

Module Map

Ideas about Science		Module story	Science Explanations	
<i>In other modules</i>	<i>In this module</i>		<i>In this module</i>	<i>In other modules</i>
<p>laS3: Developing explanations in P1 <i>The Earth in the Universe</i>.</p> <p>laS4: Scientific community.</p>	<p>Recognizing data which supports an explanation. Justifying acceptance or rejection of an explanation. Appreciating imagination and creativity in an explanation, and why scientists may not agree, or wish to give up an accepted explanation.</p>	<p>What evidence is there that evolution happens?</p>	<p>Evidence from fossils and comparison of DNA. Contemporary evidence for evolution from changes in modern species. Distinction between natural selection and selective breeding.</p> <p>Explanation of evolution by natural selection. Story of Charles Darwin, and contribution of work from other scientists. Mutations cause variation. New species produced by the combined effect of mutations, environmental changes, natural selection.</p> <p>Different views on the origin of the first life on Earth 3500 mya (simple molecules that could copy themselves). Any different conditions on Earth may have altered result of evolution by natural selection.</p> <p>The need for communication systems. The structure of the nervous system. Comparison between nervous and hormonal communication systems.</p> <p>Human evolution in terms of a common ancestor, the divergence of the hominid species, extinction of all but one species. Evolution of a larger brain gave early humans an increased chance of survival.</p> <p>Interdependence of living things and the environment. Competition for resources. Rapid changes in environment may lead to extinction. Human activity may cause extinction directly or indirectly.</p> <p>Maintaining biodiversity as an important part of sustainable development.</p>	<p>The importance of communication systems in homeostasis is explored in B4 <i>Homeostasis</i>. The structure of the nervous system is developed in B6 <i>Brain and mind</i>.</p>
		<p>How have scientists developed an explanation for evolution?</p>		
		<p>How did life on Earth begin?</p>		
		<p>How did multicellular organisms evolve?</p>		
		<p>How did humans evolve?</p>		
		<p>Why did some species become extinct?</p>		
		<p>Does it matter if species become extinct?</p>		
<p>laS3: Developing explanations in P1 <i>The Earth in the Universe</i>.</p>	<p>Drawing valid conclusions about the implications of data for an explanation.</p>	<p>How did humans evolve?</p>	<p>Human evolution in terms of a common ancestor, the divergence of the hominid species, extinction of all but one species. Evolution of a larger brain gave early humans an increased chance of survival.</p>	
		<p>Why did some species become extinct?</p>	<p>Interdependence of living things and the environment. Competition for resources. Rapid changes in environment may lead to extinction. Human activity may cause extinction directly or indirectly.</p>	
		<p>Does it matter if species become extinct?</p>	<p>Maintaining biodiversity as an important part of sustainable development.</p>	<p>Sustainable development in C2 <i>Material choices</i>.</p>