

Forces (Physics)

Year 5, Autumn Term

<i>You will be taught</i>	<i>You should know</i>
about the forces of attraction and repulsion between magnets, and about the forces of attraction between magnets and magnetic materials	how to classify materials into magnetic and non-magnetic groups; that magnetic materials such as iron and steel are attracted to a magnet; how to carry out experiments to discover that a magnet exerts a force on another magnet or any piece of magnetic material which is placed close to it; that a magnet has north-seeking and south-seeking poles and why they are so called; that a freely suspended bar magnet comes to rest in a north-south direction and acts as a compass; that like poles repel and unlike poles attract each other; that magnetic effects will pass through some materials; how to compare the strength of two or more magnets
that objects are pulled downwards because of the gravitational attraction between them and the Earth	
about friction, including air resistance, as a force that slows moving objects and may prevent objects from starting to move	about the concept of friction as a force which opposes the relative movement of surfaces, with reference to everyday situations, e.g. the effect of friction between the wheels of a bicycle and the road, the effect of air resistance on the cyclist; how to carry out investigations involving friction, e.g. a toy car running over different surfaces
that when objects [e.g. a spring, a table] are pushed or pulled, an opposing pull or push can be felt	how to carry out simple experiments to experience these opposing forces
how to measure forces and identify the direction in which they act.	different types of force: push, pull, frictional (including air resistance), magnetic, gravitational, support (reaction) and upthrust; how to use arrows to show the direction in which these forces are acting on an object; that the newton (N) is the unit of force; how to use a force meter (newton spring balance) to investigate the force required to do various jobs.

http://www.bbc.co.uk/schools/ks2bitesize/science/activities/forces_action.shtml

<http://www.bbc.co.uk/schools/ks2bitesize/science/activities/friction.shtml>

http://www.bbc.co.uk/schools/ks2bitesize/science/activities/magnets_springs.shtml