

Life Science (Heredity)

Grade 8 Science Grade 8 Science

Start Date: January 31, 2014

End Date : February 07, 2014

<p>Unit Overview This topic focuses on continuation of species.</p>	<p>Content Elaborations</p> <p>The traits of one or two parents are passed on to offspring. Traits are determined by instructions encoded in DNA. Genes have different forms called alleles. Study genetics by reviewing Mendel's work. Mendel's work is the foundation of modern genetics. Mendel's first law, the Law of Independent Assortment, should be used to predict the inheritance of traits of organisms. The concepts of dominant and recessive traits are at the level. Codominant traits such as roan color in horses are also studied. Further validation of the theory and to help dispel common misconceptions appropriate for this grade level when limited to one trait. The Law of Independent Assortment should be used to predict dominance and recessive traits. Chi-square and probability are used to analyze parent to offspring through sexual and asexual reproduction. Phenotypes that appear in the resulting generation are compared to the offspring.</p>	<p>Unit Resources</p> <p>Textbook: Chapter 5 Study Island Gizmo Lab: Inheritance</p>
<p>Unit Vocabulary</p> <p>Heredity Dominant Trait Recessive Trait Gene Allele Phenotype</p>	<p>Enduring Understandings (Big Ideas)</p> <p>The characteristics of an organism are a result of inherited traits received from parent(s).</p> <p>Expression of all traits is determined by genes and environmental factors to varying degrees.</p>	<p>Connections</p>

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Genotype Probability Punnett Square Meiosis Pedigree Sex Chromosome	Many genes influence more than one trait, and many traits are influenced by more than one gene. During reproduction, genetic information (DNA) is transmitted between parent and offspring. In asexual reproduction, the lone parent contributes DNA to the offspring. In sexual reproduction, both parents contribute DNA to the offspring.	
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Standards

OH Academic Content Standards - Science (2011) - Grade 8

Strand LS Life Science

Topic LS.1 This topic focuses on continuation of the species.

Content Statement LS.1.3 The characteristics of an organism are a result of inherited traits received from parent(s).

LS.1.3.a Expression of all traits is determined by genes and environmental factors to varying degrees. Many genes influence more than one trait, and many traits are influenced by more than one gene.

LS.1.3.b During reproduction, genetic information (DNA) is transmitted between parent and offspring. In asexual reproduction, the lone parent contributes DNA to the offspring. In sexual reproduction, both parents contribute DNA to the offspring.

Student Assessment	Unit Reflection
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