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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. |

