**Next Generation Science Standards Covered or Related to the Enemy Release Hypothesis Lab**

1-LS3-a. Use information from observations to support the explanation that different individual plants and animals of the same type have similarities and differences.

2-LS4-a. Make observations about a variety of plants and animals living in an area and identify the specific places they live in order to make comparisons between different areas.

2-LS2-c. Design a solution to a problem caused when a habitat changes and some of the plants and animals may no longer be able to live there.

3-LS4-d. Analyze and interpret data about changes in the environment of different areas and describe how the changes may affect the organisms that live in the areas.

3-LS4-e. Use evidence about organisms in their natural habitats to design artificial habitat in which the organisms can survive well.

3-LS4-b. Construct explanations for how differences in characteristics provide and advantage to some individuals in the same species in surviving, finding mates, and reproducing.

5-LS2-c. Use models to test the functioning of a designed process that mitigates a factor upsetting the stability of a local ecosystem.

MS-LS1-i. Construct an explanation using evidence for how environmental and genetic factors affect the growth of organisms.

MS-LS1-f. Ask questions to clarify the nature of empirical evidence contributing to explanations for the relationship between the behavior of organisms and successful reproduction.

MS-LS2-c. Construct and present arguments supported by empirical evidence and scientific reasoning for multiple explanations for how changes to physical or biological components of an ecosystem result in changes to the populations in the ecosystem.

MS-LS2-g. Make an oral or written argument from evidence to support or refute the merits and constraints of different plans to solve a real world problem to restore a disrupted ecosystem.

MS-LS2-d. Construct explanations for common patterns of interactions within different ecosystems.

MS-LS4-i. Use a model of managed ecosystems to evaluate and improve proposals to maintain ecosystem biodiversity.

MS-LS2-i. Ask questions to clarify the scientific, economic, political, and social justifications used in making decisions about maintaining biodiversity in ecosystems.

MS-LS4-j. Use arguments supported by scientific evidence and social and economic rationale to evaluate plans for maintaining biodiversity and ecosystem systems.

MS-LS4-i. Use a model of a managed ecosystem to evaluate and improve proposals to maintain ecosystem biodiversity.

MS-LS2-g. Make an oral or written argument from evidence to support or refute the merits and constraints of different plans to solve a real world problem to restore a disrupted ecosystem.

HS-LS2-f. Ask questions to define a problem caused by changes in population, resources, and/or the environment that can be solved through environmental engineering of solutions specific to the competition of organisms for matter and energy.

HS-LS2-a. Design and conduct an investigation to generate mathematical comparisons of factors that affect the carrying capacity and biodiversity of similar ecosystems at different scales.

HS-LS2-l. Design and conduct an investigation to test design solutions for increasing or maintaining the biodiversity of an ecosystem.

HS-LS2-i. Use scientific reasoning, theory, and models to link evidence to claims about the effects of modest and extreme biological or physical changes to ecosystems on the natural capacity to reestablish an ecosystem with more or less stable conditions.

HS-LS2-k. Evaluate evidence for its merits in supporting the role of group behavior on individual and species’ chances to survive and reproduce.

HS-LS4-c. Apply concepts of statistics and probability to support explanations for how organisms with an advantageous heritable trait tend to increase in proportion to organisms that lack this.

HS-LS2-j. Design, evaluate, and refine a solution for reducing negative impact of human activities on the environment and ways to sustain biodiversity and maintain the planet’s natural capital.