Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Period\_\_\_\_Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**HEREDITY Chapter 5 Section 1**

**NGSS**:

MS-LS3.2 Develop and use a model to describe why sexual reproduction results in offspring with identical genetic information and sexual reproduction results in offspring with genetic variation.

MS-LS3.1 Develop and use a model to describe why structural changes to genes (mutations) located on chromosomes may affect proteins and may result in harmful, beneficial, or neutral effects to the structure and function of the organism.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Learning Target | \*\*Mastery | \*Advanced | \*Meets | Approaching | Beginning |
| **I CAN** explain how inherited traits are passed from generation to generation and how structural changes to the genes effect the function of the organism. | Thoroughly explain how inherited traits are passed from generation to generation and how structural changes to the genes effect the function of the organism. | Mostly explain how inherited traits are passed from generation to generation and how structural changes to the genes effect the function of the organism. | Somewhat explain how inherited traits are passed from generation to generation and how structural changes to the genes effect the function of the organism. | Struggling to explain how inherited traits are passed from generation to generation and how structural changes to the genes effect the function of the organism. | Wasn’t able to or didn’t make an attempt to explain how inherited traits are passed from generation to generation and how structural changes to the genes effect the function of the organism. |

The following statements are how to achieve \***Advanced** or \***Meets** for this Learning Target:

**** Explain the difference between dominant and recessive traits.

**** Explain the difference between heterozygous and homozygous

**** Explain the difference between inherited and learned traits.

****Explain the difference between genotypes and phenotypes.

**** Explain how genes are related to alleles.

**** Complete and create a Punnett square.

To achieve \*\***MASTERY** for this Learning Target you need to correctly answer 15 of the 17 questions regarding the above checkboxes **AND** be able to correctly and thoroughly complete the checkbox below.

**** Given the offspring genotype in a Punnett square, be able to determine the parents’ genotype and explain the Punnett square using the words: homozygous, heterozygous, dominant, and genotype or phenotype.