**Genetics Mastery Tracker**

**STANDARD III: Students will understand that offspring inherit traits that make them more or less suitable to survive in the environment.**

## **Objective 1:** Compare how sexual and asexual reproduction passes genetic information from parent to offspring.

## **Objective 2:** Relate the adaptability of organisms in an environment to their inherited traits and structures.

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|  | **I can statements:** | Assignment | Quiz | Test |
| **Test 1** | | | | |
| **G1** | I can distinguish between inherited and acquired traits. |  |  |  |
| **G2** | I can contrast the exchange of genetic information in sexual and asexual reproduction (e.g. number of parents, variation of genetic material) |  |  |  |
| **G3** | I can cite examples of organisms that reproduce sexually (e. g. rates, mosquitoes, salmon, sunflowers) and those that reproduce asexually (e.g. hydra, planaria, bacteria, cuttings from house plants) |  |  |  |
| **G4** | I can compare inherited structural traits of offspring and their parents. |  |  |  |
| **Test 2** | | | | |
| **G5** | I can predict why certain traits are more likely to offer an advantage for survival of an organism. |  |  |  |
| **G6** | I can list examples of traits that provide an advantage for survival in one environment but not other environments. |  |  |  |
| **G7** | I can list examples of changes in genetic traits due to natural and manmade influences (e.g. mimicry in insects, plant hybridization to develop a specific trait, breeding of dairy cows to produce more milk). |  |  |  |
| **G8** | I can relate the structure of organs to an organism’s ability to survive in a specific environment (e.g. hollow bird bones allow them to fly in air, hollow structure of hair insulates animals from hot or cold, dense root structure allows plants to grow in compact, fish fins aid fish in moving in water.) |  |  |  |

**Vocabulary:**

* DNA
* Genes
* Chromosomes
* Acquired Trait
* Inherited Trait
* Asexual Reproduction
* Sexual Reproduction
* Offspring
* Natural Selection
* Artificial Selection/Selective Breeding
* Mutation
* Adaptation