



Be the best that we can be.

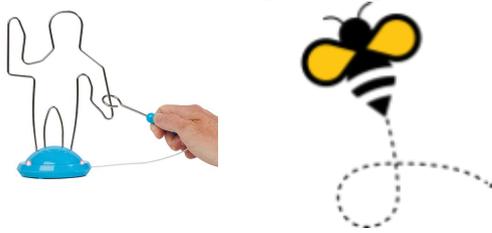
EBJ Knowledge Organiser Design Technology Year 6

Spring 1 Steady Hand Games



Curriculum Overview

Pupils learn to explain simply the difference between a product's form (its shape and its function) how it works. They evaluate existing children's toys, stating what they like or dislike and giving reasons for their opinions. Building on this, pupils explore the skills developed through play and apply this understanding when surveying one or more toys. They then identify the key components of a steady hand game and use their design criteria to create their own concept, presented through four different perspective drawings. Pupils construct a secure, neatly finished base that reflects their design, make and test a functioning circuit, and assemble it safely within a case to complete their steady hand game.



Circuit Symbols

Circuit symbols:

wire

switch open

switch closed

battery

buzzer

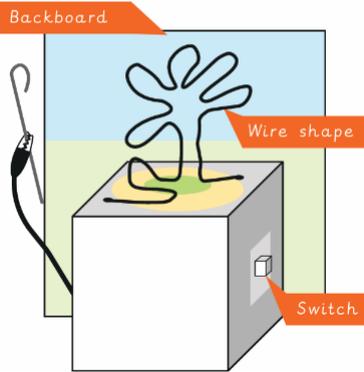
bulb

- The circuit should be a full working circuit that contains the **components** of: a battery, wires, a switch and either a buzzer or a bulb.
- When the handle of the game touches the wire, this **closes the circuit** and causes the buzzer or bulb to sound/light.

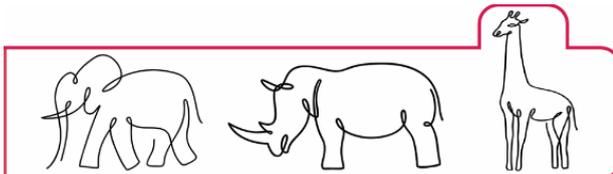
Design Criteria

- Who is the game for?
- What theme will your design be (Bear in mind the target audience)?
- Will it have a full working circuit?
- What shape will your wire be?
- How will you design the backboard?
- Will you design a box at home or use one of the cuboid nets to make your

The more complex your wire shape, the harder your steady hand game will be, especially if the bends are close together.



OWN



base?

Key Vocabulary

Backboard	A background designed for the steady hand game.
Battery	A cell or connected group of cells which store electrical energy.
Bulb	A component which gives light when electricity passes through it.
Buzzer	A component which makes a loud noise as electricity passes through.
Circuit	A collection of components which make an electrical system.
Conductor	A material that allows electricity to flow through it. e.g. metal.
Copper	A metal material that is one of the best conductors of heat and electricity. It is often used to make wires and pipes.
Function	How an object or product operates or works.
Insulator	A material that does not allow electricity to flow through it. e.g. plastic.
LED	A light emitting diode which lights up as electricity passes through.
Magnetic field	The area around a magnet where there is magnetic force.
Net	A 2D flat shape, that can become a 3D shape once assembled.
Pliers	A metal tool used for holding, twisting or cutting wire.
Prototype	A simple model that lets you test out your idea, how it will look and work.
Series circuit	A closed circuit where the current only follows one path.
Side view drawing	An engineering diagram which shows the dimensions (width, depth, length) of the side (left or right) of a product.
Switch	A component which opens and closes to turn the circuit on or off.
Side view drawing	An engineering diagram which shows the dimensions (width, depth, length) of the side (left or right) of a product.
Test	To find out whether something works as it should.
Top view drawing	An engineering diagram which shows the dimensions (width, depth, length) of the top of a product.



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