

Science KS3 Assessment Framework

	Beginning Grade 1	Working Towards Grade 2-3	Expected Grade 4-5	Exceeding Grade 6-7	Excelling Grade 8-9
Evolution & Inheritance	<p>I can:</p> <p>Build a model of the DNA molecule.</p>	<p>I can:</p> <p>State what is meant by DNA.</p> <p>State what is meant by a chromosome.</p> <p>State what is meant by a gene.</p> <p>Name four scientists who worked on the structure of DNA.</p> <p>State what is meant by genetic modification.</p> <p>Name a product produced by genetically modified organisms.</p>	<p>I can:</p> <p>Describe the structure of DNA.</p> <p>Describe how scientists worked together to discover the structure of DNA.</p> <p>State what is meant by an allele.</p> <p>State how an organism can be genetically modified.</p> <p>Describe some advantages of producing products through genetic modification.</p>	<p>I can:</p> <p>Describe the relationship between DNA, genes, and chromosomes.</p> <p>Describe how chromosomes from both parents combine to form offspring.</p> <p>State what is meant by a mutation.</p> <p>State that genetics allows us to track alleles from one generation to the next.</p> <p>Complete a Punnett square to state how many offspring will have a particular characteristic.</p> <p>Describe the difference between dominant and recessive alleles.</p> <p>Use a Punnett square to show what happens during a genetic cross.</p> <p>Trace characteristics through a family tree using Punnett squares, giving answers as percentages and ratios.</p> <p>Describe how an organism can be genetically modified to display a desired characteristic.</p>	<p>I can:</p> <p>Explain how a change in DNA may affect an organism.</p> <p>Explain how a change in DNA may affect the future offspring of an organism.</p> <p>Explain why gametes have 23 chromosomes, but normal body cells contain 46 chromosomes.</p> <p>Explain why it is important for scientists to work together.</p> <p>Explain how dominant or recessive alleles can be expressed as external features.</p> <p>Explain how to use a Punnett square to predict the outcome of a genetic cross.</p> <p>Trace characteristics through a family tree using Punnett squares, calculating the probability of different outcomes.</p> <p>Analyse advantages and disadvantages of producing products through genetic modification.</p>