

Year 7 - Design and Technology

Term 2-6 - *Passive Speaker*



Students are learning about..... at this point in Year 7 because...

Students will need to experience a workshop-based project and start to develop their practical and designing skills.

Previous topic: Core Skills

Next topic: Further DT rotation in either CAD, Food or Textiles

Core knowledge/skills/concepts

Students are to design and make a passive speaker that will work with their own mobile phone. A passive speaker is a dock for your mobile phone to sit in that will naturally boost the volume of any music played on the phone without the need for electronic speakers. Students will be able to use wood and plastics to make their passive speaker, but it must be no bigger than 150mm x 200mm in size. To get the best outcome, the inspiration for the design should be the favourite musical artist or band of the students. As always, students must try to be creative and challenge themselves to make something that is both original and will demonstrate a range of practical skills. Through this project the following skills and concepts will be covered:

- To understand how to be safe in a workshop when entering and using equipment
- To understand what templates are and how they can help designers
- To understand what a specification is
- To use a range of workshop tools, to mark up, cut, shape and finish wood including:
 - To understand how to safely drill with a Pillar Drill.
 - To use a jig to drill your plywood in the correct position.
 - To understand how to safely and accurately saw with a Tenon Saw, Coping Saw and file with a Flat file.
 - To position work in a vice correctly
- To develop creativity and presentation quality in their designing
- To respond to feedback in a constructive way to improve the quality of what you write and draw

Year 7 - Design and Technology

Term 2-6 - Passive Speaker



Essential vocabulary

- Tools, Machines, Equipment, Materials
- PPE, Goggles, Aprons
- Coping Saw, Belt Sander, Pillar Drill, File, Glass Paper, Vice
- Templates, Jigs, Measure
- Specification, Attributes
- Plywood

Threshold concepts

Students will be encouraged to take forward the concepts that 'health and safety is the most important thing in the workshop', 'teacher demonstrations need to be watched carefully and followed as shown', 'marking out is a really important skill to get right', 'do not rush practical work', 'mistakes are OK - and opportunities to learn from'. Students must also appreciate the importance of Specifications in DT.

Opportunities for reading

Any articles in the news that are to do with Design and Technology.

[Technology - BBC News](#)

How and when will the core learning be assessed?

Students will receive 'Live Feedback' throughout the project and be assessed at the end of this project on their communication skills and making skills. Students will then receive an overall mark for their work (out of 4). Students will also undertake a written assessment at the end of the project based on the theory covered.

Links to other topics/subjects

The practical and communication skills learned in this project will feed into and support all other workshop-based projects in KS3 and beyond.