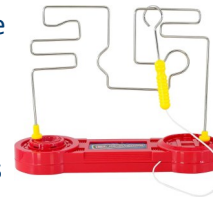


What is a Steady Hand Game?

The Steady hand game involves trying to get a metal loop on a handle from one side of a wavy wire to the other, without the two touching.

The game works because it is made from an incomplete electrical circuit. When the metal loop touches the metal wire shape track, the circuit is completed and the buzzer will sound!



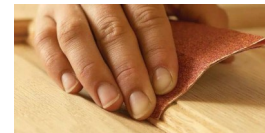
Problem solving

If the buzzer does not sound when the circuit is complete, you will need to problem solve to find out why it is not working. You could try:

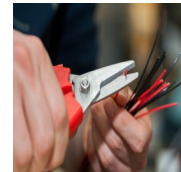
- Check batteries are correct way round in cage.
- Ensure the wire is secure in terminal block.
- Check that the batteries are working (try in circuit that is working).
- Ensure the circuit is connected to shape track securely without a gap.
- Check additional components are functioning by replacing them one at a time, e.g. buzzer and battery cage.

Key Skills

Smooth wood by sanding —rub sand paper against the wooden base to smooth the rough edges.



Strip the wire—using scissors, cut down through the rubber but not hard enough to cut through the wire. Rotate the scissors and then pull the rubber off, exposing the copper wire.



Bend the wire—using hands.



Join two wires —loosen the screw in the terminal block by turning the screwdriver left. Insert the wire into the connector and then, holding it in place, tighten the screw by turning the screwdriver right to secure.

Secure buzzer onto base by screwing it onto the wooden base. Use 2 screws, pushing down into the wood while rotating the screwdriver right.

Use a glue gun to secure components to wooden base—insert glue stick if needed, allow to heat up, squeeze trigger to release glue pointing nozzle on component, place on stand when not in use.



Key Vocabulary

Vocabulary	Definition
Components	A part or element of a larger whole.
Copper wire	A copper wire is a single electrical conductor made of copper.
Terminal Block/connector	These are simply used to connect two wires together.
Flexible	Capable of bending easily without breaking.
Heavy duty	Material designed to withstand the stress of manipulation.
loop	A shape produced by a curve that bends round.

Games Links <https://wordwall.net/resource/25989001/we-are-engineers-steady-hand-game-vocab>