

### Design & Technology GCSE Year 9 Options Open Evening

Mrs Schillaci-Rowland

January 2021

### Introduction

- D&T Department grown over the last five years, with three different specialisms
- **GCSE** 4 Graphics groups:
  - 2 in Yr 11
  - 2 in Yr 10
- A-level 20 students across the two years, mix of internal and external students and mix of girls and boys.

### Course

AQA Examboard – 50% Exam/50% NEA

NEA Coursework – Project based (50%)

- 1 Exam Papers
  - 1 Paper: Technical Principles 2 hours (50%)

### **NEA – Non-examination Assessment**

- Project that runs from 1<sup>st</sup> Half Summer Term in Year 10, until end of Spring Term in Year 11
- To prepare for this we do two extensive miniprojects in Year 10; The LP Cover project and the Confectionery Packaging project
- These are self, peer and teacher assessed, with an end of unit written assessment

### **Theory – Core & Technical Principles**

- There are 3 main theory sections, which last half a term each:
  - Materials and Processes
  - Product Design
  - Design and Make Principles
- The content covered here will help students to attempt the Exam Paper at the end of Year 11 – students will have end of topic tests at the end of each of the theory units

# Year 10

### Product Analysis

Aesthetic: The font of the company name Lindt is delicate and appears fancy, almost looking expensive. They cleverly use gold and black colours to reflect the caramel flavour and the high percentage of cocoa in the chocolate. The chocolate is also pictured on the front and looks appealing which could persuade customers to pick up and buy this product. The colours are bold and the white sub text that says "CARAMEL with a touch of sea salt" is written in white that stands out from the dark background that it is in contrast with and draws the customers attention nearly straight away. The inspiration for this design seems to be from the flavours that can be found within the chocolate since a swirl of caramel encircling chocolate with a smaller line of sait. along the top is the main feature of the design.

Environment: The company Lindt has spoken out about their companies." sustainability policies previously and they are said to be committed to building long-term partnerships with suppliers and working towards full traceability of raw materials in order to create a sustainable supply of resources that they need to produce their product. A spokesman for Lindt quoted that wherever possible the company always try to make their products one hundred percent recyclable and avoid plastic in exchange for paper, and carboard wherever it is possible to do so. As well as this, in a column about Linds, new food magazine stated, "They help to safeguard the long-term suitability of land for agricultural use and foster access to rural infrastructure". The company are deeply committed to reducing their packaging waste and destruction each year.

Monufacturing: To make the chocolate, cocoa beans are blended and the "nits" are roasted which gives off the unique aroma of cocoa. After this they are quickly processed into the end product in order to retain the flavour of the roasted cocoa as best as possible and since Lindt have full control over their production chain, the company are one of the few largest beans to bar chocolate makers in the world so that the quality of their ingredients and end product is always ensured to be high. The manufacturing process of the packaging is laid out clearly on the Lindt website which states that they work closely with the packaging manufacturers who use modern technologies in order to reduce the raw materials used as well as the number of paints used in their packaging

Cost: The manufacturing process for this packaging costs around 15p per har and if sold at around £2, guarantees a £5.85 profit for each bar sold at local supermarkets or shops. In comparison to other high end chocolate products, Lindt chocolate bars are extremely affordable taking into consideration the high level of cocoa and size of the bar which is roughly equivalent to a large Cadburys chocolate har which is £1 but uses less cocoa and a higher percentage of cream in the recipe. It is a reasonable price to pay for the high-end ingredients and delicious chocolate.

Customer: The product is designed for adults more than it is for chocolate and this is due to its more expensive retail price and strong flavours that may not particularly appeal to younger children. It can be eaten as a light snack is small proportions or given as a gift to others. Chocolate is said to release serotonin, a prosper states or green as a get su oursers. Sendostree is an an extraction described feel-good hormone, which will increase the customers happiness therefore increasing their quality of life. Also, dark chocolate is said to health benefits and it is wegan which may also widen the target market. The chocolate has an image it is vegen which may also within our larges makes. The substance last distinct of what is inside on the front which will attract customers such as chocolate or lowers to buy it when they see it on the shelf of a shop







Customer comment: The aesthetic appeal of this packaging is what first enticed me to buy it which means that this company have perfectly hit the spot in their flawless design. It is appetising and enticing and made to look expensive at the same time.

Materials: The ingredients in a Lindt caramel sea sait chocolate bar are, but not limited to, sugar, cocoa mass, caramel pieces, cocoa butter, sea salt and Eurouring. The bar is then wrapped in aluminium foil for preservation, which is described as endlessly recyclable since it can be transformed into a whole described as endessing recyclable alone in can de transformed this a whose number of different products, and paper is then on the outside packaging. Since they take their dedication towards reducing plastic waste extremely seriously. Lindt do not use any plastic materials in the packaging of this product. I think corns not not use one paston, materials to the generating at any processors to these materials were the best choice for the company because they are recyclable and work well for their function

Size: The intended use of this product is for it to be enjoyed over a course of a few days, a few squares after dinner each night. For this function is it perfectly sized and provides the customer with enough chocolate without being to little or an overwhelming amount. The size of each piece is bigger than usual but this is an over-mnerring amount, one size of secon powers suggest their dates sons often to an indication that less slices can be eaten but the customer can still be satisfied. The only comment I have about this product is that it takes a few bites to eat one square and perhaps one bite per square would be suitable. The measurements for this chocolate bar are 19cm length, 8.7cm width and 0.7cm depth. Each square of chocolate is 4 x 4cm.

ation waste ma reageling reduces the use of newly created man while compositing and energy generating reduces landful and purther use to material's Energy generation is also known a energy vecovery

Incineration: A waste treatment process that involves the law of notite materials it can reduce the mass of waste by up to Significantly reducing the volume of landful Howaver, there of concerns about pollutants in the gas emissions from incinerary including large amounts of Carbon clicacle (CO2) being dischan into the almosphere.

ENVIRON MENT: Global warming is when thermal energy is trapped by the atmosphere, Causing the planet to become warmer man it is would be naturally. Global warming is built by carbon dioade, minimumanancerecomposes mechane and other person as sollutarits + greenhouse pases of collect in the earth's atmosphere and management ap the sun's rays in the atmosphere minutesized therefore heating up the earth deal warming is causing, source wild gives worming water shortages, district massive Starm damage, pest invosions, distinging animal habitats, Stressing rystems, melting minoritarions le caps, torrestromogration Severtey don a coral, extreme use in temperature, sea level histing rapidly was excerne s and a sew other causes.

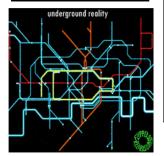
### What do you think about the LP cover I have designed?

- 'It's very pretty and I like how the tube lines have a glowing effect, it looks really cool and the name on the cover is really interesting but I think that the record label kind of ruins the design because the green doesn't go with the other colours.'
- 'It looks really cool and it's very bold so it stands out. I also really like the colour choices it makes the cover very eye catching'
- 'I like how the colours are bold and how the background is black because it really helps the design stand out."

### Would the cover appeal to the target market and why?

- 'Yes, as it reflects the artist with the colour scheme of orange, red, blue and green which links to the target audience as teenagers prefer the music from the artist and like the designs on some of his other covers."
- 'Yes, because it looks very professional and modern which appeals to the new generation of teens.
- 'Yes because, the colours are quite bright and bold which attracts teenagers.

### Testing and Evaluation:



What makes it look like a professionally designed cover?

The way the cover is presented gives of a professional look because it is very simple and there are no visible errors that you can see straight away when you look at it giving it a very

The record label makes it looks very professional because it shows that the cover has been designed by a company." 'It's not too overcrowded and busy which makes it look very professional and well planned

Does the cover link well to the Designer inspiration (Harry Beck)?

Yes. I think it links extremely well as the designers ideas reflect well to the tube effect but it has it's own twist on it which reflects your design ideas too 'Yes, hecause when I first looked at the cover I knew straight away that it was the tube map."

Sufery: a part of

pard

Yes, because you can clearly see that it's the tube map and the tube map has a lot of different colours and so does this design."

> What modifications would you make to the cover?

'Change the colour of the record label, as the colours don't really go with the tube map colours and have the artists name on the cover. 'Have the name of the artist on the cover because it will help promote

'I wouldn't change anything because I really like how the cover dust that could perhaps be improved are the sharp

### SUSTAINABILLES

A prite insource is a resource and sees not remove thesis quality FINITE RESOURCES to meet in read of a pulse generations (a resource those and fun the of lost mouses are lost got and at minutes and moral

in like 494 institutes turd and characte (character), are also trud to be process as once than are compressly gone there is no Yatural way to receiv them.

Hydroutic posturing or precious is a new technology designed to have and and out from shall rock but is suggetly controversion method of unaction because of concerns regarding sensionmedial in

### NON-FINITE RESOURCES:

um prate resources are resources that can reparash quickly enough to meet our needs, (a resource that won't nun out), trampies of other non finite resources are water and grant life such as trees. There of also common reservable energy resources that use are now using, such as, gothermal solar, who where and trade power Telmograe of varietisms have allowed us to use thise remarkete resources more effectively and to pervise more every from them reducing the re ance on unite resources

- using low-impact materials

PRODUCT USE CYCLE? Designers need to think poor about the life capte or a product They need to consider the environmental impact of the product prom the raw materials required, how long the product will last begut it wears out/means, and it's disposal out the and quiesti ge There are many deferent ways disagress can do this, and

WALKE STATE OF THE STATE OF THE

RESOURCE reclient to pocess that recovers certain disposed erials for specific use some materials can be used in supply

comming restricts by using married married - Redukto Material, Water

- Ensuring a polonger literans

making sure materials and components can be easily recipiled and well

### MINISTER STATE OF THE STATE OF

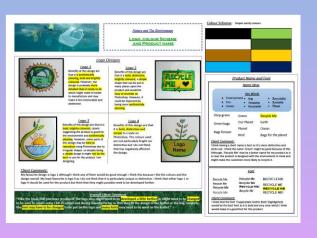
with factors continuous to agreend this accidition towards in this bewhich The effect that a companylogorisation has an graph and time musities is talled a social posporar langurars have a responsibility to torside human rights and the working landwants of their manife the Companies with a good social purpoint wasses with often this warrens, was in terms of houth and supery workforce equality, and ed labour and white other social issues that expect communities in their supply thairs.

### DISCOUNT OF WASTE

At the end of a products use it's into consideration management of the consideration MANAGORNA WATER TO THE PARTY OF THE PARTY OF

Landpill - the most common method of water disposal with it involve es putting waste into the ground and languag it However this was many properts as it can cause pallulion of the local engrament. such as contamination of groundwater in soil and decaying crops nic moste also generales methane gas, (a governouse gas) it also effects wildlife and has a hamble snew Alternatives to wantful are being developed acress the globe

## Year 11

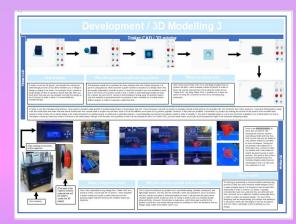


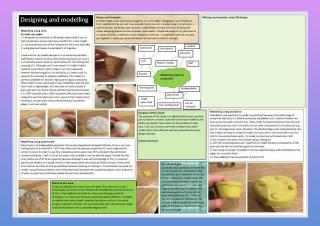
















# **A-Level** Year 12 & Year 13



















Materials: The fable will be made from oak wood with a resin feature and metal legs and sliders. The min material will be east weed. This is because to be a strong and study material which should not be a feature of the legs of the strong and study of the should be a feature of the strong and study of the strong and to feat the four times would see the sound become offer east of the strong and the strong are to feat the strong would see the sound become offer east of the strong and the strong are strong as the stro

of longer, resulting in the overall deals hongaround 71cm tall, one zen shy of the average deals.

Target market: The main ages that the product would benefit would be 12-68 (retirement age).

The productive small be taked for draw, what have limited as point in both humes or store, consolided starting or any of the form of the limited point in which have grown as much due to limited point in the limit of the limited point in the limited point in the limited point in the limited point in the limited product must be a forter builder that one converts into a functioning dock.

12. Transcriber The growduct must be a forter builder that one converts into a functioning dock of the limited product must be a forter builder that one province in the limited has desired by the lim

The client could add another layer of war, if they have had the product for a while and it begins to fade.

There will be extended silders within the main body to allow for the desk extension and a storage area below the table top will be paired under the date on ja order to differ the fore to desk beight. There will be a storage compartment under the filter grant scale; I will use a band awa to cut any wood! I need to I yell use acrees to manufacture the main bedy together an

ast; I have predicted the cost of materials to be around £110. As furniture has a 200-400% mark-up, then the retail cost would be £324-£540 for this manufacturing cost.

Time management: My time will be halanced efficiently so that I complete all necessary research and developments so I can create a good quality produc My Santichart helps me to plan how long different tasks will take and makes sare than 1 do everything in the right order and do not longer.

Health and safety: My product must be safe to use in the home environment.

Short of money

Partying international and

Range of different

social classes

On this name I will the ins and outs or

this sheet of resea aesthetics and the and the environme better product.

The manufacturing process is a very key influence in the final gaility of the fisched product influence processes when the accuracy of manufacturine includes produced and the type of manufacturine finals. I am unable to decide the exact manufacturing processes or processes as a clore into whe design that it am ging to be design. This decided the type of shape of my product which will only be accreased to write or the processes. On the product which will only be accreased with or contamination of the product which will not be accreased with or contamination of the processes. On the product will not be a product which will not be a product which will not be a product with the product which will not be a product with the product which will not be a product with the product with the product with the product with the product will not be a product with the product will not be a product with the product with the product will not be a product with material/materials that I am going to use, because certain materials only work with 

Die casting certain processes, and get a different finish from them. I will look into

Sand casting manufacturing processes in more detail on a future sheet when I have decided Roll these factors. Currently different manufacturing processes that I could use include: CAM

Rolling

Colours can completely change the type of product and can also affect who the target market is, because of colour associations. There are lots of different things to consider including shades, depth, opacity, brightness,

schemes and combinations of colours. As well as products containing solid colours, they can also use patterns and designs to make the product a bit more interesting. When using colours and patterns the connotations of them must be considered; red (caution, anger, love, negative (in finance), hot), yellow (happy, fun, young), white (sterile, innocence, peace, truth, cleanliness) surple (wealth, mystical, decadent), black (sophistication, death, light, contemporary). Even though these are just standard

night, contemporary), Every through thesets, for contemporary controlled to the cont

Knowing the target market is a very important thing for any design process, especially for a product with multipre possible market in mind, which is environmentally conscious people, however there are that of ways that this wider market can be superinded Externey street/corpically, environmentally conscious people an indide class, midled seady owners and sometimes ment. Nevertheless, there is a growing number of environmentally conscious states are made class, midled seady owners and sometimes men. Nevertheless, there is a growing number of environmentally conscious states, and extends on the class of the control of environmentally conscious states, and every and control of the control of environmental productions. The control of the control of environmental productions and every control of environmental productions and extends the control of environmental productions. The control of environmental productions are the control of environmental productions and extends the control of environmental productions and extends the control of environmental productions.

More money

value for the customers' money

from the past Lots willing to embrace

modern change

Stuck in their old ways

that I feel I need to consider when designing the product is for it to be durable, for a range of different physical abilities, easy to use and

common traits of people in these groups, in order for me to accommodate for them all.

Older generation: Short of money Living in a small flat Not the best hygiene Shared spaces Don't want to cook every single day

- 4-14 years' old
- Rough Small Energetic Get dirty quite easily

Excitable

On this sheet I will briefly addressing rows 5 and 6, I will look into both of these in more detail in further sheets From looking at all these common traits found in people from different areas of the target market, there are some things that I feel are essential that I cover in order to fulfil the needs of as many as possible. Some of the thing when I have made certain design decisions.

 60+ years
 Varying levels of mobility
 Weaker
 Grandparents
 Trouble with gripping 25-50 years' old

Rushed for time Rushed for time Rather not be of all the time Working Caring

Trying to save money for the children

Try to do everything for their children's best interest in the centre

Having an understanding about the environmental impact of a product is always important throughout the design "I like all of the color cocess. However, I feel that it is even more important for process Netwered. The first at 11 is own more important for use 15 actives of the renormental impact, all to the fact of the process of the p

many different ways for it to be disposed of. There is packaging that is decomposable and recyclable, which has almost no impact on the environment. Environment "If friendly materials and processes often cost a IRIB bit more."

extraction/collection of materials and a cost due to the harm the future so CUSTOMER PROFILE future as well Impact is very

ng as in recycle the a to make it act of the se more sut it."

vertures are essential as the function of

you said don't have any bad

ch

Product An

to turn it into a 35-litro Items such as the sleeping bag and ike just your deeping but and cloth

ually you would have to carry a tent, sleeping bag, and a bag for clothes etc which can be eavy and difficult to manage alone. This backpack aims to keep all of these camping eccessities together in a compact and lightweight formation to bring ease to the user. The rain purpose of this product is ease and comfort and so its lightweight construction, padding and shoulder strap suspensions are key features as to what makes this backpack successful.

on the notential to cause severe dan

oduced on an automated production line. This improves efficiency and reduces wasted vaterials. To fit the components into the bag, a series of machinery (e.g. applied pressure to viesse the air) and workers (to pack the components into their correct parts and any other rocesses that would be difficult for machines to carry out).

his product lacks its environmentally friendly features with regards to the materials and

that the product will break. This means it has a long useful life before disposal: its high quality ussed on to second-hand users, or components of the product may be reused for other

Next steps:

### Client comment:

tean ending the trip early. Affordably priced at \$199.95, the Pi

50 offers everything from advanced shoulder strap suspension, to quickly accessible compartmentalized pockets. No need to go

digging through your pack to find your camp spoon because the

PK 50 has a spot for that!"

Now that I have gained further knowledge as to what makes a similar product to my own successful, I can begin finding ways to ncorporate this into my designs. I have found areas of mprovement (improving the environmental aspects of the sackpack) to ensure I have effectively innovated.

will continue my research to develop a secure and in depth understanding about the design issue my product is minimising Developing a strong understanding is one of the most importan stages of the design process.

editions). This high quality is also reflected in the price.

e this type of product. For this reason, gathering cult as can eb a large range of heights and widths amongst

reponents and features/ characteristics is priced at \$199.95. This may seem like a large sum of money for a one buy however, it is important to consider the price of Buying each of the product individually (a backpack, tent, sleeping bug etc with the same characteristics would easily be double the price of this bag, let one the struggle that come with handling this load!) As a result, this price is onable and affordable.

pace and so excess space will ela waste and will leading bag gets damp it will expand in size, this

nsure the material used is strong enough to hold the ackpack and is contents. This is to maintain quality and mure safety to the product. This is the main quality check nd can be carried out through applying prolonged pressure on a sample of the material. It is important for quality checks to be taken throughout the manufacturing process to ensure any faults and implications are quickly addressed. Such a

Quality checks -

trength of the straps should be tested well in advance to

olerances for the sleeping bag compartment recise and compact product makes quality checks essential

CAD drawing



√<u>~</u>

### Developing the Connection Point

straight line. Although this would still

work, it may be difficult to fin this space

at a festival when it is busy. To combat

add the same shaped flat door on both

this problem, it may be necessary to

side on the left side of the tent. This

means the user can choose which doo

to add to the connection point of the

round). This can allow the chain of tent

next tent (creating a line or bending

to fit in all gaps.

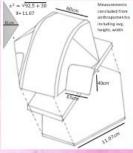
in my initial plan for this section, I hadn't intended to base a sheet on this area of the design however, I began to realise that the connection point is one of the most intricate and complex parts of this design, My client too agreed and asked to see a more in deadth evaluation and explanation of bow the connection point will function.

To the right is the exploded view of my design. It shows the three levels of the product. On the first level is the base of the tent, this is a thin layer of material that is waterproof to stop water seeping through when exposed to it for a long period of time.

On the second level shows the built-in-sheeping area, This is the pudded area that the tent folds up to and becomes the back of the backpark. Level one and then are the simple sections of the design and so this is something to take into account during manufacture. These tayes should be done in good time to be able to have as much time as possible on the final lever, which is the most complex and time consuming.

The third sper is the main body of the tent, the cover, and doors. The design of this is much more complex. During the manufacture I have to take not consideration the doors, the connection point, and any possible windows when I make the net. When I come to the manufacturing. I may find it exists to cut out different areas of the net at a time and see them together.

When I come to manufacture, I will do it in this order, making the Issue first, then the second level, and then the thirt. All exists will be attached dispetive with severing. One thing to consider during manufacture is whether I will attach the top of the text to the base of the text to stop water committe frought or cases an inner text II were not to these of the text to stop water committe many reduce condensation in the text however, this will add to the materials which tensor more weight and more cost, Attaching the levels, significant will be quicker and chapter to manufacture and errect and so this is looking like the control of the control of



The tent groundsheet will be made from a form of polyester.

At the moment, when the tents are connected only by a small area I need to think about incorporating windows. Although this soil reduce the process.

Due to the tenth being connected only by a small area it need to think about incomposing elizidows. Although this skill eledent the structure discharged the skill eledent the structure of the small, it will make it feel more like you are all in a tent specifies. The windows could more a open to leave the sax are option to the user. The material of the connection point will be made of the same material as the root of the tent (control). This means is an buy this material in but, which will be otherwise than buying tent a lamples of a range of different materials, for my one off product this may not make much difference to the price but in industry, this would be a significant difference.

From the specification: "In the event of company, the sips opposite each other can attach onto another of the same product. This can be done with as many tents and deemed necessary. This enables the tent to accommodate as many required at that seed its event."

QC/QA — Full inspection at the end of the manufacture to ensure no human error has occurred. Such this to look out for include holes between pieces of fabric which have not been sews properly. Poles not lifting into poles sewers due to inaccurate tolerances etc.

Due to the two triangular sections, coming out towards each other, this makes the connection point have to be longer to fit out to the sect test without these areas clashing. This creates two possibilities moving forwards.

The first possibility is to keep the tent design the same, despite the connection point sticking out further than previously planned for, it allows for more room inside the tent.

The second possibility is to reduce the size of the triangular sections that are sticking out or changing the shape of the femaling them rectangular is entitle the test test being connected on the positioned closer together. This will mean the connection point does not a fair which adds, weight from the extra material and and efficient to get through.

This is a design different that I will present to my client for him to chose which route to go down. This is essential as either possibility have both benefits and drawbacks to them.

Reducing the size of the connection point by half-could bring the price of the product doesn by approx. £2.58



The connection point either use a zipping system gust like zipping up a coad This is simple and easy to use by all ages. They are "lightweight and consenient. Due to zips not being protective against water asserting through, all typ to cores it will be measurery. The Flag will be made from the same material as the rest of the text (ovasted control) and will be on high the connection points and the door zip. The alternative is to use Video to attack at the connection point. The end of the connection point will have a zemi-circle shaped pole in the end to keep it shales. There is a cover and zip on the end of the

connection point for wi connection point, it car reduce the trip hazard. I have come to the con-

This brings the total nu

Client Comment: Great

Modelling

The purpose of modeling is to provide an accurate representation of the function of my product. This needs to gidone to see if my ideas work and if they are practical to be used by people from all ages. This means a full analysis of the product can be carried out and the appropriate testing and modifications can take place before any manufacturing takes place. This saves time, money and materials that would be required.

QC/ QA

Make sure that no

ends of the material

are left to fray. This.

sthetics of the

real, losing its

fesign and cause it to

can ruin the

I attempted to create the tent using strap materials I coold find and recycle. The idea was to create a scaled down version of my design to show the functions I was not very pleased with the outcome of the model and so I have fully analyzed what reach to be improved. Design the model not going to plant, an one learn from this and not relieb the same mistakes going forward. I believe, the main problem was not using the correct materials that I have created as the property of the propert



Despite the model rist gold process a support of the process and process and evaluate and key hope to plan, there are pleany of parts to analyze and evaluate and key to plan. So to plan the process are a result. If it is reported to plan the process as a result. If it is reported to plan the process as success. Below I have commented some of the lessons I have learnt and the microcoments in the result be made to plan the process as success. Below I have commented some of the lessons I have learnt and the

Ensuring each part (each step) of the product is in line with upmost quality standards. To do this I will create a Quality Assurancy Quality Control page to have alongaide when I come round to manufacturing. This will be don through this use of a flow fact.

Use thisner materials on the outer shell of the term. The thick material did not provide the correct properties or functions. They don't look austhanizely pleasing and do not conform to the shape of the design. They create thick layers of materials which self be theory to carry and hard to compact.

The bottom of the term pole needs to be closer to the term material so that it doesn't make the corner rise. This will

The bottom of the term pote needs to be closer to the tent materials to that it doesn't make the corner rise. This will assily be possible with the cornect materials.

The material used frayed along every side making the model look scruffy and not aesthetically pleasing. This made

the model look enternely unprofessional and ensuccessful.

The tent poles need to be collapsible to allow compact storage to be carried around easily and efficiently. Find a

way to attach the poles to the tent so they cannot be left behind/ lost.

Areas of the model which did go well and with incorporate onto my final design:

The base of the tent occured extremely well. The thicker material on the bottom provides extra protection for the user. This is protection from both voter absorption and oneven surfaces. This thicker material also held the skepping are is extrawal, keeping are in extrawal.

The sleeping area was attracted on top of the base, securing it down with simple stitching. This meant it couldn't be moved amunic which provides ease when pocking the tent away.

be moved around which provides ease when packing the tent away.

To model the sleeping bag, I used bubble wrap with two heat sealed edges. This was a successful mode of how the real design will look.

After my evaluation of my model (will carry our same setting and produce modifications as a result. The animal for text model underly since successful will be begin in mid-and incorporated when underlying his process. One way in which full come to decisions about the best way to make changes is through secting. All testing and modifications will be about an animalised on a separate best. Exting allows me to find facts it in the design before manufacturing the final product. Texting allows small parts of the product to be made, reducing material wastage and skicking to my fine plan. It is important to thick theretwely in this stage, coming back to the design brief and specification and look at the original design proposals on the general away with unrealistic ideas, yet not allow this to interest stating.



sievers on the tent and attach sippers. To carry this out I used a seeing machine. The sevent machine I used only had one need and so coold only create one stitch line at a sime. Although this mean it took longer to stitch the towe. I used measurement guide to keep the material steady and so I kooks neat and professional. I used a backetich setting on the seeing machine each of the control of the seeing machine and work over each of the lines twice. This oversied a strong hold which is essential for this product.

I thought about the health and safety of the poles. The end of the poles agging-relatively sharp white could cause injury approach by the poles agging-relatively sharp white could cause injury. To eliminate the risk of injury it created rubber caps for the ends of the poles. Although this doors it stop the joint poles from thitting into people, the injury should be reduced. Another way to reduce their poles examing plany it to have them stacked to the text. This is something I am already looking its oal is created to the text. This is something I am already

Tis modeling was successful and my methods to complete this will be incorporated into my final manufacturing



Here I have taken the relevant part of my time plan to show where I should be up to at this part of the coursevort and how much time I should be sponfing on it. The Modelling section should be completed on the week commercing 26° Clothole and last for one week. This is exectly what has happened. I have clearly calculated a recallittle time farme and believe my time emanagement odds are excellent. The third piece of modeling I have completed is the connection points. To carry this out I had two potential

The first idea shown which )
Thatstated and described on my
design proposal is to have an
ent-epitide part from each of the
tenti being connected creating a
tenti being connected creating a
tennel shape. This does work with
the use of a simple 2p. The design
almost privacy as well as connection
between tents without giving
outside. However, the turner large
become incorrenient for some
creating a whole hour of developed.



The second method of carrying this out is to have one extendible part from one tent which attached onto a flat area of the second tent. This is a new idea that I have come up with and is shown in my first page of CAD development. The main reason for this modification is to reduce material wastage. This makes the product fit closely with the specification, improving on more than one area. Reducing weight means more convenience for user. reduce risks of back injury and Improve convenience. Having just one extendable means also means using less material, it reduces material costs and manufacturing costs, reducing the overall price of the tent. These are all areas described on my specification



Client comment:

Great detail and layout

# What current Year 10 students say about GCSE Graphics...

# Why did you choose to do Graphics as a GCSE?

- Because it really compliments my art skills and I can apply them to practical work as well as testing my ability to analyse and improve my own work.
- I chose Graphics as I really enjoyed the mini-projects we did at Key Stage 3. I also want to go into a creative career when I am older so I think it will help me.
- I liked the idea of a mix of creative projects and also learning more about the theory of Design and Technology.

# What would you say are the best things about Graphics in Year 10?

- I would say the best things is the fact that you can add your own personal touch to your products and designs.
- When it comes to projects it is up to you what creative spin you put into the design ideas. I can already see that I am developing my skills in Graphics as well as learning so much about the theory of the subject too.
- The freedom to come up with your own design ideas. When it comes to the theory you are glad as you can link all of the creative learning you have done to the history of design and also learn about how technology has developed over the years and allowed us to manufacture new products that get better and better with each iteration.

# What things do you think students considering taking Graphics at GCSE should consider before choosing it?

- The potential knowledge and its use for future jobs.
- If you like the idea of designing new things then this is the subject for you.
- It was important for me to know that the theory was linked to design as I want to be an architect. Knowing that we would learn about things like materials and processes and that there would be project based work was also quite important.

# What differences are there to what you thought the GCSE would be like (before staring Year 10), and what it is like now?

- There is an equal amount of focus given to the theory which I was surprised at, but really enjoy. I thought the projects would mostly be drawn by hand, but I like the fact we have learnt how to use computer based programmes too.
- I thought it would be a lot of hand drawn sketches and also writing, however we do a lot on computer and learn how to use new design packages such as Photoshop.
- I knew there would be a lot of work, however because I enjoy the mix of theory and design, it does make the work seem less. We also have one homework a week, which again is helpful rather than just finishing tasks.

### What you wish you had been told about GCSE that you didn't know at the Options Evening?

- That the project work always seems to link with the theory, so remembering key facts makes it easier.
- That the subject develops you as a person too, we have a lot of discussions in class with our peers and this is important in developing communication skills and confidence too.
- That there is always an opportunity to complete work or ask questions at Graphics Club which is on either at a lunchtime or after school.

# What sort of students should consider taking Graphics at GCSE?

- Ones who have high ambitions and goals with a strong will, so that when they face difficulties in the design and manufacturing of their product they're easily able to pick themselves back up. You don't need good art skills to do well in graphics either as we do use computers too.
- Anyone who enjoys designing, anyone who likes to find out about how products are designed with a customer in mind, and also those who are creative.
- A positive attitude and to understand that you need to work hard and be organised!

### **Common Career Paths**

- Product Design
- Interior Design
- Creative Design
- Automotive Design
- Architecture
- Graphic Designers
- Engineering
- Marketing
- Environmental Design
- Town and Country Planning
- Quantitate Surveyor
- Anything creative!

### Other paths our students have taken:

- Economics
- Maths
- Criminology
- Accountant/Finance

### Questions:

schillacirowlandd@presdales.herts.sch.uk