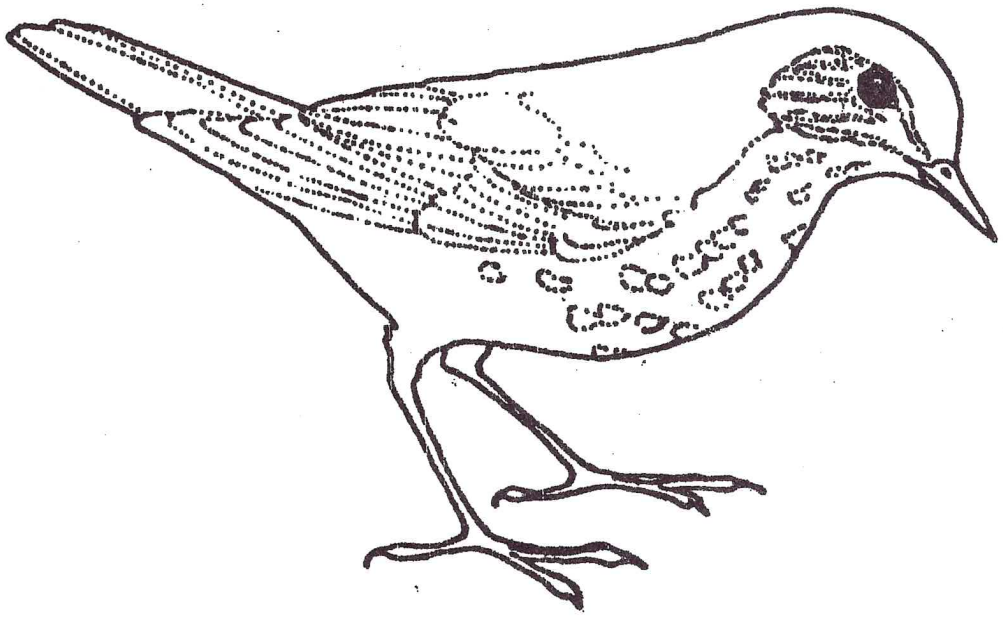
Class Set



Name: _____ Date: _____ Per: _____

Lab: Evolving a Bird

Natural selection is the mechanism by which evolution occurs. According to natural selection, adaptations that best benefit an organism will increase its likelihood of surviving, reproducing, and passing on its genes to the next generation.

Adaptations may arise from mutations. In this lab, you will be "evolving" a bird by giving it mutations that will help it survive in its environment. The first thing you need to do is to choose an environment in which your bird may live. Next, you will trace the bird onto another sheet of paper, erase one part of the bird, and give it a mutation that will better enable it to survive in its environment. Pass your tracing of the bird (with the mutation) to your lab partner and your partner must erase another part of the bird and give it a second mutation that will increase its survival. Do this for a total of 4 mutations. When your bird is complete, it must be colored (since body coloration is often an adaptation) and its environment must be drawn.

1. What type of environment does your bird live in?

2. Complete the chart below that lists the adaptations your bird evolved and how those adaptations make the bird better suited to its environment.

Mutation/Adaptation	How adaptation helps the bird survive and reproduce
a.	
b.	
c.	
d.	

3. Consider the following animals. Complete the chart on the back of this page, identifying the environment in which the animal lives, an adaptation that the animal has, and how the adaptation helps the animal live in its environment.

Animal	Environment	Adaptation and how it helps the animal to survive and reproduce
Chimpanzee		
Bird		
Polar bear		
Bat		

4. Can you think of another animal, an adaptation it has, and how that adaptation helps it to survive and reproduce? Describe an example.

5. Influenza (the flu) is caused by a virus. Viruses, like living organisms, can mutate and evolve. Using this knowledge, explain why even though you may get a flu vaccine at the beginning of the winter, you can still get the flu.

6. What types of adaptations do you think humans have evolved that help us survive in our world? (Do not list technological advancements, adaptations must be a physical or biochemical change in the organism itself.)