

BIO 182 LAB SIGN OFF PAGE — LESSON 10

Name _____

Please staple all of your lab pages for this Lesson together with this page as the top. You will use this page to get your Labs for Lesson 10 signed off by the Biology Learning Center staff. You need to have all of the following steps initialed by a staff member before you can receive your 15 labs points for Lesson 10 and be allowed to take Exam 5.

After you have obtained all of your sign offs for this Lesson, be sure that a BLC staff member indicates on your Lab Card that you have completed all the Labs. Also, keep this sign off page, along with your completed lab worksheets, as proof of your lab completion. If your Lab Card indicates that you have not completed the required Labs for this Lesson and you believe that you have, it is up to you to provide proof that you have indeed completed the Labs. Keep this page!

_____ Lesson 10, Step 3: Animals of the Biology Learning Center

_____ Lesson 10, Step 4A: Comparing Hominoid Skulls

_____ Lesson 10, Step 4B: Comparing Hominoid Skulls

__no points__ Lesson 10, Step 5: Evolution

*BLC Staff: After the student receives his/her last initial on this page, please indicate on his/her Lab Card that s/he has completed all the Lesson 10 labs.

Step 3 – In Class Activity – Animals of the Biology Learning Center

Follow the online directions for this activity

Write the common names of vertebrates that you find in the BLC in the table below. You should be able to find organisms in five different classes of vertebrates, all in the Phylum Chordata, Subphylum Vertebrate. Indicate each animal's class (Amphibia, Reptilia, etc). Remember: We are using a slightly different version of classification for classes of fishes than does your textbook, so look at your textbook worksheets to help you out with this.

Common name of vertebrate	Class
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	

If you have trouble finding the correct number of vertebrates, please ask for help.

1. What two classes of vertebrates are not currently represented in the Biology Learning Center?

2. Name examples of animals from these two classes not represented in the BLC.

When you have answered the questions and filled in the tables above, please bring your worksheet to the front desk to receive lab points.

182 10.3:

Step 4A – In Class Activity – Comparing Hominoid Skulls

In this lab activity, you will look at models of real hominoid skulls and match written descriptions of hominoid species with the skulls. You can check out the comparative skull kit at the front desk of the Biology Learning Center. You will need your ID or keys to borrow the skulls.

Note: The skulls may have elastic around them to secure the mandible (lower jaw). You may try opening and closing the jaw if you wish, but please don't remove the elastic.

Directions:

Look at each skull carefully.

Read the species descriptions on the cards in the kit.

Match the cards with the skull number.

Indicate below the species of each skull. Write the skull number by the species name in the list below.

_____ Chimpanzee (*Pan troglodytes*)

_____ *Australopithecus boisei*

_____ *Australopithecus afarensis*

_____ *Homo erectus*

_____ Gorilla (*Gorilla gorilla*)

_____ *Homo neanderthalensis*

_____ *Homo sapiens*

When you have answered the questions for this activity, please bring your worksheets to the front desk to receive lab points. Don't return the skulls just yet.

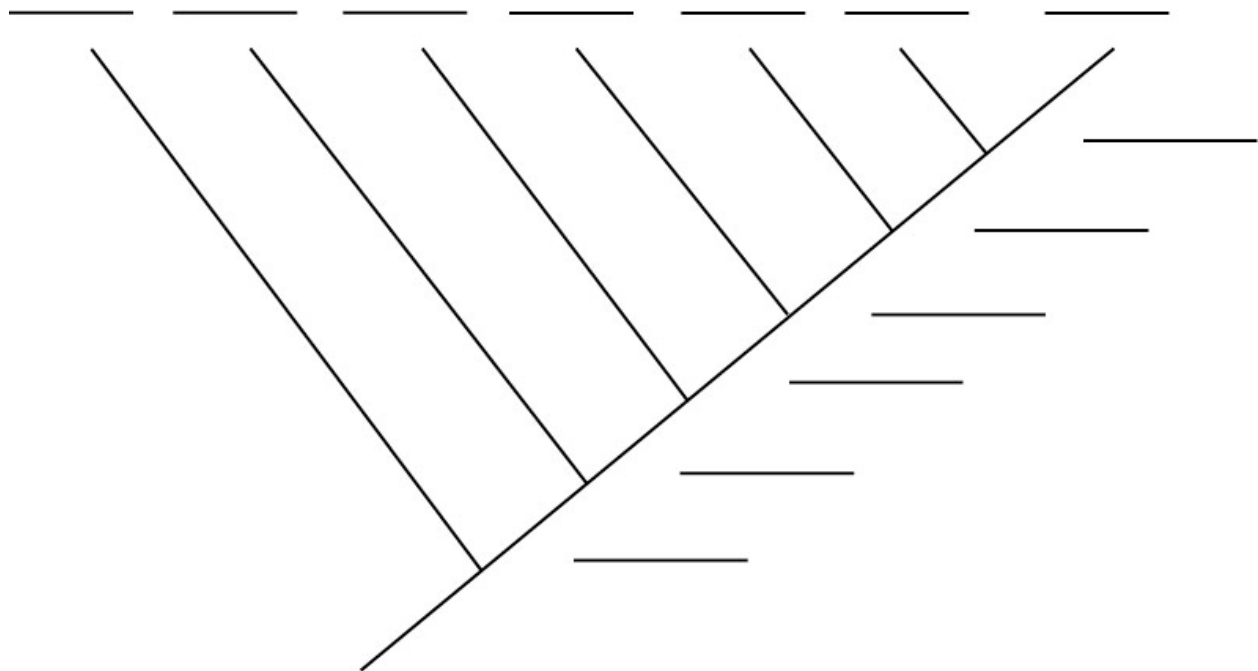
182 10.4A:

Step 4B – In Class Activity – Comparing Hominoid Skulls

In this part of the lab activity, you will make observations about the anatomical features of the hominoid skulls and use your observations to create a cladogram that shows the evolutionary relationships among the hominoid species. The online directions for this lab have the information you need to make your observations. Fill in the chart below and use it to create your cladogram.

Traits→ Species	Trait 1	Trait 2	Trait 3	Trait 4	Trait 5	Trait 6	Trait 7	Trait 8
<i>A. bosei</i>								
<i>P. troglodytes</i>								
<i>H. erectus</i>								
<i>H. neandertalensis</i>								
<i>Gorilla sp.</i>								
<i>H. sapiens</i>								
<i>A. afarensis</i>								

_____ BLC staff initial before proceeding to cladogram



There are some questions on the next page for you to answer

How do the changes in traits that you examined relate to changes in diet and lifestyle in the hominoid lineage? Think about teeth and neck muscles.

Take a look at *Ardipithecus ramidus* skull in the case by the saltwater tank. Based on the traits you looked at for the other 7 skulls, where do you think *Ardipithecus ramidus* would fit in on your cladogram? Why?

**When you have answered the questions for this activity, please bring your worksheets to the front desk to receive lab points.
182 10.4B:**

Step 5 – Online Video Activity – “Evolution”

No points, but questions from this may be on your exam

You’ll watch video segment 5 from the PBS evolution series, “Did Humans Evolve?”. You can watch the video segment in the Biology Learning Center, or you can check out a copy of the videos at the front desk to watch at home, or you can view the segment at PBS’s website (see the class website for the link). Answer the related questions below.

1. How does DNA evidence support the close evolutionary relationship between chimpanzees and humans?

2. What kinds of evidence support the fact that humans have evolved?