

Name _____ Date _____ Period _____

CHAPTER 17- QUICK LAB: CONSTRUCTING A CLADOGRAM

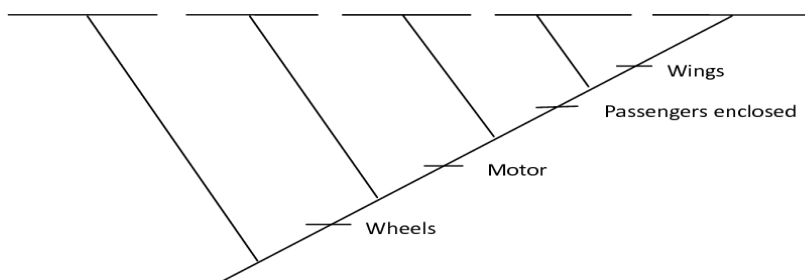
You can think of a cladogram as an evolutionary family tree in which things that are more closely related share more characteristics. As an analogy, processes that have evolved due to new technologies can be organized using cladistics. In this lab you will fill in a cladogram for methods of transportation.

Problem: How can methods of transportation be organized using a cladogram?

Hypothesis: (Use an "If...,then..." statement to write a hypothesis that answers the question above)

Procedure

1. Think about the characteristics of the following methods of transportation: bicycle, car, motorcycle, airplane, and on foot.
2. Complete your cladogram by filling in each method of transportation listed in step 1 on the appropriate line at the top.



Analyze and Conclude (use complete sentences to answer each question)

1. What "derived characters" are used in this cladogram?

2. Which mode of transportation may be considered an "outgroup"—a group that has none of the characteristics labeled on the cladogram?

3. A species that has evolved a new trait is not better than a species without that trait. Each species is just adapted to a certain way of life. When might riding a bike have an advantage over flying in an airplane?
