Design and Technology Knowledge Organiser



What is Health and Safety?

Safety is anything that people do to protect themselves or others from harmful accidents.

People can prevent accidents by following safety measures (rules). Safety measures involve knowing when an accident might take place and then taking steps to keep it from happening.



Risk – a chance of getting hurt by something (what could happen?)



Hazard – something that is dangerous and likely to cause harm.



Prevention – the act of stopping something or someone from doing something that could cause harm.



Risk Assessment – a way of identifying risks in activities or situations when using objects.



Emergency Stop

Used in an emergency to cut the power to the machinery. Can be turned off by another person in the event of an accident.

Health and Safety signs

Yellow signs show a warning, hazard or risk.





Caution Wet floor

Red signs show 'danger' and are 'do not' commands.



Blue signs show safety activities or actions that MUST be followed.





Green signs show emergency information





Tools and Equipment

Picture	Name	Function	
	Vice	To hold material firmly in place	
D some	Tenon Saw	Cut rough, straight lines	
	G-Clamp	Secure material to machines or worktop	
	Abrasive Paper	Smooth material by hand	
	Coping Saw	Cut curved, intricate lines manually	
	Fret Saw	Cut curved, intricate lines mechanically	
	Band facer	Quickly smooth edges on wood	
	Pillar Drill	Create holes in material	

Workshop Rules

No running.

Wear an apron.

Do not use machinery, tools and equipment until you have seen a demonstration on how to use it.

Listen carefully and follow teacher instruction.

Stop what you are doing when asked.

No messing about or silly behaviour.

Tie back long hair.

One person to a machine.

Coats, bags and blazers stored safely out of the way.

Timbers

Timbers can be split into 3 subcategories; hardwood, softwood and manufactured board.

Keyword	Definition	Symbol
Property	Characteristic and qualities of a material.	
Example	The name of the material, where it comes from	(C)=
Hardwood	Wood from trees that shed their leaves in the winter (deciduous)	- المارة - المارة
Softwood	Wood from trees that keep their leaves all year round (coniferous)	条 条
Grain	The growth rings visible in wood.	
Manufactured Board	Made from gluing particles or pieces of wood together	(a)

Hardwood

- Deciduous trees
- leaves are flat and broad
- Take a long time to mature
- Expensive

Oak

Mahogany

Beech

Balsa



Softwood

- Coniferous trees
- Needle like leaves with cones
- Take a short time to mature
- Cheap

Pine

Larch

Birch Spruce



Manufactured Board

- Made from timber waste and adhesive.
- Can be purchased in desired stock form size
- Often veneered.
- Cheap to buy.

MDF

Chipboard

Plywood

Blockboard



What is a Mind Map?

What is a Design Brief?

A design brief is a statement a client

gives to the designer outlining the

aims and objectives with what they

want their outcome/project to be.

A Mind map is a visual way of linking key concepts using key words, lines or photos.

Strength and durability

Why choose timber?

- Aesthetics and design possibilities
- Environmentally friendly material
- Easy to work with
- Long-lasting quality
- No waste

What is Analysis in DT?

Design analysis is a process that involves evaluating and modifying design ideas.