**Heredity and Reproduction**

**Benchmarks:**

**SC.7.L.16.1: Understand and explain that every organism requires a set of instructions that specifies its traits that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.**

**SC.7.L.16.2**: Determine the probabilities for genotype and phenotype combinations using Punnett Squares and pedigrees.

**SC.7.L.16.3**: Compare and contrast the general processes of sexual reproduction requiring meiosis and asexual reproduction requiring mitosis.

|  |  |
| --- | --- |
| **4** | I can predict the traits that can be inherited from one generation to the next. |
| **3** | **I can Understand and explain that every organism requires a set of instructions that specifies its traits that this hereditary information (DNA) contains genes located in the chromosomes of each cell, and that heredity is the passage of these instructions from one generation to another.** |
| **2** | I can **define**:\_\_\_\_ Pedigree\_\_\_\_ Punnett Square\_\_\_\_ Phenotype\_\_\_\_ Genotype\_\_\_\_ Recessive trait\_\_\_\_ Dominant trait \_\_\_\_ Probability\_\_\_\_ Heterozygous\_\_\_\_ Homozygous | \_\_\_ I can **determine the probability** for genotype and phenotype for children or their parents.\_\_\_ I can use a pedigree chart to **analyze and predict** inherited traits from one generation to the next.\_\_\_ I can **use** a Punnett square to predict inherited traits |
| I can **define**:\_\_\_\_ Heredity\_\_\_\_ Allele \_\_\_\_ Gene\_\_\_\_ Trait\_\_\_\_ Generation | \_\_\_ I can **describe** where heredity information (DNA) is located in a cell\_\_\_ I can **explain** what “heredity” is and give examples of inherited traits. |
| I can **define**:\_\_\_\_ Meiosis\_\_\_\_ Mitosis\_\_\_\_ Cell Cycle\_\_\_\_ DNA\_\_\_\_ Cell\_\_\_\_ Chromosomes\_\_\_\_ Asexual reproduction\_\_\_\_ Sexual reproduction | \_\_\_ I can **compare and contrast** meiosis (sexual reproduction) and mitosis (asexual reproduction.) |
| **1** | With help, students are able to have partial success with 2.0 content. |
| **0** | Even with help, students have no success with content |