**Crofton Junior School – Curriculum Knowledge Organiser**

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| **Unit of Work** | Science – Physics – Year 3 | |
| **Key Strand** | **Understand movement, forces and magnets** | |
| **Overview of the Unit of Work** | This concept involves understanding what causes motion. | |
| **Prior Learning & Vocabulary** | Year 2 Materials: push(ing), pull(ing), | |
| **Sticky Knowledge** | A force is a push or pull that changes the motion of an object. Different surfaces create different amounts of friction. Friction is a force that acts between surfaces or objects that are moving or trying to move, across each other. The amount of friction depends on the roughness of surfaces and objects moving across each other.    Forces will change the motion of an object. They will either make it start to move, speed up, slow it down or even make it stop. | A magnet is an object which produces a magnetic force that pulls an object a certain way. A magnetic field is invisible. The same poles repel and opposite poles attract.  Some objects that contain iron, nick or cobalt are magnetic; however not all metal objects are magnetic. Objects made form plastic, wood or rubber are classed as non-magnetic. |
| **Key Vocabulary** | Tier 2   * **compare:** estimate, measure, or note the similarity or dissimilarity between * **predict:** to estimate that a specified thing will happen * **describe:** give a detailed account of concepts * **accurate:** correct in all details; exact * **identify:** establish or indicate who or what (someone or something) is * **conclude:** arrive at a judgement or opinion by reasoning * **demonstrate:** give a practical exhibition and explanation * **investigate:** carry out a systematic or formal inquiry to discover and examine the facts so as to establish the truth | Tier 3   * **force:** strength or energy as an attribute of physical action or movement – a push or a pull * **contact force:** any force that requires contact to occur * **non-contact force:** any force that does not require contact to occur * **magnetic force:** attraction or repulsion that arises between electrically charged particles because of their motion * **magnet:** a piece of iron or other material which has its component atoms so ordered that the material exhibits properties of magnetism, such as attracting other iron-containing objects or aligning itself in an external magnetic field E.g.*bar magnet, ring magnet, button magnet, horseshoe magnet* * **poles:** each of the two points or regions of a magnet to and from which the lines of magnetic force are directed - north and south * **attract:** when opposite poles will magnetise (pull) * **repel:** when similar poles will not magnetise (push) * **magnetic material :** a material which will be attracted by a magnet e.g. metal, iron, steel, * **non-magnetic:** a material which will not be attracted by the magnetic e.g. wood, plastic |
| **Post Learning** | Year 5 Forces | |