**Welcome to Evolution Island!**

**While you are on this island, your objectives are to**

* *Compare the theories of gradualism and punctuated equilibria*
* *Compare/contrast divergent and convergent evolution*
* *Key terms: punctuated equilibria, gradualism, Wallace, Lamarck, convergent evolution, divergent evolution*

**At Home Activities**

1. Text p. 162-163. Q 4a 4b p. 163

**Required Tasks for Evolution Island**

**Task 1: Watch Video ‘Myths About Evolution**

**Task 2: Read “Is Evolution a Theory or Fact?**

**Task 3: Video and Discussion “Evidence of Evolution”**

**Task 4: Video and Reflection “5 Fingers of Evolution”**

**Task 1: Video and Discussion**

**Myths about Evolution**

***If evolution is NOT organisms adopting to their environment, what is it?***

* 1. Watch the video at **tinyurl.com/odutwsw**
  2. In your journal explain:
     + The role of genes in evolution
     + How not passing your genes on can help a population
     + Why evolution happens
     + Why does natural selection happens at the “genetic level?”
     + What does it mean when evolution proceeds blindly?

**Task 2: Reading**

**Is Evolution a Theory or Fact? Discuss in your groups:**

1. How would you define evolution?
2. Why does the article say evolution is both a theory and a fact? Support your reasoning with evidence from the reading
3. Record your ideas in your journal

**Task 3: Video and Reflection**

Watch Video Evidence of Evolution at<http://www.youtube.com/watch?v=cC8k2Sb1oQ8>

1. How were pigeons central to Darwin’s ideas?
2. Biogeography: What did Darwin notice while on the Galapagos that led to his theory?
3. What evidence did Darwin use to support his theory?
4. What evidence did Darwin not use to support his theory?
5. How do scientists measure the rate of evolution?

**Task 4: Video and Reflection**

**5 Fingers of Evolution (draw hand)**

1. Trace around your hand in your journal
2. Watch the Five Fingers of Evolution at **tinyurl.com/l72pk8y**
3. **Discuss the video with your group**
4. Write the 5 processes that result in evolution on your hand while watching the video
5. In your journal address the following (re-watch the video if necessary)
   * What does it mean if the frequency of genes change?
   * How does nature impact adaptations?
   * How does Microevolution differ from macroevolution?

**Optional Activities**

**Task 1: Reading**

1. Read the three handouts about Charles Darwin, Jean-Baptiste Lamarck, and Russell Wallace
2. Create a chart to compare/contrast the three theories
3. Complete worksheet “Thinking about Evolutionary Thinking”

**Task 2: Lab**

**Convergent and Divergent Evolution**

Use the materials at your table to complete the lab. Record your information in your journal