

Unit Handout
2 8

Lesson 4: Observing the Adult Cabbage White Butterfly

Purpose: Make observations observations of the adult cabbage white butterfly, relate functions to its structures, and describe adaptations it has to its environment.

Guiding Questions: How is the body of the adult cabbage white butterfly adapted to survival?

Part One. Obtain a preserved cabbage white butterfly. Create a general drawing of its body (and label it with the diagram provided on your table). Then, create a detailed drawing of the head (use the microscope) and label the parts as needed.

Part Two. Answer the following questions about the adult butterfly. Use the handout on your table to assist you in defining the structures and providing functions for these structures.

Definition. One characteristic of life we have not talked about is adaptations. All organisms have adaptations that help them survive. Adaptations are inheritable (i.e. genetic) traits that increase an organism's chance of survival. An example of this would be the rough texture of a cat's tongue which makes it easier to pull meat from its prey. Another example is how our pupils expand in a dark room to help us see.

1. What are the 3 body sections of the cabbage white butterfly (SDRO p.60)?
2. How can you identify the sex of a cabbage white butterfly? What is the sex of the butterfly in your drawing?
3. Similarly, how can you identify the sex of a cabbage white larva?
4. Describe how the cabbage white butterfly is able to locate food sources.
5. How are the legs adapted to helping the cabbage white butterfly survive?
6. How are the wings adapted to helping the cabbage white butterfly survive?
7. What is the function of the spiracle?

Part Three. All arthropods (e.g. insects, arachnids, crustaceans, etc.) go through metamorphosis. There are two types of metamorphosis: complete and incomplete. Find an online resource that describes the differences between the two types of metamorphosis and write a CEA/R argument for which type the cabbage white butterfly goes through.

Claim: Do the CWB go through complete or incomplete metamorphosis?

Evidence: What evidence (e.g. citations) do you have to support your answer?

Analysis: How does the evidence connect back to your claim?
Counterevidence: This is a good place to discuss how it isn't the other type of metamorphosis.