

# **Year 8 Tech**

If you are working on this booklet it means we aren't at school for a while. The work inside is to compliment the skills we have been developing in lessons.

Try your best to have a go at all of the activities. Some of them you may find a little bit tricky but have a go and see what you can do.

If you need any help you can always email me and I will reply as soon as I can.

Miss Ashby

**LO: To investigate the Bauhaus movement in relation to the design of products and be able to use it in the design of a chair.**

**MUST:** Know what the Bauhaus movement is. Design ideas link to the principles of Bauhaus and have some simple annotation.

**SHOULD:** Explain the main principles of the Bauhaus movement. Design ideas are based on the principles of Bauhaus and are annotated to explain the design decisions.

**COULD:** Explain how the principles of the Bauhaus movement influenced the design of products. Design ideas link directly to the principles of Bauhaus and are annotated to explain their strengths and weaknesses.

## The Bauhaus



The Bauhaus was the most influential modernist art school of the 20th century, one whose approach to teaching, and understanding art's relationship to society and technology, had a major impact both in Europe and the United States long after it closed. Bauhaus combined crafts and fine art and was founded by an architect Walter Gropius. It was designed as a total art school, covering all areas of creativity and design. Bauhaus focused on simple lines, geometric shapes, primary colours and black and white and purity of shape and form.

1. Who was the Bauhaus founded by?

2. What did Bauhaus combine?

3. What did Bauhaus focus on in the design of products?

4. How have the principles of Bauhaus influenced the design of this product?



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5. How have the principles of Bauhaus influenced the design of this product?



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Produce a chair design in the style of Bauhaus, use the images as inspiration for your design. Annotate your design idea to explain how it fits in with the principles of Bauhaus.

Design Idea

1. How does your chair design fit in with the principles of Bauhaus?

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2. What materials do you think your chair would be made from and why?

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3. Who do you think your chair would appeal to? (Who would use it?)

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**LO: To develop knowledge of softwoods and hardwoods.**

**MUST:** Know what a softwood and hardwood are.

**SHOULD:** Be able to name different types of softwood and hardwood and know their uses.

**COULD:** Know the properties of typical softwoods and hardwoods. Know which materials would be most suitable for different jobs.

### **Softwoods**

**Use the information on the next page to help answer these questions.**

1. What types of trees do softwoods come from?

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2. What are the properties of softwoods?

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3. Describe scots pine.

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4. What are the typical uses of softwood pine?

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5. What is the difference between scots pine and parana pine?

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6. Which softwood is used for boat building?

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7. Which softwood is lightest in colour? Describe it's appearance.

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8. What makes softwoods relatively renewable?

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# Softwoods











Softwoods come from coniferous trees which have needles instead of leaves. Softwoods grow faster than hardwoods and so are cheaper they are also easier to work with as they are typically softer than hardwoods. This makes them ideal for using in the construction trade because they are cheap and relatively renewable with their fast growing speeds.



Softwood properties:



- Softwoods come from **coniferous** trees. (they do not loose their leaves)
- Softwoods have **needles** instead of **leaves**.
- Softwoods grow **faster** than **hardwoods** this makes them cheaper.
- Often used as **building** material.
- Trees grow tall and straight which makes it easier for the **manufacturer** to cut long straight planks of wood.

<u>Softwood types</u>	<u>Grain image</u>	<u>Softwood uses</u>	<u>Example product</u>
Scots pine - A straight-grained softwood but knotty. Light in colour. Fairly strong but easy to work with. Cheap and readily available. A softwood.		Used for DIY and cheap quality furniture. Mainly used for constructional work and simple joinery.	
Parana pine - Hard and straight-grained. Almost knot free. Fairly strong and durable. Expensive. Pale yellow in colour with red/brown streaks. A softwood.		Used for good quality knot free pine red / brown furniture such as doors and staircases.	
Spruce - Creamy-white softwood with small hard knots. Not very durable. A softwood.		Used for general indoor work, whitewood furniture used in bedrooms and kitchens.	
Yellow cedar - A pale yellow-coloured softwood with a fine even texture. Light in weight but stiff and stable.		Used for furniture, boat building, veneers, and model making.	
European redwood - Quite strong, Lots of knots, durable when preserved. cheap		Used for general woodwork, cupboards, shelves, roofs.	

## Hardwoods

**Use the information on the next page to help answer these questions.**

1. What types of trees do hardwoods come from?

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2. What are the properties of hardwoods?

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3. Describe beech.

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4. What are the typical uses of beech?

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5. Describe oak.

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6. What are the typical uses of oak?

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7. Which hardwood is used for outdoor furniture and which of its properties make it suitable?

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8. Which hardwood isn't hard and what are the typical uses of it?

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9. What are the differences between softwoods and hardwoods?

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# Hardwoods







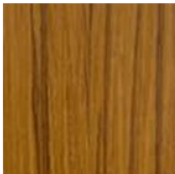



Hardwoods come from deciduous or broad-leaved trees. They are generally slow growing which tends to make them harder and more expensive. Please note though that not all hardwoods are hard, Balsa which is very soft and is often used for model planes is in fact a balsa wood!



## Hardwood properties:



- Hardwoods come from deciduous or broad-leaved trees.
- Hardwoods are special as they are deciduous this means they lose their leaves in the autumn/winter months.
- You can distinguish hardwoods by the structure of the wood grain.
- Hardwoods grow slower than softwoods so they are more expensive.

Hardwood types	Grain image	Hardwood uses	Example product
Beech - A straight-grained hardwood with a fine texture. Light in colour. Very hard so is ideal to be used where it is being bashed around and used often. Beech is also very easy to work with.		Used for furniture, toys, tool handles. Can be steam bent.	
Oak - A very strong wood which is light in colour. Open grain. Hard to work with. When treated it looks very classy and elegant. A hardwood.		Used for high class furniture, boats, beams used in buildings, veneers.	
Mahogany - An easy to work wood which is reddish brown in colour. This wood is very expensive. A hardwood.		Used for expensive indoor furniture, shop fittings, bars, veneers.	
Teak - A very durable oily wood which is golden brown in colour. Highly resistant to moisture and outdoor weather. A hardwood.		Used for outdoor furniture, boat building, laboratory furniture and equipment.	
Balsa - is a pale white to grey. It has a distinct velvety feel. It has exceptional strength to weight properties. It is the lightest and softest wood on the market. A hardwood.		Used for light work such as model making and model airplane construction.	

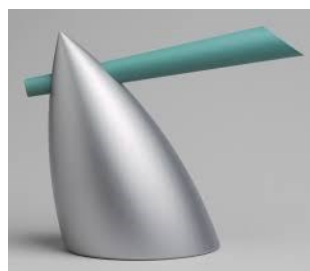


<b>LO: To evaluate an existing product using ACCESSFM.</b>
<b>MUST:</b> Use ACCESSFM to make simple points about an existing product.
<b>SHOULD:</b> Explain the points made giving reasons.
<b>COULD:</b> Include your own opinion about what are the strengths and weaknesses of the product.

### Analysing Existing Products

A	Aesthetics	What does the product look like?
C	Customer	Who has the product been designed for? Who would use it?
C	Cost	How much would it cost to buy and why?
E	Environment	What impact does the product have on the environment? (Can it be recycled? Is it made from a sustainable material—one that can be replaced?)
S	Size	How has it been designed to be a suitable size? How has it been designed to fit with the size of people?
S	Safety	How has it been designed so it is safe to use? (Are there any small parts? Are the corners rounded? Does it have a smooth finish?)
F	Function	What does it do?
M	Materials Manufacture	What is it made from? How is it made?

**Philippe Starck** is a French designer known since the start of his career in the 1980s for his interior, product, industrial and architectural design including furniture. He believes that his role is to create more 'happiness' in the world. He likes to design objects that can be mass produced and are relatively affordable. However he believes in 'honesty' and 'integrity' in design and aims to make products which are both useful and durable. Although his designs sometimes look amusing, they are not created as throwaway artefacts and are made to last.

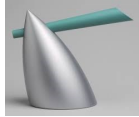


Above are products designed by Philippe Starck.

What does Philippe Starck believe his role in designing is?

What principles are behind Philippe Starck's designs?





Circle the design you are going to do your product analysis on.

A	Aesthetics	
C	Customer	
C	Cost	
E	Environment	
S	Size	
S	Safety	
F	Function	
M	Materials Manufacture	

**LO: To be able to recall tool names and their uses.**

**MUST:** Know the name of some of the tools and what they are used for.

**SHOULD:** Know the names of the tools and what the tools are used for.

**COULD:** Identify some key features of the tools.

### Hand Tools

Below are some of the tools you will be using this term. Label and then explain what the tools are used for in the spaces provided.

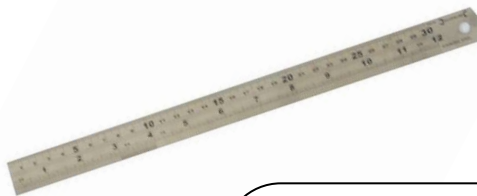


Tool name:

This tool is used for:

Tool name:

This tool is used for:



Tool name:

This tool is used for:



Tool name:

This tool is used for:



Tool name:

This tool is used for:



Tool name:

This tool is used for: