

Exploring Success

Before you begin, complete the activities found on:

http://evolution.berkeley.edu/evolibrary/article/3_0_0/arthropodstory

This is the “special assignment” of this web activity, so you will not be successful unless you have taken accurate notes on the other activities presented there

Arthropods illustrate incredible diversity, longevity, and astonishing adaptive success. At the same time, their evolutionary history has been constrained by the characteristics they have inherited. Your assignment is to apply what you have learned about arthropods and the nature of their success to another group of organisms of your choice.

Select one of the groups listed below and then complete a research project using appropriate science resources on the Internet and in your library. Your project should cover all of the questions listed below.

Groups of Organisms: (Choose one)

Dinosaurs, Humans, Bacteria, Mosses, Mammals, Echinoderms, Birds

If you are feeling particularly creative, you may choose to do this project for the evolution of (Choose one, **but see your teacher first**)

Tablets (iPad), Cars, Cellphones, Videogame consoles

Your product must answer the following questions, in depth:

- What are (*your selected group*)?
- What are the traits of (*your selected group*) that make it unique?
- Why do all (*your selected group*) share unique traits? (common ancestors)
- What features of (*your selected group*) provide unique opportunities for success?
- What features of (*your selected group*) provide evolutionary constraints?
- Why are (*your selected group*) successful in terms of evolution?

Rubric for Evolution Project

	Excellent	Successful	Acceptable	Attempted
Content Accuracy	Describes both the “how” and the “when.” 10 9 8	Describes either the “how” or the “when.” 7 6 5	Does not describe either the “how” or the “when.” 4 3 2	Does not address the issue described. 1 0
Content depth	Evolutionary concepts are well explained and documented 10 9 8	Evolutionary concepts are explained but lack documentation 7 6 5	Evolutionary concepts are mentioned. 4 3 2	Evolutionary concepts are not mentioned. 1 0
Make inferences	Uses direct evidence from multiple sources to substantiate claims. 10 9 8	Uses only one source of direct evidence. 7 6 5	Uses only inference. 4 3 2	Does not use either direct evidence or inference. 1 0
Suggest other evidence to look for.	Identifies missing evidence to support and to disprove the claims. 10 9 8	Identifies evidence that could disprove the claims. 7 6 5	Identifies missing evidence that could support the claim. 4 3 2	Does not suggest other evidence to look for. 1 0
Be neat, well organized and communicate effectively.	Is neat and well organized with information clearly and effectively communicated. 10 9 8	Is mostly neat and organized and most information is clearly presented. 7 6 5	Parts are neat and organized with some information clearly presented. 4 3 2	Is not neat or well organized and/or lacks information. 1 0

Total Rubric Score: _____

50–41 = Excellent

40–31 = Successful

30–21 = Acceptable

20–0 = Poor