

Year 8 Genetics and Ecosystems

12 Lessons

Stage	Description
Emerging	<p>Recall the definition of heredity.</p> <p>Identify differences between species.</p> <p>State what an ecosystem is.</p> <p>Draw a basic food chain.</p> <p>State some variations between people.</p> <p>Define the term extinction.</p> <p>Investigate variation.</p>
Developing	<p>Describe the importance of plant reproduction through insect pollination in food security.</p> <p>Describe how organisms affect, and are affected by, their environment, including the accumulation of toxic materials.</p> <p>Draw a food web and describe what it shows.</p> <p>Describe the difference between continuous and discontinuous variation, giving examples.</p> <p>Describe the process of natural selection.</p> <p>Describe the structure of DNA.</p> <p>Describe the use of gene banks.</p>
Secure	<p>Explain a range of relationships in an ecosystem.</p> <p>Describe the interdependence of organisms in an ecosystem, including insect pollinated crops.</p> <p>Create your own food web.</p> <p>Compare a range of food webs.</p> <p>Explain the role that named scientists had in the development of the DNA model.</p> <p>Create a simple model of DNA.</p> <p>Explain how changes in an environment may lead some species to become extinct.</p> <p>Explain how natural selection occurs and the evidence which was used to support the theory.</p>
Excellence	<p>Apply knowledge of ecosystems to a range of different places.</p> <p>Create your own food webs.</p> <p>Explain how the accumulation of toxic materials can impact on environments and organisms.</p> <p>Explain how the DNA model was developed.</p> <p>Create your own investigation to investigate variation which includes measurement and graphical representation of variation.</p> <p>Explain the importance of maintaining biodiversity and the use of gene banks to preserve hereditary material.</p> <p>Apply natural selection to a chosen organism.</p>