

D&T – Electrical Systems: Monitoring and Control

Year 6: Spring 2

Key Vocabulary

Program – a sequence of instructions that can be used to control electrical components.

Microcontroller – a device that can be programmed to control how an electrical product operates.

Light emitting diode (LED) – an output device that glows when electricity is passed through it.

Light dependent resistor (LDR) - a light-sensitive device, also called a photo-resistor.

System – a set of related parts or components that together achieve a desired outcome.

Output devices – components that produce an outcome e.g. buzzers.

Input devices – components that are used to control an electrical circuit e.g. switches.

Process – how a computer program controls one or more output devices.

Key Questions

- Who have the products been designed for and for what purpose?
- How and why is a computer control program used to operate the products?
- What are the advantages of using computer control?



Key Skills

- Generate, develop and communicate ideas through discussion, annotated sketches and pictorial representations of electrical circuits or circuit diagrams.
- Use research to develop a design specification for a functional product that responds automatically to changes in the environment.
- Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product.
- Create and modify a computer control program to enable an electrical product to work automatically in response to changes in the environment.
- Test the system to demonstrate its effectiveness for the intended user and purpose.
- Apply their understanding of computing to program, monitor and control their products.
- Understand the use of computer control systems in products.

Concepts

Technical knowledge - an understanding of modern technology, its working and advances. Your detailed understanding of anything that can be applied or reasoned with in any shape or form for any issues or applications.

Making - the making of something is the act or process of producing or creating it.

Website Links

<https://rundontwalk.co.uk/primary-computing-resources/>

<https://www.youtube.com/watch?v=CejDBLkXZkc>