

Theme: **Heredity and Variation**

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Guide Questions

1. Define:
  - a. Mutation
  - b. Adaptation
2. Are mutations always harmful?
3. What are the effect of helpful mutations?

4. *Critical Thinking*

Genetic Engineering is the process in which scientist transfer genes from one organism to another. Today genetic Engineering is used in many different ways. For example, some bacteria are genetically engineered to produce medicines such as insulin. Crops are also genetically engineered to be resistant to certain diseases and pets.

How do you think genetic engineering might affect a species' diversity?



Theme: **Natural Selection**

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Guide Questions

1. Define
  - a. Natural Selection
2. What does natural selection operate on?
3. What happens to organisms that are poorly adapted to an environment?
4. What adaptations does a camel have that help it survive desert conditions?
5. What might happen if a camel's environment were suddenly flooded?
6. Which fish body systems are likely to have been altered by an adaptation that results in fast swimming?
7. How does natural selection cause a species to change over time?



Theme: **Diversity of species**

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Guide Questions

1. Why were honeycreepers able to diversify so quickly?
2. What are the main adaptations honeycreepers show?
3. Why might the adaptation for color be important?
4. What has caused the number of species to increase over time?

## Review for Test

1) Read and study:

Lesson 4: How are traits inherited?

Lesson 5: What is Natural Selection?

2) Read and study guide questions on the notebook.