**Unit Essential Question:** *How do species change over time and should we intervene?*

For your project you will argue whether humans should intervene on the behalf of threatened species OR let nature take its course. Use the following table to organize what you learn throughout the tasks, so that you may use it for your culminating project. For each activity, be sure to include answers to **ALL** the questions provided.

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| Lift-Off Task: The Case of the Peppered Moths | Select and research a species that is being negatively affected by a change in their environment that is caused by humans.   * Describe the change in the environment and its effect on this species. |
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| Task 1:  The Fossil Record and Geologic Time Scale | Think about the species your group chose.   * Draw a pretend fossil record showing how the species has changed over time. * How might the fossil record in the last 50 years show the species changing over time? * Given how our planet is changing, predict what future layers might look like? |
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| Task 2: Evidence of Change Over Time | Look back at the fossil record that you created after Task 1. Draw in a pretend common ancestor at the beginning of your fossil record and a pretend modern species also related to this common ancestor.   * What similar anatomy or embryological development might your species have with this related species? |
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| Task 3: Natural Selection | How would changes in the environment that are caused by humans affect your species?   * Explain within the context of natural selection. You may choose to explain using a paragraph or a flowchart with pictures. * Compare your species to the “insect” simulation. Is the situation for your species more similar to the black “insects”, the white “insects”, or the newspaper “insects”? Explain how. |
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| Task 4: Human Intervention | Think about how your species is being affected by an environmental change caused by humans.   * What change in trait might help the species survive this environmental change? * Model the process of changing this trait, using what you have learned in this task. |
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