

## Science

### Key Skills and Knowledge

Years 3 and 4

2014-2015

	Autumn 1 Vicious Vikings	Autumn 2 A sharks tale	Spring 1 Natural Disasters	Spring 2 Rumble in Jungle	Summer 1 Shakespeare	Summer 2 Beautiful Britain
National Curriculum Objectives	<ul style="list-style-type: none"> <li>compare how things move on different surfaces</li> <li>notice that some forces need contact between 2 objects, but magnetic forces can act at a distance</li> <li>observe how magnets attract or repel each other and attract some materials and not others</li> <li>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</li> <li>describe magnets as having 2 poles</li> <li>predict whether 2 magnets will attract or repel each other, depending on which poles are facing</li> </ul>	<ul style="list-style-type: none"> <li>identify that animals, including humans, need the right types and amount of nutrition, and that they cannot make their own food; they get nutrition from what they eat</li> </ul> <p>identify that humans and some other animals have skeletons and muscles for support, protection and movement</p>	<ul style="list-style-type: none"> <li>compare and group together different kinds of rocks on the basis of their appearance and simple physical properties</li> <li>describe in simple terms how fossils are formed when things that have lived are trapped within rock</li> </ul> <p>recognise that soils are made from rocks and organic matter</p>	<ul style="list-style-type: none"> <li>identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</li> <li>explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow) and how they vary from plant to plant</li> <li>investigate the way in which water is transported within plants</li> </ul> <p>explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</p>		<ul style="list-style-type: none"> <li>recognise that they need light in order to see things and that dark is the absence of light</li> <li>notice that light is reflected from surfaces</li> <li>recognise that light from the sun can be dangerous and that there are ways to protect their eyes</li> <li>recognise that shadows are formed when the light from a light source is blocked by a solid object</li> <li>find patterns in the way that the size of shadows change</li> </ul>
Key Skills	<p><b>To work scientifically</b></p> <ul style="list-style-type: none"> <li>ask relevant</li> </ul>	<p><b>To work scientifically</b></p> <ul style="list-style-type: none"> <li>Report on findings from enquiries, including written and oral presentations and</li> </ul>	<p><b>To work scientifically</b></p> <ul style="list-style-type: none"> <li>Identify differences, similarities or</li> </ul>	<p><b>To work scientifically</b></p> <ul style="list-style-type: none"> <li>Ask relevant</li> </ul>		<ul style="list-style-type: none"> <li>Notice that light is reflected from surfaces</li> </ul>

	<p>questions</p> <ul style="list-style-type: none"> <li>• make accurate measurements using standard units, using a range of equipment</li> <li>• Gather, record, classify an present data in a variety of ways to help answer questions</li> <li>• <b>To understand movement, forces and magnets</b></li> <li>• Notice that some forces need contact between two objects and some forces act at a distance</li> <li>• Observe how magnets attract or repel on each other and attract some materials and not others</li> <li>• 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</li> </ul>	<p>explanations, displays or results and conclusions.</p> <ul style="list-style-type: none"> <li>• <b>To understand animals and humans</b></li> <li>• Identify that animals, including humans, need the tight amounts of nutrition, that they cannot make their own food and they get nutrition from what they eat.</li> <li>• Describe the ways in which nutrients and water are transported within animals, including humans</li> <li>• Identify that humans and some animals have skeletons and muscles for support, protection and movement</li> <li>• Describe the simple functions of the basic parts of digestive system in humans</li> </ul>	<p>changes related to simple scientific ideas and processes</p> <p><b>To investigate materials</b></p> <ul style="list-style-type: none"> <li>• Relate the simple physical properties of some rocks to their formation (igneous or sedimentary)</li> <li>• Describe in simple terms how fossils are formed when things that have lived are trapped within sedimentary rock</li> </ul>	<p>questions</p> <ul style="list-style-type: none"> <li>• Set up simple practical enquiries and comparative fair tests</li> <li>• Use results to draw on simple conclusions and suggest improvements, new questions and predictions for setting up further tests</li> </ul> <p><b>To understand plants</b></p> <ul style="list-style-type: none"> <li>• Identify and describe the functions of different parts of flowering plants</li> <li>• Explore the requirements of plants for life and growth and that they vary from plant to plant</li> <li>• Investigate the way in which water is transported within plants</li> <li>• Explore the role of flowers in the life cycle of flowering plants, including pollination, seed</li> </ul>		<ul style="list-style-type: none"> <li>• Associate shadows with a light source being blocked by something, find patterns and determine the size of shadows</li> </ul>
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Key Knowledge						