






Timber and manufactured boards	
Hardwood	<ul style="list-style-type: none"> - comes from deciduous trees that lose their leaves each year - thick trunk with branches - have a close grain and tend to be denser and heavier than softwoods
Hardwood types	Oak, Mahogany, Teak, Beech, Sycamore, Willow, Ash
Softwood	<ul style="list-style-type: none"> - comes from coniferous/ evergreen trees with needles not leaves - faster growing than hardwood trees - grow tall and straight with branches all the way up - has more knots than hardwood
Softwood types	Scots pine, Parana pine, Spruce, Cedar, Redwood
Manufactured board	<ul style="list-style-type: none"> - can be made from hardwood or softwood - made by gluing and compressing wood fibres or layers together - can be made in large sheets that are easy to work with - generally cheaper than 'real' or natural wood
Manufactured board types	Medium density fibreboard/ MDF, Plywood, Chipboard, Blockboard

Ferrous and Non-ferrous metals and Alloys	
Metals come from underground ores that are extracted, processed and refined into metal bars, sheets and other forms ready for use.	
Ferrous Metals	<ul style="list-style-type: none"> - contain iron (Fe) - are magnetic - corrode quickly if a suitable surface finish is not applied
Ferrous metal types	Mild steel, carbon steel, cast iron, wrought iron
Non-ferrous metals	<ul style="list-style-type: none"> - DO NOT contain iron - better corrosion resistance than ferrous metals - generally more expensive than ferrous metals
Non-ferrous types	Aluminium, copper, tin, zinc, silver, gold
<p>Alloys are metals made by combining two or more metals, and occasionally other elements, to improve the properties of the alloy. The metals are carefully chosen to improve hardness, or strength, reducing the melting point, or making the alloy more lightweight. Alloys generally have one main metal with small quantities of others added. Alloys are generally cheaper than non-ferrous metals, but more expensive than ferrous metals.</p> <p>Although still classed as ferrous metals, carbon steel (mixed with small amounts of carbon) and stainless steel (mixed with small amounts of chromium and other elements), can also be classed as ferrous alloys</p>	
Alloy types	Brass - copper and zinc Pewter -85-99% tin, with copper, antimony and bismuth Duralium - 95% aluminium, 4% copper, 0.5% manganese and magnesium Bronze - copper and tin

Thermoplastic polymers	
Thermoplastic polymers	<ul style="list-style-type: none"> - soften when heated and harden once cooled (but can be reheated and reshaped if needed) - due to ability to be reheated and remoulded can also be recycled - when reheated, if not reshaped, will return to their original shape e.g a flat sheet. This is called plastic memory
Thermoplastic Polymers	
	PET - Polyethylene Terephthalate - strong, lightweight, hygienic and shatterproof. Used for bottles/containers for food and drink. Most commonly used polymer in the world.
	HDPE - High Density Polyethylene - extremely strong, durable. Used to produce corrosion resistant piping, building materials and packaging for thick, heavy liquids such as shampoo, bleach and other cleaning products.
	PVC - Polyvinyl Chloride - both rigid and flexible forms. High tensile strength, durable, long lasting and robust. Flexible PVC - used to make bottles, packaging and medical devices e.g blood bags. Softer forms used as flooring, cabling, clothing, insulation and inflatable products. Rigid PVC - commonly used in construction and plumbing as pipes, doors and windows.
	LDPE - Low Density Polyethylene - flexible, strong, can be used in corrosive environments. Used to make carrier bags, bin liners, packaging films and other flexible items such as foams, squeeze bottles and toys.
	PP - Polypropylene - colourfast, heat resistant, fatigue resistant, highly resistant to corrosion and chemical leaching. Semi-rigid plastic, ideal to use on items such as hinges and flip top caps. PP commonly used for packaging food and non-food items, as well as reusable food containers, housewares, ropes, carpets, car parts and laboratory equipment.