

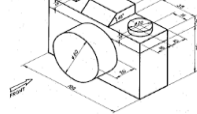
## Key vocabulary

SPECIFICATION	A list of measurable design criteria that the product must meet
ANALYSIS	Detailed examination of something
GRAIN	The growth rings visible on the surface of wood, making its structure
WORKING DRAWING	A scale drawing that show the dimensions of a part
ACCURACY	A degree of closeness to a measurement, standard or value
FUNCTIONALITY	How well a product fulfils the purpose it is designed to meet.
VENEERS	A thin layer of wood
QUALITY CONTROL	Testing and checking that a product meets the specification
JIG	A custom made tool designed to hold work and achieve accuracy repeatedly.
SEASONED WOOD	Timber which has been dried out to make it more stable
COMPONENT	Electronic parts which are soldered together to make a circuit
PERMANENT	Cannot be taken apart without damage
TEMPORARY	Can be taken apart or adjusted without damage

## YEAR 9 ANGLEPOISE LAMP

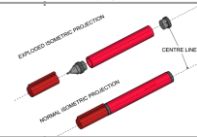
### Core knowledge and skills design

Isometric Drawing



Isometric drawings are 3D drawings. They show three sides, all in dimensional proportion. All the vertical lines are drawn vertically but all horizontal lines are drawn at 30 degrees to the base line. Isometric is an easy way of drawing 3D images.

Exploded isometric



A 3d drawing which show how the parts of a product fit together. Each part should be lined up and the correct size relative to the other parts. Useful when showing a product with many parts that need to be assembled.

## The work of others - designers

ETTORE SOTTsass



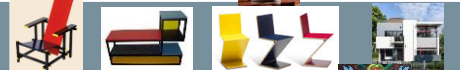
NORMAN FOSTER



MARCEL BREUER



GERRIT RIETVELD




WILLIAM MORRIS




## MATERIALS


**Softwoods** come from coniferous trees which have needles instead of leaves. Softwood grows faster than hardwoods and tend to be cheaper to buy. Softwoods are easier to work with as they are softer because the grain is more open.




**Hardwoods** come from deciduous trees. This is a broad-leaved tree which loses its leaves in the winter. Hardwoods take a lot longer to grow than softwoods—one of the reasons why it is a more expensive to buy. The grain is tightly packed making it hard to work with.



**Plywood** constructed from thin veneers glued together with the grain structure at 90° to each other...very strong and tough to work with.



**MDF—Medium Density Fibreboard** is a composite material, made of two materials—wood fibres and glue. MDF is a man-made product. Panels are made by applying high temperature and pressure. There is no grain making it easy to work with.



A

### Aesthetics

What does the product look like; theme, colour, texture, shape the appearance

C

### Cost

Does the product look expensive to make? Look closely at the fabric choice

C

### Client

Who is the product aimed at? Explain. What makes you think this?

E

### Environment

Think the 6Rs? Have they been applied? Where will the product be used?

S

### Safety

Is the product safe to use? Explain. What about making it?

S

### Size

Measure the product. Is it a good size? Is it comfortable to hold?

F

### Function


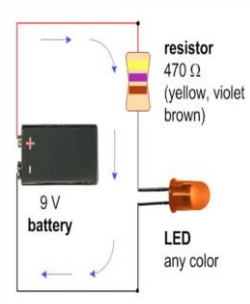


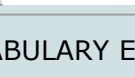
What is the main purpose. What other functions can it do?

M

### Materials

Try to name the material used. Look at the different components. Has it been recycled?

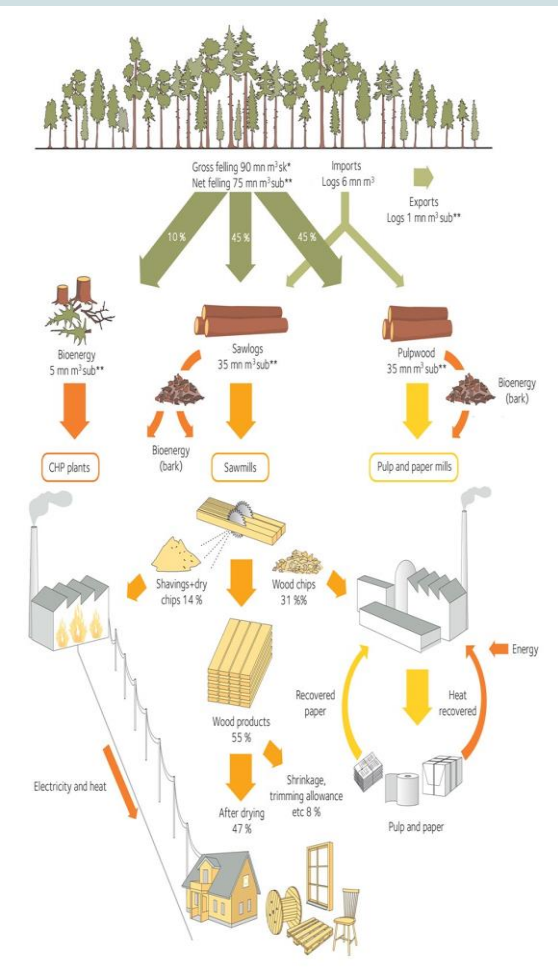
# Core knowledge ELECTRONICS

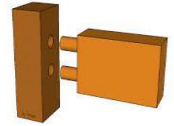

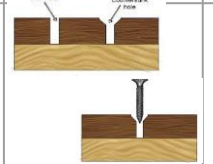
SOLDERING IRON		 <p>resistor 470 Ω (yellow, violet brown)</p> <p>9 V battery</p> <p>LED any color</p>
IRON HOLDER		
SOLDER		
SIDE CUTTERS		

## KEY VOCABULARY ELECTRONICS

INPUT	The part of a system or circuit that takes something in, e.g. a sensor, switch or input socket.
PROCESS	The central part of a system or circuit that changes the input(s) in some way, e.g. amplifies it.
OUTPUT	The end of the system or circuit that could be the generation of light, sound or movement
CURRENT	CURRENT The flow of electricity, measured in AMPS. This can be likened to the flow of water
VOLTAGE	VOLTAGE The amount of energy (push) behind the flow of electricity. Measured in VOLTS
POWER	Voltage multiplied by the current, measured in WATTS
RESISTANCE	The opposite to flow. A reduction in the flow of electricity through part of a circuit or component. Measured in OHMS

# TECHNICAL KNOWLEDGE



<b>Dowel Wood joint</b>		Permanent
<b>Nut and bolt</b>		Temporary- can be adjusted
<b>Countersunk woodscrew</b>		Temporary can be adjusted

## TOOLS & EQUIPMENT Write in the names once you know them

