

Name _____ Date: _____ Period: _____

Life Has A History

<http://www.ucmp.berkeley.edu/education/explorations/tours/intro/Intro5to12/tour1nav.php>

1. Some scientists estimate that there may be as many as _____ million species of animals, plants, and other kinds of organisms on the Earth.

2. Of the species identified today, how many are:

Arthropods? _____ Roundworms? _____

Mollusks? _____ Flatworms? _____

Mammals? _____ Land plants? _____

Fungi? _____ Protists? _____

3. If the pictures of the various life forms were of appropriate sizes, which would be the largest? _____

4. The biodiversity that exists on earth today is the result of _____.

The easiest way to define evolution takes just three words: _____

Click on one of the images for a peek at life at the sea (Tour 2).

5. 470 Million Years Ago - Middle _____ Period. This Period is in the _____ Era. What were the dominant predators of the sea? _____ What are a few of their relatives? _____

6. 160 Million Years Ago - Middle _____ Period. This Period is in the _____ Era. What animals dominated the land? _____ What were two vertebrates that lived in the sea? _____ What are two relatives of ammonites are found in oceans today? _____

7. Evolution has occurred over _____ years. The history of the Earth can be traced back _____ years.

8. Explore the calendar to discover some of the other important events. Write the date that is associated with each of the following events

_____ Formation of the Earth	_____ First Fish
_____ Dinosaur Extinction	_____ First Life
_____ First Dinosaurs	_____ First Multicellular Life
_____ Modern Humans	_____ First Land Plant

9. The best source of evidence is the _____.
10. _____ are a great source of information about past events. provide the evidence for the history of life on Earth. Fossils are not just bones! _____, _____, _____, _____, and even tiny organisms may form fossils. Scientists that study fossils to learn more about life in Earth's past are called _____.
11. Click on the at least three of the fossils to explore the history of life on Earth and describe what you find. (Tour 3a)
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13. Fossils help us to _____ how life forms are _____.
14. The four animals that have related characteristics are _____, _____, _____, and _____.
15. Shared _____ help us put closely related organisms in groups. All of these animals share features _____ from a _____.
- They are a type of _____, called Theropods.
16. Theropods are described as having _____.
- _____, _____, and _____.
17. What features do all members of these groups have in common?
- A. Therapod -
 - B. Aves -
 - C. Neornithes (Modern Birds)-
18. Neornithes are _____.
19. What is a cladograms? _____
20. How is it used by scientists? _____
21. Each _____ on the cladogram represents a group of organisms that share special characteristics _____ from a _____.
- Cladograms can be used to illustrate _____ relationships and _____ of divergence.
22. Scientists use cladograms to infer that the more _____ two organisms shared a common ancestor, the more closely related they are.
23. To which animal are the crane and eagle most closely related? _____
24. Scientists examine several lines of evidence to determine evolutionary relationships among organism. You have just examined how groups of organisms are related because they have inherited certain physical features.

Scientists can also use: _____,
and _____.

25. All populations have individual differences or _____.

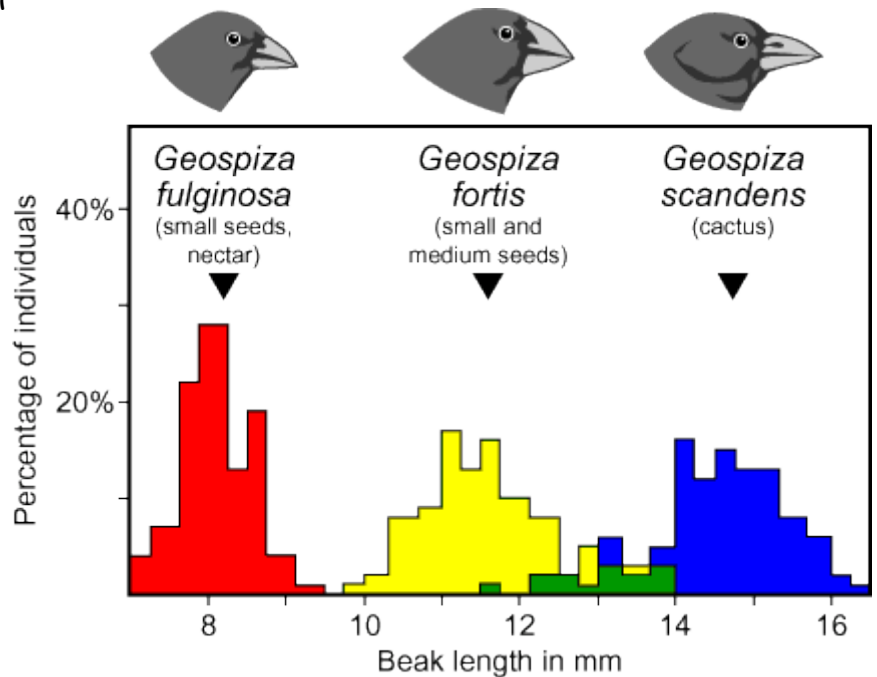
26. Without variation, _____ cannot happen.

27. Even though related organisms inherit common features, _____ exist within populations.

28. One example of variation is the _____ finches. Charles _____ visited the Galápagos Islands in 1835. He was surprised by the number of different finch species that existed in such a small area. Each group of finches was adapted to different _____, _____, and _____.

29. Variation affects how an organism can live and exploit (take advantage) of its environment. This bar graph shows the difference in beak sizes among three different Galápagos finch species.

Write the correct statement that describes the graph.



30. Think about what would happen if the environment changed and only plants with larger, harder seeds survived. How do you think that might affect the population of *Geospiza fortis* finches?

31. _____ is not the only mechanism of evolution.

Anything that changes the _____ make-up of a population, such as genetic _____ and _____ isolation, can influence evolution.

32. Who is credited with publishing the theory of natural selection?

33. Scientists estimate that _____% of all species that have ever lived are now extinct.

34. Click the trilobite photo, and then summarize their life history.

- What are trilobites?
- When did the first trilobites appear on Earth?
- When did trilobites become extinct?

35. Click the Lambeosaurus photo

- What are Lambeosaurus?
- When did the first Lambeosaurus appear on Earth?
- When did Lambeosaurus become extinct?

36. Click the ammonite photo, and then summarize their life history.

- What are ammonites?
- When did the first ammonite appear on Earth?
- When did the ammonite become extinct?

37. Click the box with several animals to explore a few extinct species from recent times.

- Where did the quagga live?
- When did they become extinct?
- What caused the extinction of passenger pigeons?
- What threatened the golden lion tamarin?
- What is being done to save them from extinction?