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| **Interesting facts** |
| F1 cars are aerodynamic. This means that they have been carefully designed to reduce air resistance. An F1 car can reach speeds of over 200 miles per hour! |
| The Moon's gravitational pull is strong enough to move the oceans, creating tides. This means that the fuller the moon is, the higher the tides will be! |
| Leonardo Da Vinci was a famous artist. He was also a scientist and inventor, designing some incredible machines that used pulleys, gears, and levers, such as the helicopter and bicycle.  |

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| **Word** | **Definition** |
| force | An action that changes or maintains the motion of a body or object. Simply stated, a force is a push or a pull. Forces can change an object's speed, its direction, and even its shape. |
| magnetism | An invisible force or field that causes objects to attract or repel one another. |
| pole | Either of the two points of a magnet where the lines of magnetic force meet and are strongest. |
| predict | Think about what might happen in the future. |
| resistance | A force that opposes or slows down another force. |
| drag | A force that acts on an object in the opposite direction than that object is moving. |
| mechanical | Made of or has to do with machines or motors. |
| motion | the activity or process of continually changing position or moving from one place to another |

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| **Useful Pictures/Diagrams** |
| Earth’s shifting magnetic poles  Gravity |

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| Question: Is The Force With You? |
| 1. Can we identify how magnets attract or repel each other and attract some materials and not others?
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| 1. Can we predict whether two magnets will attract or repel each other, depending on which poles are facing?
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| 1. How does gravity work?
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| 1. How do forces such as drag and motion work?
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| 1. Do we understand that force and motion can be transferred through mechanical devices such as gears, pulleys, levers and springs?
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