

# Year 4 - DT Knowledge Organiser

## Construction / Electrical Components

### Wooden Beach Huts

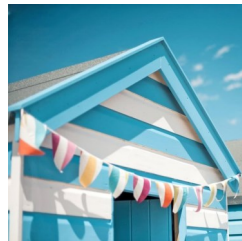


#### What I remember from Year 3...

- How to use a metal safety ruler to measure accurate cutting lines.
- A buttress can be added to a structure to make it more stable.

#### Key Knowledge...

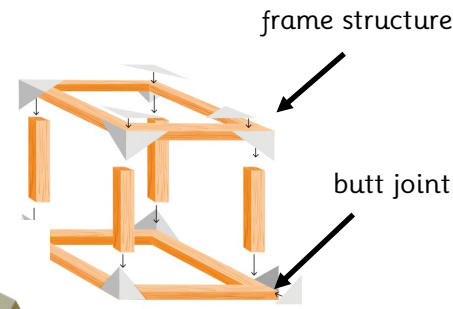
Beach Huts are small buildings that some people use when they go to the beach. They provide shelter from the sun, wind and rain, and people can get changed in them. Beach huts are usually built from wood. They have a door, a window and a roof. They are usually painted in bright colours and can be decorated with bunting.



#### Design...



cardboard cladding



frame structure

butt joint

cardboard triangle

cardboard roof

There are different ways to support a frame to make it more stable.

#### Frederick Percy Dolamore

Frederick designed and built the first public beach hut in Bournemouth UK in 1909. He was the town's Chief Assistant Borough Engineer and Surveyor.



#### Key Vocabulary...

**Struts** - A connector that is added to hold / strengthen a structure.

**Adhesive** - A substance used to stick materials together.

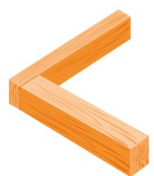
**Gusset** - A piece of material used to strengthen a frame.

**Cladding** - Material used to cover / provide a layer.

**Prototype** - A sample or model used to test ideas.

**Circuit** - A complete circular path that electricity flows through.

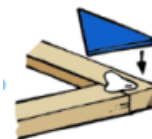
**Clamp / Vice** - Used to hold wood firmly, so that it doesn't move.



butt joint

A simple butt joint is when two pieces of wood are joined together using an **adhesive**. E.g. wood glue.

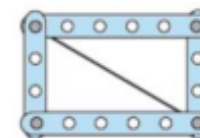
The joints of a frame can be strengthened using cardboard **gussets**. Triangles are stronger shapes than squares. This is called triangulation.



Diagonal **struts** on the inside of a frame can strengthen.

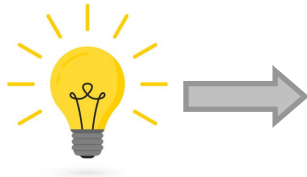


The wider the base, the more stable a frame is.

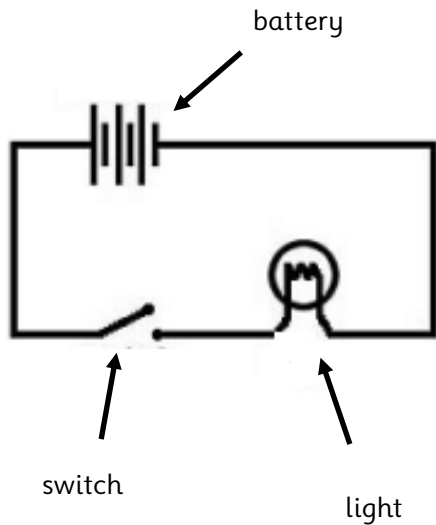


## Key Knowledge...

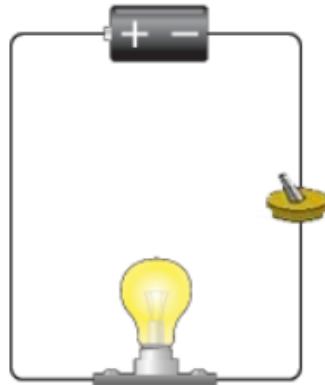
Let's add a light to make your Beach Hut light up! You will need to connect a circuit.



A complete **circuit** contains a battery (cell), wires and a component that requires electricity to work. E.g. a bulb, motor or buzzer.



A switch controls the flow of the electrical current around the circuit. When the switch is off, the current cannot flow.



## Key Skills...

Choose a suitable material or reinforcing and strengthening corners of wood.



cardboard



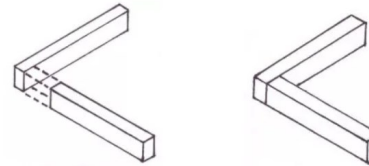
paper



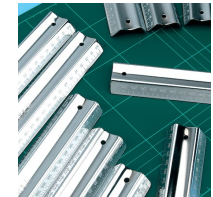
fabric



Create some **prototypes** of butt joints.



Use a metal safety ruler to measure pieces of wood accurately.



Use a saw to saw wood safely, using a vice or clamp to hold the wood securely.



clamp



vice

## Health and Safety...

**If you use a low melt glue gun.....**

- Always use with an adult.
- Don't touch the nozzle or the glue.
- Always point the gun down when gluing.
- Use the stand to place it safely on the table when you aren't using it.

