

Evolving Your Own Organism

Name _____ Period ____

Due: _____

**You may work on your own or with a partner.

Point Value: 30—lab category (A BIG project!)

Objectives: To identify and describe the advantages of adaptations (structures) that help an organism to survive in a particular environment, habitat or niche.

Purpose: This assignment will give you a chance to be creative and at the same time demonstrate your understanding of the concept of evolution and speciation in organisms. Use the theme (structure relates to function) to help guide your critter’s design. *These new species would have to develop different ways to survive based on the environmental conditions they face, so your mutations need to be logical.*

Background Information: Before you begin, review the concepts of evolution, natural selection, speciation, variation and adaptation. Think about real world examples discussed or read about in class. Adaptations can be structural (giraffe’s long neck, shape of a flower nectar tube, scorpion’s stinger) or behavioral (rattle snake shaking its tail, a male peacock spreading its feathers or a night predator). Adaptations of common features are what make an organism suited to its particular niche.

For example, a hawk is an example of an ideal flying predator. The hawk has a wide wingspan for soaring while looking for prey. The hawk also has large hook like claws with powerful muscles for grasping prey and a curved sharp beak for tearing tissue. When a hawk strikes, its legs bend and its talons automatically clinch. The hawk may find shelter in a wooded area but hunts in a neighboring meadow. Its feather coloration allows it to be camouflaged while nesting in its shelter. Its competition is from other predators.

Your assignment should include the following:

- 1) A small drawing of your organism in its normal habitat AND a bigger drawing of your new organism in its new habitat. [8 points]
- 2) A scientific name and common name for your organism. (Make it up!) [2 points]
- 3) Notes and/or drawings on how your organism feeds and escapes its enemies.
**Describe at least 5 special adaptations of your organism! [10 points]
- 4) What organism alive today did your creature evolve from? Why did it evolve? Explain the reason for this new species to have developed...what new spot in the ecosystem does this life form fill? [10 points]

Notes:

Common Name: _____

Scientific Name: _____

New Habitat: _____

How does your organism feed?

How does your organism defend itself or escape from its enemies? _____

Sketch your organism:

What are some traits you gave your organism so it will be successful in the new environment? WHY???

1) _____

2) _____

3) _____

4) _____

5) _____

*****WHY** would your organism evolve? What’s a creative (yet somewhat realistic) story for why it would evolve?

NOW PUT YOUR FINAL VERSION ONTO A POSTER!!!

Write it on the back!

