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| Key concepts – our Big Ideas |
| Living things | **Our world** | **Investigation** | **Energy** |
| * All living things rely on light and sound to help them communicate, navigate and survive.
* Plants rely on light to make their own food.
* Some animals have adapted to live where there is no light (underground, deep sea)
* Animals use sound to communicate / find a mate / warn of danger.
* Some animals are capable of producing their own electric currents – they use these for protection or to help them hunt.
* Blood is used to transport water, nutrients and other substances around the body.
 | * Everything in our world experiences forces.
* Forces work in pairs – for every action, there is an opposite reaction – a car engine creates a push force and the friction of the tyres on the road acts to slow the car down.
* If something is still, it means that all of the forces that are pushing it or pulling it are balanced.
* Most living creatures will have some form of heart and circulatory system to move blood around their bodies.
* Plants do not have a heart but they can still move fluids and nutrients around using their transport systems.
 | * A ***hypothesis*** is an idea about how something works that you can test through an experiment.
* A ***prediction*** is what you believe will happen during an experiment if your hypothesis is correct.
* A ***variable*** is something that can change in an experiment.
* An ***independent variable*** is something that you can control or change.
* A ***dependent variable*** is what is measured or tested in an experiment.
* A ***fair test*** is one where you only change one independent variable to test your hypothesis.
 | * Physics is the science of energy.
* Light is a type of energy.
* Light must travel in straight lines and reflects off different surfaces.
* When this reflected light enters our eyes, we can see the object that the light has bounced off.
* Energy cannot be made or destroyed.
* Electricity is another type of energy.
* Electricity is the flow of tiny particles called electrons.
* Some materials allow electricity to pass through like metal – these are called conductors.
* Some materials stop electricity from flowing like rubber – these are called insulators.
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