



STRAND – FORCES

<u>National Curriculum Objectives</u>	<u>Fordbridge suggestions</u>
YEAR THREE • compare how things move on different surfaces • notice that some forces need contact between 2 objects, but magnetic forces can act at a distance • observe how magnets attract or repel each other and attract some materials and not others • compare and group together a variety of everyday materials on the basis of whether they are attracted to a magnet, and identify some magnetic materials • describe magnets as having 2 poles • predict whether 2 magnets will attract or repel each other, depending on which poles are facing	• identify forces as pushes, pulls and twists, understanding that it can change speed, direction or shape of an object. • Understand that friction is a force between 2 surfaces that slows an object down and describe factors that affect friction. • Understand magnets can exert forces at a distance. • Classify materials as magnetic or non-magnetic. • Investigate the relationship between the size of a magnet and its strength.
YEAR FIVE • explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object • identify the effects of air resistance, water resistance and friction, that act between moving surfaces • recognise that some mechanisms including levers, pulleys and gears allow a smaller force to have a greater effect	• know that objects are pulled towards the Earth and this gravitational attraction causes objects to have weight. • To be able to use force meters accurately. • Know that when an object falls, air resistance acts in the opposite direction to the weight. • To know that water provides an upward force (upthrust) on an object submerged in water. • Know that water resistance acts to slow down objects that move through water. • Know that friction can be useful or a problem. • Investigate a range of simple machines, pulleys, gears, ramps, wheel and axel and levers. • Build and evaluate a working catapult.