

Name: _____

Cladograms

A cladogram is an image or _____ that shows us _____ between _____.

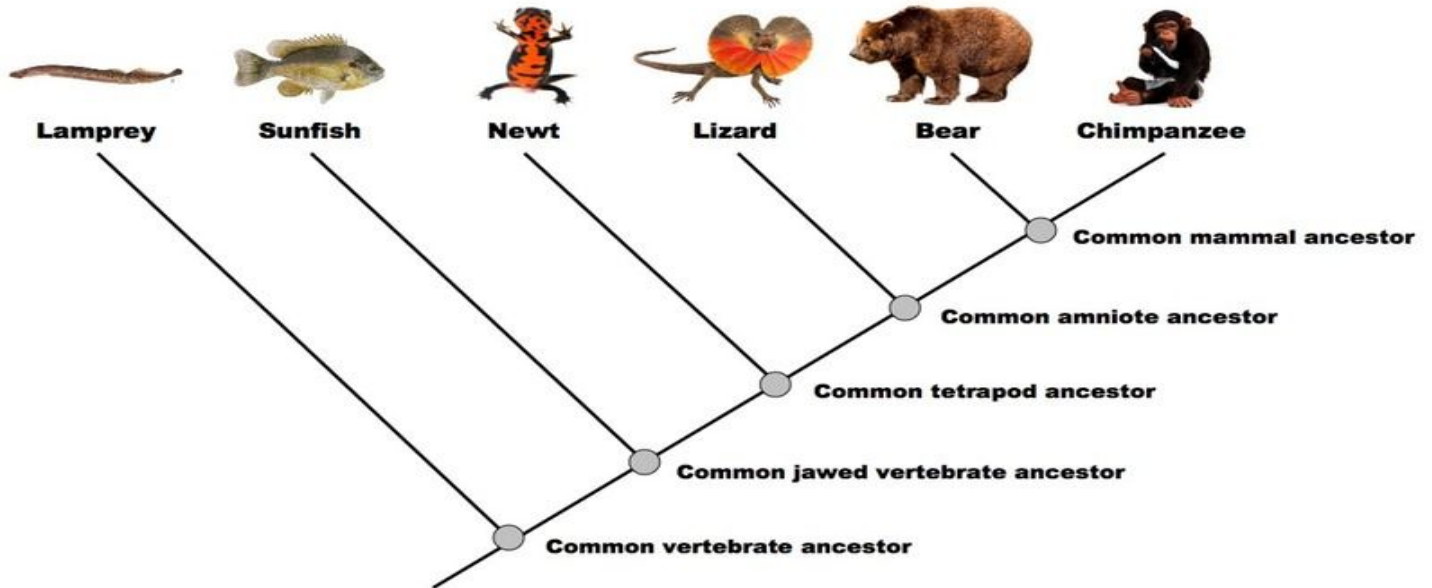
At the top of a cladogram you usually have _____. Along the side you have _____.

The “higher” we are on a cladogram the more _____ the organisms have to share to be placed there.

A cladogram allows us to trace _____ relationships. The points where the lines connect represent a _____. This means that a cladogram can tell us which organisms _____ a common ancestor, NOT that an organism “evolved” into another.

Another thing that cladograms can tell us is how _____ related organisms are.

Look at the following cladogram.








Did chimpanzees evolve from bears? Explain.

Which organisms are more closely related, bears and lizards or bears and newts? How do you know?

How to build a cladogram

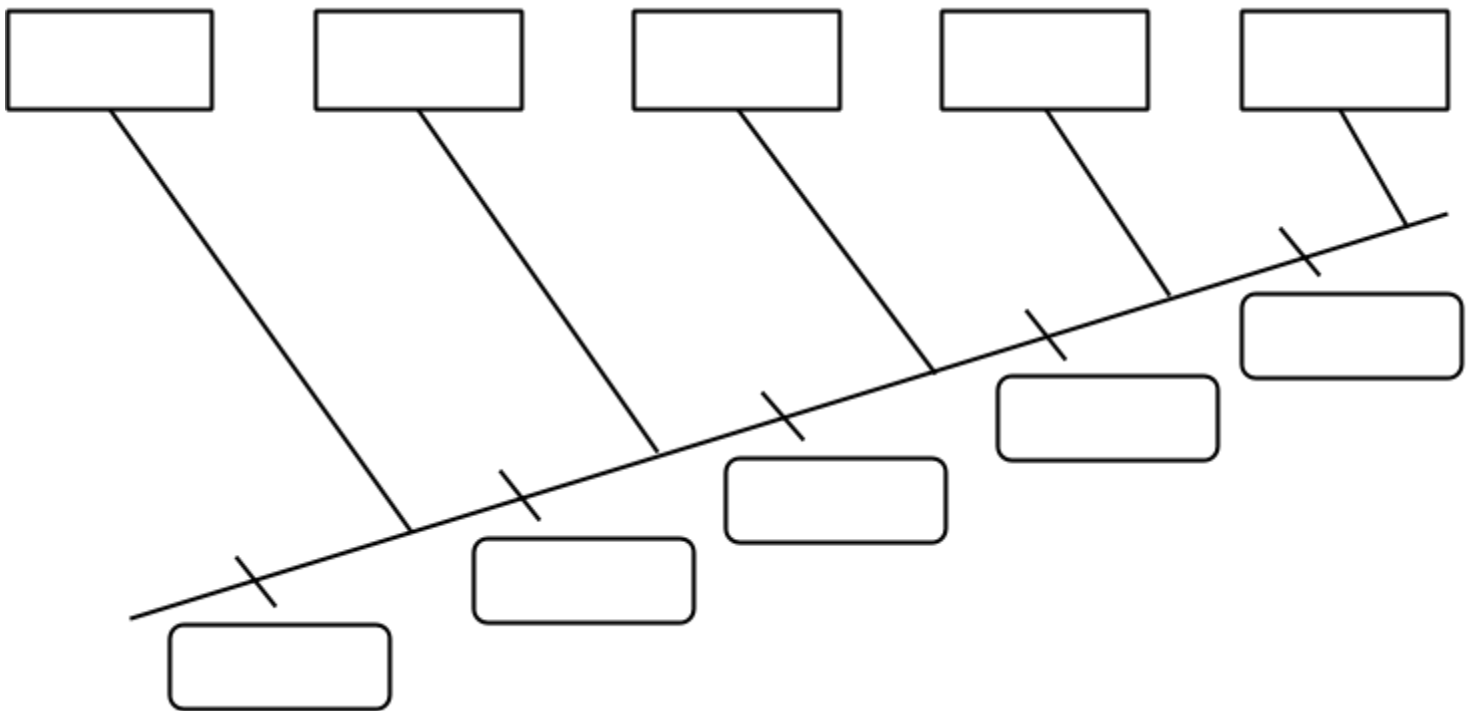
1. Identify shared derived characteristics, and create a table.

	 Organism 1	 Organism 2	 Organism 3	 Organism 4	 Organism 5
Tail					
Spikes					
Horns					
Wings					
4 limbs					

2. Draw a Venn diagram, starting with the characteristic that is shared by all organisms:

Four limbs: Organism 1, Organism 2, Organism 3, Organism 4, Organism 5

3. Now you are ready to build your own cladogram:



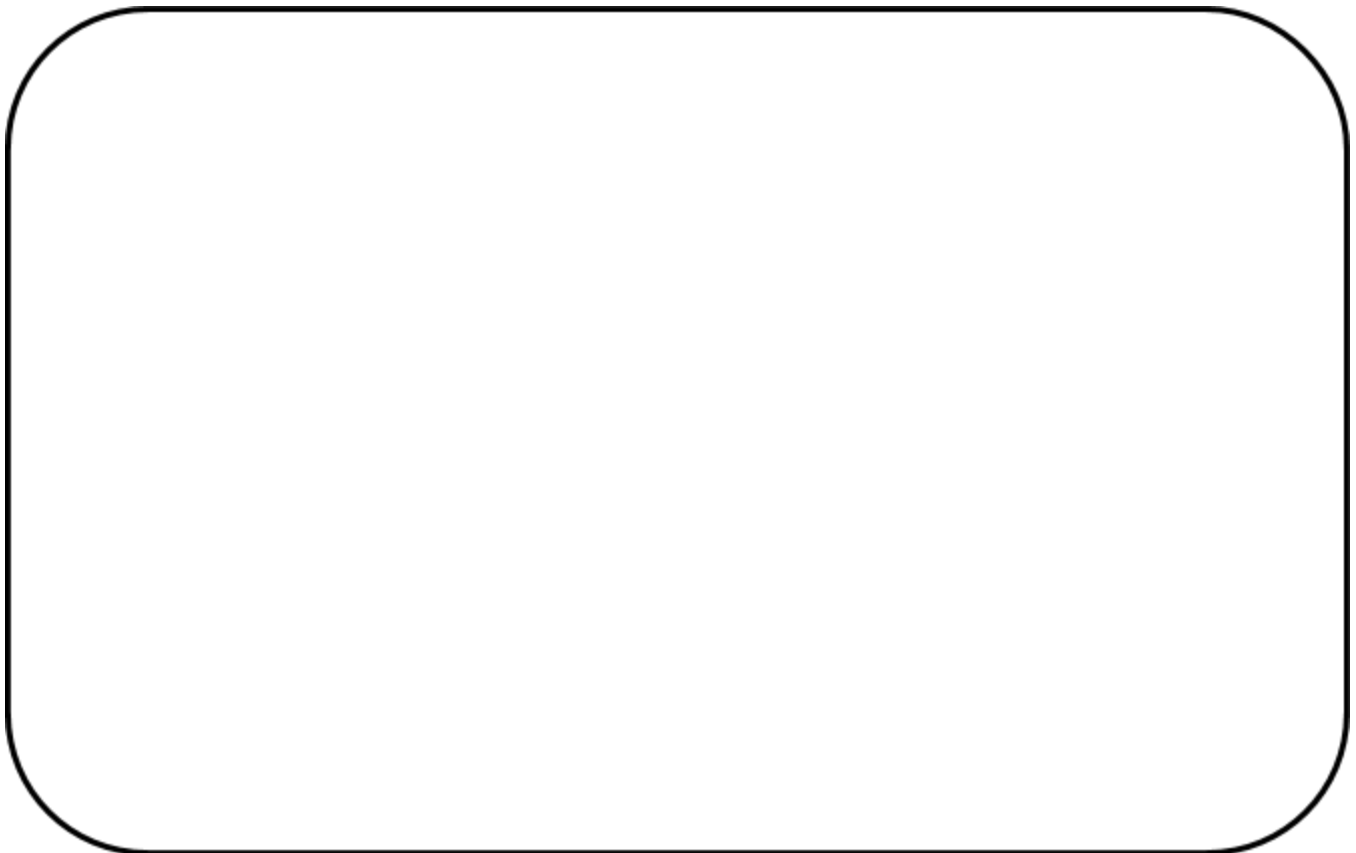
According to the cladogram you just built, which organisms are more closely related, organisms 3 and 4 or organisms 3 and 2. Explain how you know.

Now with a partner.

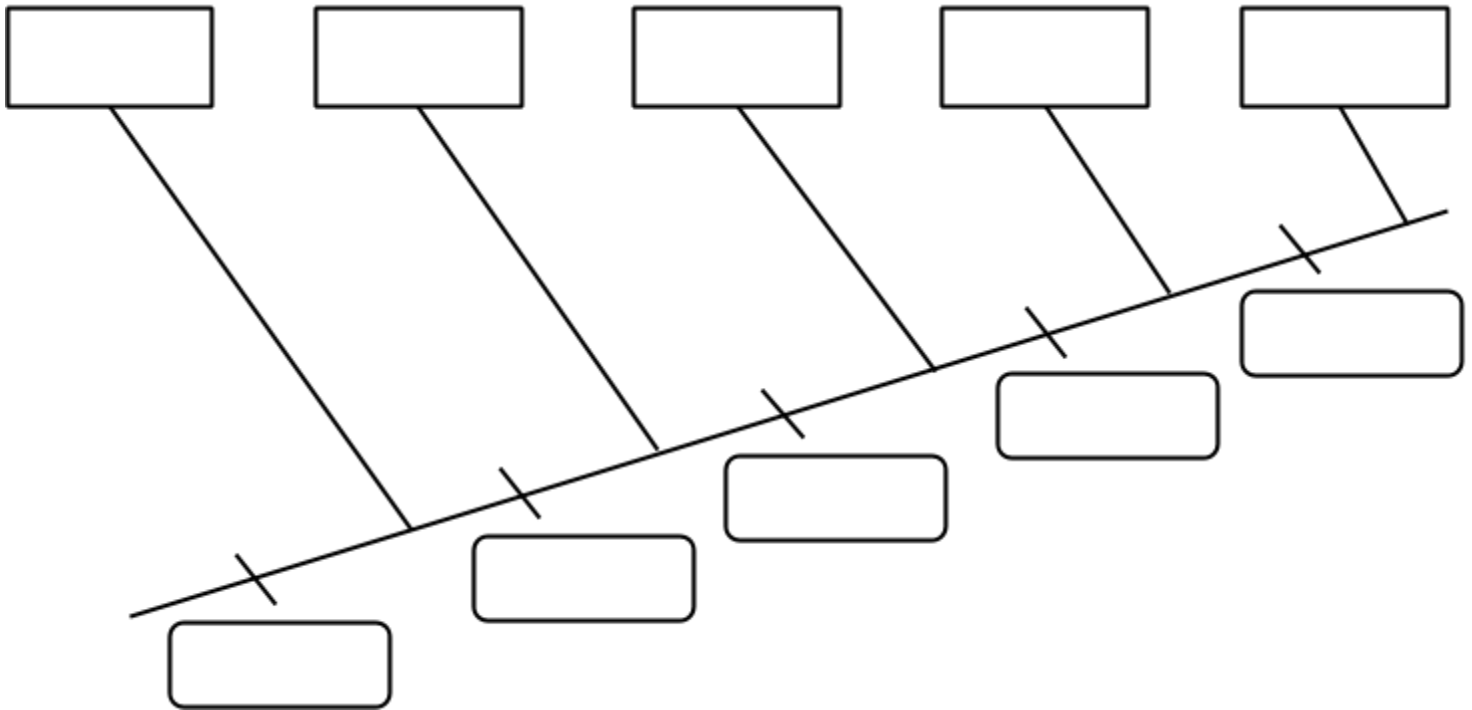
Fill in the following table.

	cells	legs	hair	eyes	opposable thumbs
Bacteria					
Human					
Snake					
Monkey					
Lizard					

Create your venn Diagram



Create your cladogram:



According to your cladogram, which two species are more closely related: humans and snakes or humans and lizards? How do you know?

According to your cladogram, what species are humans most closely related to? How do you know?
