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| St Julie Catholic Primary School - DT |
| DT – Spring Term | Year: 6 | **Unit Title:**  **Electrical/protection Systems-Alarm.** |



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| Vocabulary |
| Artefact | An object of cultural or historical interest. |
| Sensor | A device that responds to a physical stimulus (such as heat, light, sound, pressure, magnetism, or a particular motion) and transmits an impulse |
| Electronic Circuit | A series of components connected through wires. |
| Mechanism | A system of working parts. |
| Components | A part of an alarm system. |

**What should I already know?**

* Experience of building structures, exploring how they can be made stronger, stiffer, and more stable.
* Experience of exploring and using mechanisms & basic circuits e.g., levers, sliders, wheels, and axles in their products.
* Experience of selecting from and using a wide range of materials and components

**Can I make an alarm to protect an artefact?**





**What security do museums have?**

Modern security technologies protect artefacts.

Who was Thomas Edison?



* Innovative ideas
* Video surveillance
* Motions detectors
* Intruder alarms

**Skills recap:**

* Select and use components in their constructions.
* Build structures, explore and use mechanisms.

**DT Skills**

* Understand and use electrical systems in their products for example, series circuits incorporating switches, bulbs, buzzers and motors.
* Apply their understanding of computing to program, monitor and control their products.

**How do I make an alarm to protect an artefact?**

1. Can children investigate, analyse and evaluate how museums protect artefacts (LED, sensors, security)?
2. Can children explore diverse ways of protecting artefacts (LDR’s, switches)?
3. Can children draw labelled 2D & 2D diagrams of their designs (circuits)?
4. Can children follow their designs to make an alarm to protect an artefact(control)?
5. Can children make an alarm by using circuits and include components?
6. Can children evaluate their product?

**Curriculum links:**

Mathematics – Measure, 2D & 3D shapes.

Science – Apply knowledge and understanding of complex switches, circuits, conductors & insulators.

Computing – Programming and control, use technology for research & design.



