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| Knowledge Organiser - Science |
| Year 3 Autumn Term 1-Forces and Magnets |
| Recap from previous years | Important vocabulary | Key facts | Pictures/diagrams |
| Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses. | **Air resistance**: A force that shows an object down as it moves through the air. **Attract:** To pull or draw things together. **Force meter:** An instrument that is used to measure the strength of forces in newtons. **Friction**: A force that is created when two materials rub against each other. It makes things slow down. **Gravity:** A force that pulls everything down to the ground on earth. **Parachute:** A piece of equipment made from fabric that a person attaches to themselves to slow their fall from an aircraft. **Pull:** A force that moves something towards a person, animal or object. **Push:** A force that moves something away from a person, animal or object.**Streamline:** To shape something so that it can move smoothly and quickly through liquids such as water, or gases such as air,   | **Forces**A force is a push or a pull. Forces cannot be seen but it is possible to see what forces do. When a force is applied to an object, it can change the objects speed, direction of movement or shape. Some forces are contact forces. This is where objects must be touching each other to apply a force. Non-contact forces, such as gravity and magnetism, act between two objects that are not touching each other. Some forces can be measured in newtons (N) using a force meter. **Gravity**Gravity is a non-contact force. It pulls objects towards each other. Anything with a mass can pull on another object. On Earth, gravity pulls everything downwards towards it centre because it has such a large mass.**Friction**Friction is the force between two surfaces moving across each other. It acts in the opposite direction to the movement and always slows down a moving object. Normally, smooth surfaces have less friction that rough surfaces**Air Resistance**Air resistance is a type of friction between air and another material. Parachutes use air resistance in a useful way. Air resistance acts in the opposite direction to gravity. **Magnetism** A magnet is a material or object that produces an invisible magnetic field. A magnetic field causes the force of magnetism that pulls on magnetic materials and attracts or repels other magnets. The two ends of the magnet is where the force is strongest. These are called the north and south poles. Two poles of the same type push each other away. Two opposite poles pull towards each other |  |