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| **Science Unit Five: Electricity (six week mini-project)****Carne and Readymoney Autumn 2020** |
| **What should I already know?**Electricity is a form of energy that can be carried by wires and is used for heating and lighting, and to provide power for devices.Sources of light and sound may need electricity to work.Magnets, magnetism and forces as pushes and pulls.  | **Key Knowledge**Electricity is generated using energy fromnatural sources such as the sun, oil, water andwind.These can also be called fuel sources.Some appliances use batteries and some usemains electricity.Batteries come in different sizes depending onhow much power is needed. A complete circuit is a loop that allows electrical current to flow through wires.A circuit contains a battery (cell), wires and anappliance that requires electricity to work (suchas a bulb, motor or buzzer).The electrical current flows through the wiresfrom the battery (cell) to the bulb, motor orbuzzer. A switch can break or reconnect a circuit as it controls the flow of the electrical current around the circuit. When the switch is off, the current cannot flow. This is not the same as an incomplete circuit.When objects are placed in the circuits, they mayor may not allow electricity to pass through.Objects that are made from materials that allowelectricity to pass through a create a completecircuit are called electrical conductors.Objects that are made from materials that donot allow electricity to pass through and do notcomplete a circuit are called electrical insulators. |
| **Key Vocabulary**

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| **Key Term** | **Definition** |
| appliances | a device or machine in your home that you use to do a job such as cleaning or cooking. Appliances are often electrical. |
| battery | small devices that provide the power for electrical items such as torches |
| bulb | the glass part of an electric lamp, which gives out light when electricity passes through it. |
| buzzer | an electrical device that is used to make a buzzing sound |
| cell | a synonym for battery |
| circuit | a complete route which an electric current canflow around |
| component | the parts that something is made of |
| conductor | a substance that heat or electricity can passthrough or along |
| current | a flow of electricity through a wire or circuitdevice an object that has been invented for aparticular purpose |
| electricity | a form of energy that can be carried by wiresand in used for heating and lighting, and toprovide power for devices |
| energy | the power from sources such as electricity thatmakes machines work or provides heat |
| fuel | a substance such as coal, oil, or petrol that isburned to provide heat or power |
| generate | cause it to begin and develop |
| insulator | a non-conductor of electricity or heat |
| mains | where the supply of water, electricity, or gas enters a building |
| motor | a device that uses electricity or fuel to producemovement |
| power | Power is energy, especially electricity, that is obtained in large quantities from a fuel source and used to operate lights, heating and machinery |
| source | where something comes from |
| switch | a small control for an electrical device which you use to turn the device on or off |
| wires | a long thin piece of metal that is used to fasten things or to carry electric current |

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| **Key Experiences**making a circuit using a bulb and a buzzerdrawing a simple circuittesting insulators and conductorsvisit to Suez waste recycling and energy centre at St Dennis |