

# Butterfly Lab Directions

~Please Read All Directions~

Natural selection is a process in which individuals with inherited characteristics that are well-suited to their environment are capable of leaving more offspring on average than other individuals without such characteristics. Members of the same species have slight variations that are inherited and passed from generation to generation. These inherited characteristics are called adaptations. **Adaptations improve an organism's ability to survive and reproduce in a particular environment. An example of an adaptation that is easily understood is camouflage.** Camouflage, or cryptic coloration, is basically background matching—making a visible organism indiscernible from the surrounding habitat.



**Concealing coloration** is the most common, where the organism resembles its surroundings in coloration, form or movement. An example would be the earth-tone colors of a white-tailed deer or the swaying walking pattern of a walking leaf insect.

**Disruptive coloration** allows the organism to disguise its identity or location so that predators misidentify what they are seeing. For example, a zebra has a black and white stripe pattern. This pattern makes it extremely difficult for a predator to stalk one zebra, as the patterns of the herd blend together.



**Self-decoration** is the act of hiding and concealing body features. Organisms, like the dresser crab, decorate themselves to match the background. The dresser crab obtains pieces of coral or sponge and affixes them onto hooked hairs that cover its body. This allows the dresser crab to blend into the seafloor and be overlooked by a predator.

## What do you need to do:

1. Adapt your 3 butterflies to their new surroundings (your house, backyard, etc) so that they become “hidden” in this new environment.
2. Cut out each butterfly - there should be 3 total.
3. One butterfly is to demonstrate concealing coloration. Color/decorate it to represent this adaptive method.
4. A second butterfly is to demonstrate disruptive coloration. Color/decorate it to represent this adaptive method.
5. A third butterfly is to demonstrate self-decoration. Color/decorate it to represent this adaptive method.
6. Place each butterfly into its “new” habitat and take a picture of it.
7. Send me each picture - make sure you INDICATE which adaptive method per picture.
8. The goal is to make the butterfly hidden so that NO predators can see it and ultimately, eat it.
9. Do not copy the deer, zebra, or dresser crab examples.

