

Technology

at Central Lancaster High School

Technology at CLHS

The 'why?'

Design and Technology GCSE
(AQA)



Interest in practical application of technology. An enjoyment of 'doing', making and problem solving.

Hospitality and Catering Level 1/2
(WJEC)



A love of food, catering and an interest in the industry wider aspects of the catering industry.

The desire and ability to think creatively and consider other peoples perspectives.

Hospitality and Catering

Exam Board and Method of assessment



Unit 1 The Hospitality and Catering Industry

Unit 2 Hospitality and Catering in Action

Unit 1: Assessment

External assessment (Examination) 50% of final grade

The Hospitality and Catering Industry will be externally assessed.

The external assessment is available in June each year. Centres may choose to enter candidates for an on-screen or paper version.

One 90 minute examination.

Unit 2: Assessment

Internally assessed (Catering practical) 50% of final grade

Each centre must ensure that internal assessment is conducted in line with WJEC controls. There are three stages of assessment that will be controlled:

- Task setting (pupil).
- Task taking (pupil).
- Task marking (school).

Hospitality and Catering

Overview of course content

Unit 1: The Hospitality and Catering Industry.

This unit provides a broad introduction to the sector in a way that is purposeful and develops a range of transferable skills.

Pupils learn all aspects of the sector from types of establishment, to front of house operation, to delivery and storage. They acquire knowledge of all aspects of the industry and are able to propose new hospitality and catering provisions for specific locations. They explore different types of establishments and job roles within them to determine the best options for a new enterprise.

They learn, in detail, what front of house and kitchen operations entail on a day to day basis and are able to determine how the proposed hospitality and catering provision could operate efficiently.

Unit 2: Hospitality and Catering in Action

Pupils apply their learning to safely prepare, cook and present nutritional dishes.

They will draw on their learning of different types of provision and kitchen and front of house operations in Unit 1, as well as personal safety in their preparations.

The content is relevant not only to employees within food production, but also those with a responsibility for food safety in the industry, nutritionists and managers and owners.

Hospitality and catering

Component unit 1

Understand the environment in which hospitality and catering providers operate.

Analyse job requirements within the hospitality and catering industry.

Know how food can cause ill health.

Describe the role and responsibilities of the Environmental Health Officer (EHO).

Describe the symptoms of food induced ill health.



Hospitality and catering

Component unit 2

Understand the importance of nutrition when planning menus.

Explain characteristics of unsatisfactory nutritional intake.

Explain how cooking methods impact on nutritional value.

Understand menu planning.

Explain how dishes on a menu address environmental issues.



Design and Technology

Exam board and method of assessment



NEA (non-exam assessment or coursework) is worth 50%

The exam makes up the remaining 50% and is 2 hours long

Tests you in 3 sections:

- Section A – Multiple choice, short answers
- Section B – A few short questions and a longer question
- Section C – Short and Long questions

15% maths questions

Year 10

Earphone Tidy

Half term 1 sees year 10 complete a quick project to design, make and evaluate an earphone tidy from recyclable plastic. Designed by hand and made using 2D design and the laser cutter the students get a quick intro into most aspects of the GCSE course.

Architecture

During half term 2 we begin to learn about technical drawing. We make hand drawn plans to create a small dwelling for a client based in the Brazilian rainforest. We make architectural models of our plans and create a 3D model on the PC, further developing our CAD skills.

Christmas eve box

In the run up to Christmas we design and make a Christmas eve box to take home as a gift to a family member. Again we learn more about 2D design and laser cut a themed design and message onto the lid of the box, before finishing with sandpaper and varnish.



Year 10

Mock NEA

After Christmas we have a trial run at the NEA coursework. Applying our knowledge from KS3 and weaving it in with the previous 3 year 10 projects. We work in 6 sections; Research, design spec, initial ideas, development, manufacture and evaluation. It is not a linear process, but an iterative one, preparing the students for year 11.

Theory Topics

We study topics from sustainability and the environment to specialist equipment and the work of previous designers. This is done in exercise books and accompanied by some AQA accredited worksheets – homework is given to enhance knowledge on each topic. Students are given 5 or 6 lessons over the 2 week timetable. The theory lessons are taught alongside the mock NEA as they would be in year 11. Every topic could be covered in the exam, students require a broad knowledge of many topics!



Year 11

Students complete 10 marks worth of research, primary and secondary.



Manufacture, Safety and cost will be the key biggest factors for my design. Safety will come first when handling large sheets of wood and safety glasses must be worn when using machinery.

The snowboard stand design here is built but makes snowboards. This will increase the storage space but it will be because it is such a large stand take up more space.

With this design you can explore and different design, empty colour change or graphic design printed, on the side panels, change the shape of side panels, could dramatically change the different ideas surrounding the product.

Because the stand is on the floor and not hanging in the air there are safety aspects to think about. The main safety issue is that the stand is not too high, but to solve this problem you could split down the edges to create a safety, another design.

In this particular design the side wooden panel design is not ready. The material will be chosen by the user. The material will be chosen by the user. The material will be chosen by the user.

The snowboard stand will need to be built out of wood which is strong enough to hold the snowboards. The material will be chosen by the user. The material will be chosen by the user. The material will be chosen by the user.

This design also looks very different. The material will be chosen by the user. The material will be chosen by the user. The material will be chosen by the user.

This design will be made out of wood which is strong enough to hold the snowboards. The material will be chosen by the user. The material will be chosen by the user. The material will be chosen by the user.

Cost. The factor which will affect the cost of my product will be the material used. Packaging, Delivery, and Manufacture. I will try to keep the cost as low as possible to encourage customers to buy it. I will also try to make it as profitable as possible. The snowboard will be made out of wood which is strong enough to hold the snowboards. The material will be chosen by the user. The material will be chosen by the user. The material will be chosen by the user.

Location visit

In here, the hammock has room to be stored when not needed.

The hammock stand

The house is located by the A6 which provides good access. The garden is a wrap around one with around 7 by 9 mers allowing easy space for an 8 ft. hammock stand. This garden allows sunlight to always hit part of it both when its east or west, meaning the hammock may have to be mobile to make it easier to move into the sun. The overall aesthetic is very modern farm house style, with loads of natural wood showing in its structure and furniture. An unpainted stand would complement this. The doors to the garden are large (2 metres) which will allow the hammock to easily be moved inside. The location of the house is nearby a college and bus stops.

We move on to completing a design brief and design specification worth another 10 marks towards the NEA



Section B – Design Brief and Specification

My client lives on the outskirts of Lancaster with a big house and average wrap around garden. They are a 28 year old female who enjoys relaxing outdoors. She also likes animals and nature, owning many different pets of which are outdoor ones. My client needs a place in her garden where she can relax, she has requested that the product is easily stored after being used for she does not have a lot of room indoors. If possible, it needs to be transportable to be moved around the garden to get the best sunlight or shade. My client is currently using a broken deckchair that is unstable and impractical.

The product will make a difference to the client's life, being one save my client has, it will be for people who love relaxing in the outdoors. The product is the solution for people who have room to go to outside where they can be calm and sunny, it is beneficial as it will help customers be in the comfort and peace that the outdoors has to offer. It will be used to relax and make them purchase my product. The customer is looking for a product that allows them to relax in the heat or with their heater on.

In my research I have looked at many different outdoor living products such as sitting areas, picnic, swing chairs, cooling areas and hammocks. I decided, with my clients wishes included, that a using a hammock would be best, next, I focused on two existing products one from major companies, one from custom spaces. After analysing both products, I came to the conclusion that the stand from custom spaces was more like what was requested by the client, I only need to make it transportable. In my design plan, I will make the stand easily disassembled. My research has also helped me to keep my structural design simple, in conclusion, I will make the product comfortable with a simple structure.

I am making the hammock to help people find comfort in the outdoors. The stand has been requested to make by my client, my client's goal is to provide people with a simple, sturdy, and easy to use product. Following my research, I will be able to design the most efficient product.

Firstly, I will create a rough design which will take an estimated 45 minutes. Secondly, the design will show me possible errors of my product which can be corrected in the final design, taking approximately 1 hour and 15 minutes. Next, I will develop for 2 months. After, I will make my product in an estimate of 2 months. Finally, I will add finishing details, for example sanding and adding a finish which will take approximately 1 week or 1. The deadline is 10th.

The budget for my product is £400. This is divided into materials, profit and £100 to be used in case of any urgent issues that may come up. The budget has been agreed upon by my client because it is in her price range.

Overall, the budget is £400 and the product will have to be a wooden garden, it must be comfortable and have to be finished by 10th April 2019 and have to be suitable for outdoor conditions.

Specification

Function
The product must motivate the user clients to exercise
The product should be in the shape of a retro sports chair
The product should have a real spinning wheel

Aesthetics
The product must have a retro theme
The product should be shaped like a record player
The product could be finished with a glass varnish

Safety
The product must have safety electrical wiring
The product must not weigh more than 100kg or be too heavy to be carried easily
The product should be rounded on the edges and sanded properly to avoid injuries if the product was dropped

Usability
The product must be aimed at 18-25 (see client profile for details)
The product should be targeted towards the personal training company
The product could target the fitness industry in general as a sophisticated piece of equipment in a stretching fitness room

Environment
The product must be made from sustainable materials
The product should be sourced from a sustainable source
The product should be kept in one room or portable

Performance
The product must be able to have a life cycle of 5 years
The product should be dropped off a table top, 100cm
It should be off outdoors for extended periods during the day

Cost
The product must cost no more than £300
The product must be for sale for between £40-£50
The product could be made from sustainable materials to reduce cost

Operation
The product must have buttons to press to work
The product should have a battery pack or be plugged in to a 240v connection

Maintain
The product must be made from a combination of acrylic and wood
The product should be easy to clean
The product could be made from paint correct materials

Design Brief

The aim of this project is to create a semi portable product which is small enough to carry but be loud enough to be heard over the spoken voice. The purpose of the product is to encourage a healthy lifestyle by encouraging Will's PT clients.

I will do this by meeting the clients needs. The product should be targeted towards the client, Will. The product must cost no more than £40-£50.

The design and making process will take until March 22nd 2019. Only after that will the client receive the product.

The product will have a retro aesthetic and should include elements of art deco to symbolise the retro theme.

Research Summary

From my research I have found that my client wants a product that plays music and has a retro look. He wants a portable product that has rounded edges for safety and cost not much more than £30 and no more than £50. It needs to weigh no more than 10kg. Next time I would do a focus group to find out what healthy people prefer in general and I would look at more existing products that are suitable for my client.

Students generate their initial ideas based on the previous steps. Designs must be creative and show design flair. This section is worth 20 marks towards the NEA.



Design Ideas – 2D drawings

Summary: To summarise out of all four design I have concluded that the snowboard stand is not only the most practical but also one of the designs which can be developed to a great extent. All of the designs have been designed in order to help encourage a healthy lifestyle. The snowboard stand will ultimately not only present the snowboard in an aesthetically pleasing way but seeing the snowboard will also encourage the user to go out snowboarding.

Development: Initial Ideas

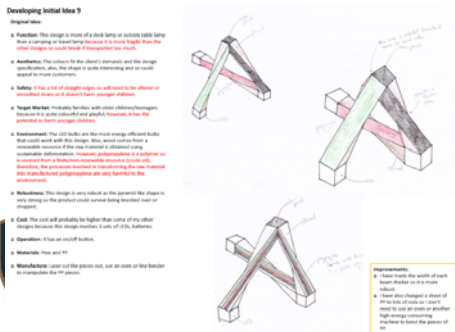
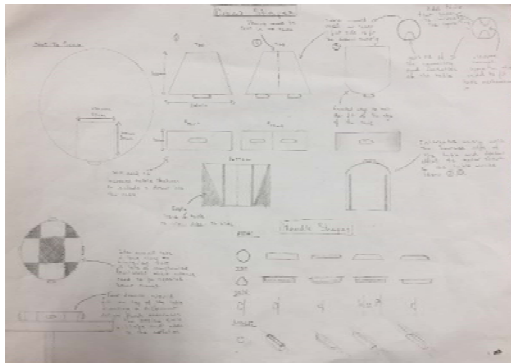
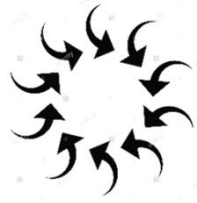
Client feedback:
Once the client receives and completes the design specifications, I have talked to the client and the user that the product is desirable having a product if it fits the overall design and is comfortable, even though a product is not a record player, it is not essential if including a product is not practical for the use or shape of the product. Therefore, I have only included a product in the initial ideas if it fits the design.



Central Lancaster High School

Year 11

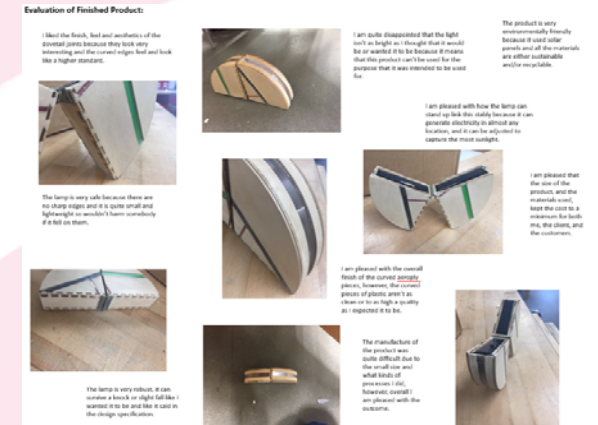
Students develop their initial ideas and make iterations, supported by a manufacturing specification. Designs must show good judgement on materials and processes. This section is worth 20 marks towards the NEA too.



Students use various workshop tools and CAD/CAM to realise their developed designs, worth another 20 marks towards the NEA.



Finally, students evaluate their work against their specification. Casting judgement is an important part of the project. Worth the final 20 marks of the NEA.



Evaluation of Project

Some of the safety precautions I took during the project to make sure I was using all the equipment, tools and machines properly and with caution, being careful to all the rules into mind when using it for instance:
 • Wearing my safety glasses
 • Making sure I was using the correct equipment for the job

The aesthetics of my project is actually quite basic however I used different techniques and materials to give it a unique look. I used a lot of acrylic paint to give it a unique look. I used a lot of acrylic paint to give it a unique look. I used a lot of acrylic paint to give it a unique look.

Next time I would have been more careful with the quality of the finish of the wood. Also, I would have been more careful with the quality of the finish of the wood.

Problems I encountered during the project include how hard my design was. I had to think about the design and the materials I was using. I had to think about the design and the materials I was using. I had to think about the design and the materials I was using.

My product is targeted at anyone who has a house or any form of accommodation that needs a table lamp. It is a table lamp that is designed for people who want a table lamp that is designed for people who want a table lamp.

My classmate said that she liked the overall design and the finish of the acrylic paint. She also liked the aesthetic of the design.

I learnt lots of different skills. I learned how to use the equipment and the materials I was using. I learned how to use the equipment and the materials I was using. I learned how to use the equipment and the materials I was using.

My product operates by having a battery and a solar panel. It is a table lamp that is designed for people who want a table lamp that is designed for people who want a table lamp.

I feel I was very happy with the overall look of my design. I think the finished look was sleek and looked professional. I was also happy with how the acrylic finished out to look.



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Technology at CLHS

Where might it lead?

Design and Technology GCSE (AQA)



- ☐ Architect
- ☐ Civil engineer
- ☐ Product design
- ☐ Mechanical engineer
- ☐ Carpenter
- ☐ Construction manager
- ☐ Fabrication
- ☐ Electrician

Hospitality and Catering Level 1/2 (WJEC)



- ☐ Food and nutrition
- ☐ Waiting staff
- ☐ Event manager
- ☐ Food and beverage marketing
- ☐ Hotel manager
- ☐ Chef
- ☐ Catering manager
- ☐ Food production



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LEARNING TRUST



Central Lancaster High School



For more information about the courses,
please speak to your child's technology teacher
at progress evening on Thursday 9 March 2023.



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