Designing

Target Market	Your coat hook is designed for a younger child.
Inclusive design	This should be a product that anyone can use, so it must be simple and straightforward and need no special instructions
Gender neutral	Designs that appeal to all genders, and avoid stereotypes such as blue for boys, etc.

Materials

MDF	Is a wood based composite made up of chippings and find wood dust bonded together with strong adhesive. It has no grain structure and is therefore weaker than natural wood.
Composite	Composites are materials that are made up of more than one type of material.
Acrylic	A type of hard, brittle plastic. Acrylic is available in transparent, transluscent or opaque colours. It can be cut with a saw, filed, drilled and sanded
Thermo-plastics	Thermoplastics can be heated and shaped many times. This makes them recyclable
Properties	Properties include physical (how a material looks) and mechanical (how a material can be manipulated)

Manufacture

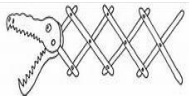
Polishing	You can use very fine grit wet and dry paper to polish acrylic, to restore the glossy edge after filing. This will enhance the quality of your product
Batch production	Because you are making a product from a limited choice, others in your class will be making the same as you. This is an example of a small batch produced product
Template	Templates can be used to aid accuracy when marking out, to locate the position of drill holes and to make multiple copies of the same product
Cone Drill	You will use a cone drill to make conical holes for your speaker. This will help the sound reverber-ate and project forward

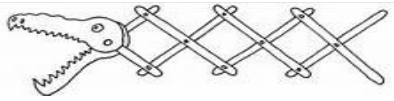
Explore—STEM links

Mechanism	You will be making a simple mechanism to create a movement. The mechanism you make will change an INPUT movement into an OUTPUT movement
Motion; 4 types	Linear - movement in a straight line Rotary - movement in a circle Oscillating - a swinging movement Reciprocating - movement back and forward along the same line
Lever	Levers are used to give mechanical ad-vantage, usually to produce a bigger output movement (force) from an input movement (force)

Functionality

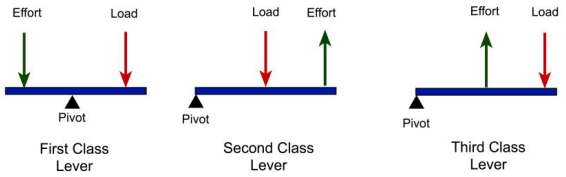
Linkages	A mechanical way to join two or more levers together. Linkages allow distances to be spanned, an example of this is a brake system on a bike. You pull the lever and the linkages move further away on the wheel
INPUT	The movement you put into a mechanism, e.g. pulling a lever. When you hang a coat on the hook of your product it pulls the linkage down, providing an input movement
OUTPUT	The movement you want to create as a result of the input, e.g. the ears or wings on your product





Critique

Using criteria	You will be given a set of success criteria to make a judgement on how well made your product is. You will also use these criteria to evaluate products made by your class mates



Vocabulary used in materials—MDF Composite Plastics Acrylic Thermoplastics Batch Production Properties Levers Linkage

Health and Safety - Wear protective clothing. Tie long hair back. Listen to instructions. Use the correct technique. Stay calm and sensible at all times. Tidy up after you have finished. Use the correct equipment safely

Year 8 Product Design Knowledge Organiser: Coat Hook