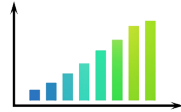


There will be an interim assessment in each units; strengths and areas for development will be identified.

1. Research To be able to differentiate between the different coloured signs and their meanings. Work through each common materials (timber and plastic) with each tool and piece of equipment to evaluate their suitability. Draw conclusions based on research. Choose a company from the list and create a questionnaire and survey to influence your design brief and initial ideas. Summarise the results and create a graph to represent the data. Create a 4 slide power point on a designer chosen from the list on the page. Include designer history/timeline, range of products, your favourite product and a conclusion slide of your overall views. Include positives and negatives.



2. Design Brief and Specification

Fill in activity on 'designers think...' Write how the 4 products listed cater for each disability they are designed for. Research how Japanese culture is different to our and fill in the sections on seating, housing and dining. Select a classmate and fill in the sheet about your classmate. Write what you found out and how it will impact your design work and brief. Read what a design brief is, underline key points, write your own design brief based on research and client (company) chosen for your passive amplifier.

Low stakes tests Performed half-terminly and are based around the skills learned

Assessments Half termly assessments based on level at which the work/tasks have been completed



5. Manufacturing

Students use their design work and begin to make their speakers from recyclable and sustainable timber/man made board. They start by measuring the wooden pieces into the correct size and shape. Students then cut using Coping Saws and Tenon Saws to achieve the desired outcome. Students use the pillar sander and palm sanders to smooth out the speaker and prepare for finishing. Students then assemble and solder their speaker and glue it to the speaker as a stretch and challenge activity. Students glue their speakers together with PVA, the solutions are then laser cut with a previously designed image. Students then varnish; ensuring multiple layers are applied and sanded back to achieve a commercially viable finish. Students complete a manufacturing diary evidencing their processes throughout the manufacturing process. Quality Assurance and control is followed throughout.

6. Analysis and evaluation

The product is analysed and evaluated based on FASTERCOMM elements, the product is tested against the specification created at the beginning of the product; to test continuity. Peer and self-assessment takes place. WWW and EBI are given. Feedback is acted upon where possible. Students that this iterative design process is important when designing anything from GCSE level to the workplace and beyond.

Low stakes tests Performed half-terminly and are based around the skills learned

SOLUTION



4. Design Development

Designs are chosen then developed in stages using the SCAMPER method. Ideas and stages are annotated using FASTERCOMM. Prototypes of the middle layer are made and drawn to scale. Production planning takes place to ensure a smooth manufacturing process.



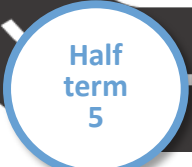
Assessments Half termly assessments based on level at which the work/tasks have been completed

Low stakes tests Performed half-terminly and are based around the skills learned



3. Idea Generation

Choose a designer from the list provided, select 3 pieces of their work to analyse. Print, cut and stick them into the spaces provided. Use plus and minus points to draw a conclusion on each. Justify your decisions as best as possible. This will be used to help develop their products. Follow the rendering rules to create 4 creative and unique ideas based on the research and design brief/specification in the space provided. Annotate using FASTERCOMM to 'tell the story' of the design.



7. Theory topics

To be able to describe the advantages and disadvantages of Remote working and understand impact of technology in society. To be able to Recall 6Rs and explain how they have been used. Linking to current project. Can you identify which 'R' is best and worse? As well as their impact on the environment. Write how each of the 4 products provided are or are not ergonomic. The products provided are made by the companies/designers we have looked at. Complete the close activity on ergonomics and re-design the computer mouse to make it more ergonomic. Use rendering rules to help.



8. Crumble

Students work through various examples of circuits and learn then develop logic based skills using the Crumble software, sparkles and motors. Crumble is an electronic controller. There are multiple difficulty levels and the activities become more complex and diverse as the student completes them. It uses a Scratch-like program to deliver the desired outputs. This Unit of work follows on from year 7 ICT and the soldering/electronic component element of the Speaker project completed previously in year 9.



Assessments Half termly assessments based on level at which the work/tasks have been completed

