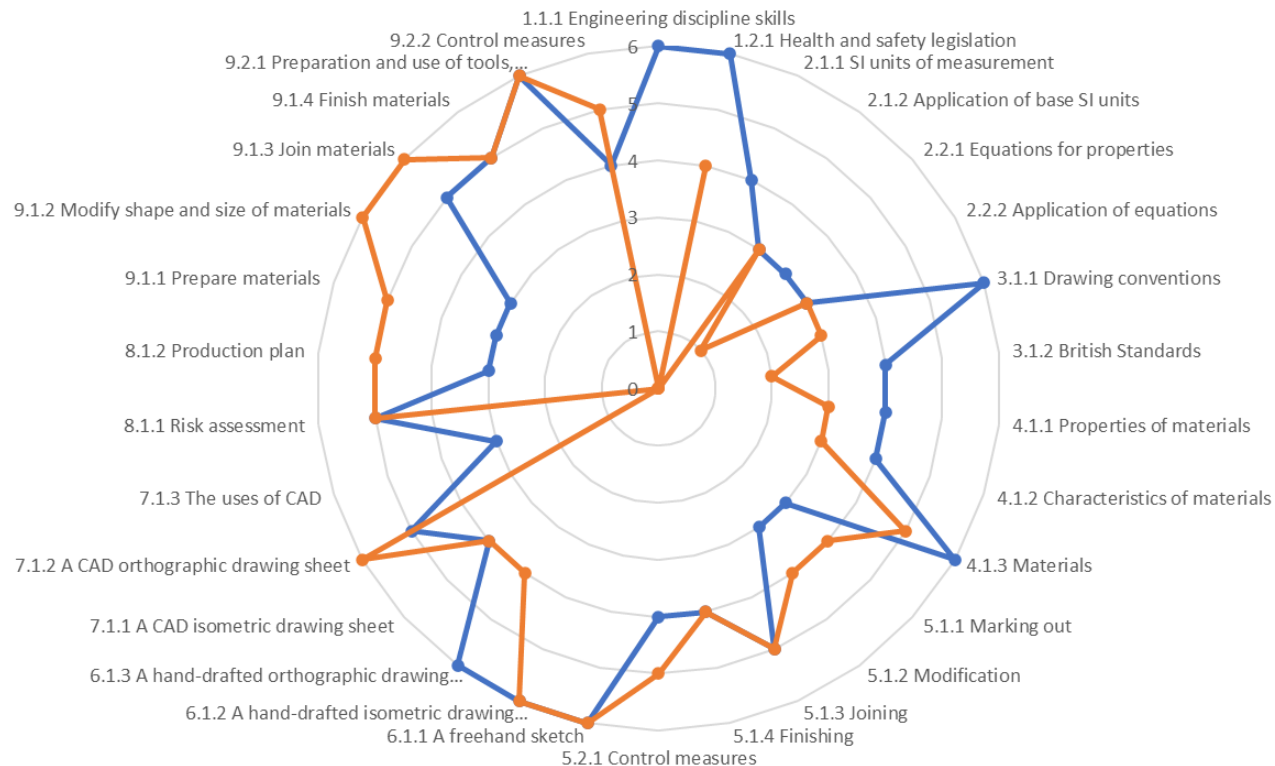
Learners will be able to read technical drawings, select appropriate materials along with tools and machinery, and know how to carry out a directed practical task; working in a safe manner in line with current health and safety legislation.

The qualification focuses on an applied study of the engineering sector and learners will gain a broad understanding and knowledge of systems within this industry sector.

Knowledge is evidenced through the Live class feedback and end of topic assessments.

NCFE L1/2 Technical Award in Engineering

Unit 1: Examined assessment Unit 2: Internal assessment



Yr10-11

Level 1/2 Vocational Award in Hospitality and Catering

INTENT

The students will receive an introduction to the course structure and will begin learning for the unit 1 exam.

During practical lessons, they will learn to cook several key commodities, with a focus on homemade pasta and breading (using both poultry and fish).

In the second half term, they will focus on bread recipes and other techniques. This will focus on learning setting agents, sauces and side dish recipes in the first half term, before moving on to a pastry focus in the second half term.

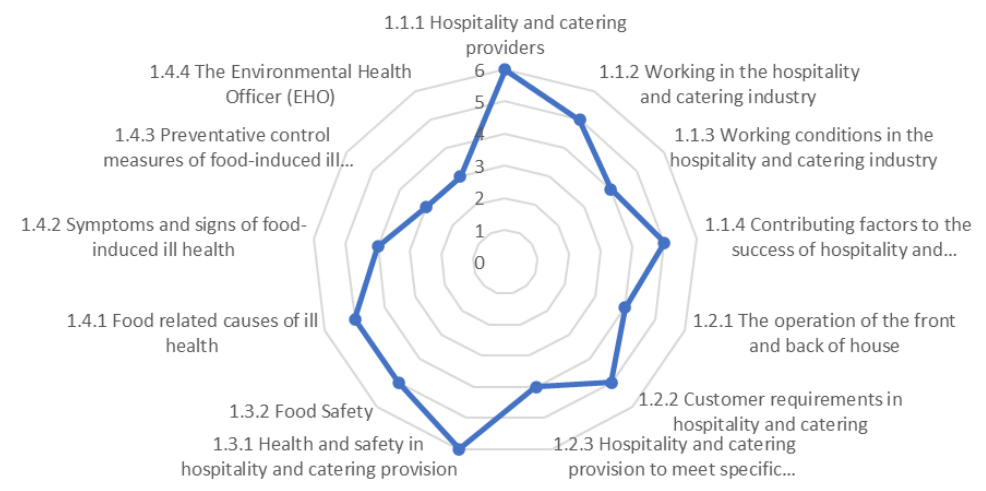
Once the Unit 1 content has been fully covered by Easter, the first half term of the Summer term will focus on revision of content before the June's first exam sitting.

In year 11 students will receive an introduction to the NEA structure and will build on learning started in the summer term of year 10 for their written NEA.

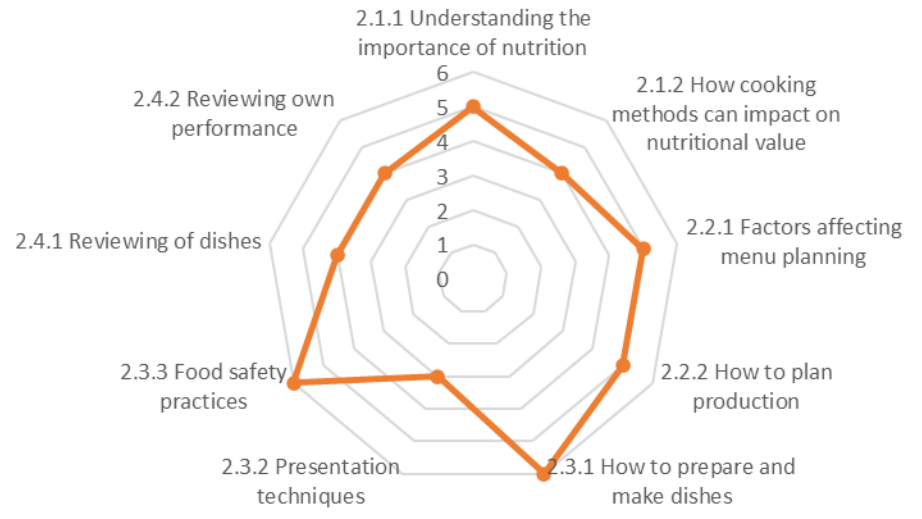
During practical lessons, they will learn to cook several key commodities, refreshing skills from their year 10 study. After the half term, the students will work on skills of their choice, refining areas of weakness with the help of the teacher.

In the second half term, the students will undertake a further mock NEA and start their assessed NEA, with completion by Easter.

UNIT 1: The hospitality and catering industry



UNIT 2: Hospitality and catering in action



IMPACT:

The practical lessons will start to build higher level cooking skills with the students, who may not even if not pursue a career in Hospitality and Catering, will be able to use these skills in their future lives.

Theory based lessons will aim to build on study and exam skills, improving their decision making and independent study skills.

Knowledge is evidenced through the Live class feedback and end of topic assessments.