

Project glossary

3-core flexible cable

A flexible cable used in household electrical wiring, containing three copper wires: the live wire, earth wire and neutral wire.

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appliance

A piece of electrical equipment used in the home.

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battery

A number of cells connected together.

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battery holder

A component that holds one or more cells.

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brass

A conductive metal that is used to make the pins in a plug.

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buzzer

A component that makes a sound when part of a complete circuit.

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cartridge fuse

A small safety device inside a plug that breaks the circuit if it becomes overloaded.

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cell

A store of chemical energy that can be converted to electrical energy and used as a power source.

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circuit

A collection of components connected by wires through which electricity can flow.

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coding

A language used to give instructions to a computer.

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complete circuit

A circuit that has no gaps in it, so electricity can flow around it.

component

A device used in an electrical circuit.

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conductive

Able to let electricity pass through.

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conductor

A material through which an electric current can flow.

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copper

A metal that is used inside electrical wires because it is conductive.

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core

The middle of a wire, usually made from copper.

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crocodile clip

A metal clip that is used to join electric wires to other components.

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earth wire

A green and yellow wire inside a 3-core flexible cable that does not carry an electrical current unless there is a fault. It is a safety wire that helps to prevent electric shocks.

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electrical conductivity

The ability of a material to allow an electric current to pass through it.

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electric current

The flow of electric charge through a circuit.

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electric shock

A sudden, painful feeling when an electric current flows through the human body.

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electricity

A form of energy that provides power and makes appliances work.

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filament

A thin wire inside a light bulb that produces light.

incandescent light bulb

A light bulb that produces light when an electric current flows through a filament, making it heat up and glow.

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incomplete circuit

A circuit that has gaps in it, so electricity cannot flow.

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insulator

A material that does not allow an electric current to pass through.

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lamp

A component with a bulb and a holder that emits light when part of a complete circuit.

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light bulb

An electrical device that produces light.

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light-emitting diode (LED)

A device with two legs that emits light when part of a complete circuit.

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live wire

A brown wire inside a 3-core flexible cable that carries an electric current into an appliance from the mains socket.

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mains electricity

Electricity generated in power stations and supplied to buildings through power lines.

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material

The substance that things are made from, such as metal, plastic or wood.

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micro:bit

A small, programmable computer with an LED light display, buttons and sensors.

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motor

A component that creates movement when part of a complete circuit.

neutral wire

A blue wire inside a 3-core flexible cable that carries the electrical current out of the appliance back into the socket.

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non-conductive

Unable to let electricity pass through.

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power station

A building or group of buildings where electricity is produced.

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programmable

Able to be programmed so that a machine will perform actions automatically or in a particular order.

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push-to-break switch

A switch that is normally closed. Pushing the button opens a gap and creates an incomplete circuit.

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push-to-make switch

A switch that is normally open. Pushing the button closes a gap and creates a complete circuit.

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pylon

A tall structure that carries power lines from power stations to buildings.

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rechargeable

A battery that is able to have its electrical energy restored.

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reed switch

An electromagnetic switch used to control the flow of electricity in a circuit. It is operated by a magnet.

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resistance

The ability of a conductor to oppose the flow of an electric current.

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rocker switch

A switch that works like a seesaw. When one end is pressed, the other end pops up.

sensor

A device that detects changes in the environment.

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series circuit

A circuit that forms a loop with a single path for an electric current to take.

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socket

A device in a wall where equipment is connected to mains electricity via a plug.

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source

Where electricity comes from, such as a cell or the mains.

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switch

A component that can make or break a circuit.

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three-pin plug

An electrical plug with three metal pins that fits into a socket.

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toggle switch

A switch that is activated by a lever.

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tungsten

A conductive metal that is often used as a filament in an incandescent light bulb.

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wire

A conductive core coated in insulating plastic that an electric current flows through, connecting other electrical components.

Scientific terms glossary

bar chart

A type of chart that uses blocks or rectangles to show different amounts.

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compare

To look at two or more things closely and see what is the same or different.

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conclusion

An explanation of what has been found out using data collected.

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data

Collected information or facts, including numbers, words, measurements or observations.

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diagram

A drawing with labels that show the parts of something.

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equipment

An object or objects that are needed for a particular purpose, such as a data logger or light meter app.

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fair test

A test or investigation in which only one variable is changed each time measurements are made.

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findings

The information or facts that a person discovers from carrying out an observation, investigation or research.

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investigation

An activity that involves a person studying a subject or problem carefully to learn facts or answer a question. An investigation includes planning, doing, recording and reviewing stages.

method

A set of instructions or steps to follow in a specific order to complete a particular task.

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observe

To watch or look at something carefully.

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prediction

A statement made by a person where they say what they think will happen in the future, using their knowledge or experiences.

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question

Something we ask using the words how, what, where, when, who and why.

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record

To write down data or observations, such as numbers, measurements or words, using lists, tables, charts or labelled diagrams.

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research

To study a subject to discover new facts or information.

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results

The data collected from an investigation or test.

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table

A way of recording data in rows and columns.

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variable

A factor, such as an object or condition, that changes during an investigation.