

Name _____

What did T Rex taste like?

<http://www.ucmp.berkeley.edu/education/explorations/tours/Trex/navigation.html>

Folder 1

Life is very _____, yet all living things are _____.

_____ show how living things are _____ to each other.

Define

a. lineages:

b. common ancestor:

Two Big Ideas:

Life is very _____, yet all living things are _____.

Branching diagrams show how living things are _____ to each other.

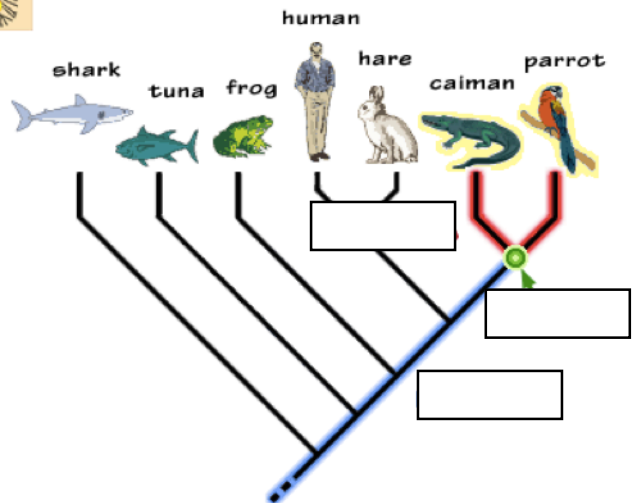
Folder 2

Lineages can be traced _____ to find a point of _____.

Match the following with its place on the diagram.



- 1) Each has its own distinct history
- 2) They also share a part of their history
- 3) Somewhere back in time they shared a common ancestor



Define

a. most recent common ancestor:

Main points

Lineages can be traced back in time to find a point of _____.

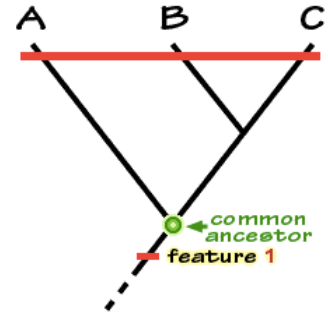
Folder 3

Cladograms illustrate _____ based upon shared _____ features.

Explain what the small red bar represents and what the long red bar represents.

Small bar:

Long bar:



Define

a. tetrapods:

The cladogram in our example allowed us to see how different kinds of vertebrates are

_____.

Folder 4

Evolutionary relationships can be used to _____ many kinds of questions about the _____.

Explain what the following symbols mean in a *cladogram table*:

+ feature is _____

0 feature is _____

- feature _____

? feature _____

Fill in the Features Table as you explore Folder 4.

Features Table

As you explore Folder 4, fill in the data tables below, using a +, -, or ?.

	shark	tuna	frog	human	hare	caiman	parrot	T. rex
vertebrae								
bony skeleton								
four limbs								
amniotic egg								
hair								
opening in front of eye								

Define:

a. bipedal:

Fill in the feature table

	caiman	parrot	T. rex
vertebrae			
bony skeleton			
four limbs			
amniotic egg			
hair			
opening in front of eye			
heel			
bipedal			
4 th and 5 th finger lost			

What did the T Rex taste like?

Folder 5

We can use cladograms to make _____ about past life, including *T. rex*.

Use your completed features table and the cladogram with additional data on inherited features below to make hypotheses about what *T. rex* was like.

Examine the questions below. For at least two of the questions do the following three things on another paper:

1. Decide if it is possible to answer the question with the data provided (the cladogram and data tables).
2. If it is not possible, what information is needed to be able to answer the question?
3. If it is possible, what kind of hypothesis would you make? What is the evidence for your statement? In your justification, make sure that you include information about common ancestors and shared inherited features. What other evidence would you look for that would support or refute your hypothesis?

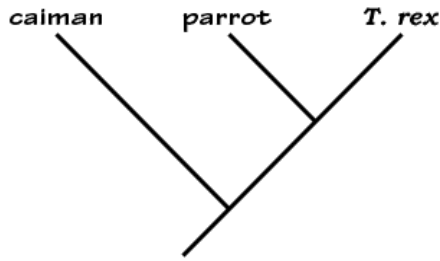
Questions:

1. Did *T. rex* have an amniotic egg?
2. Was *T. rex* warm-blooded or cold-blooded?
3. Could *T. rex* have had feathers?
4. Did *T. rex* have color vision?
5. How many chambers were there in *T. rex*'s heart?
6. Did *T. rex* sing to its offspring?

Additional Data

Cladogram

Below is a simple cladogram indicating the proposed relationship among the caiman, parrot & *T. rex*.



This data table indicates the presence or absence of eleven additional features for the caiman and parrot. Notice that the information about the *T. rex* has not been filled in. You will need to make that determination based upon what you have learned. Use the cladogram above and this additional data to infer if the features are present or not for *T. rex*. Then use that information to answer your questions.

	caiman	parrot	<i>T. rex</i>
color vision	+	+	
warm blooded	0	+	
feathers	0	+	
sing to young	+	+	
scaly skin	+	+	
melanin pigment in skin	+	+	
amniotic egg	+	+	
few glands in skin	+	+	
hole in hip socket	0	+	
3-chambered heart	+	0	
4-chambered heart	0	+	