**Human Characteristics**

In this activity you will be examining 6 traits that in combination make humans unique. There are other living things that possess some of these traits (or some variation of them) but none have all six.

To create a Mini-poster of these 6 Human Traits fold your piece of paper into 6 equal blocks. Each block **must** contain the following information. You will find some information directly in your resources and will need to infer some from your activities and readings.

* Name of trait
* Description/Definition of the trait
* Major benefit(s) of the trait
* One other piece of info (chart, list, drawing)

As you investigate each trait fill in the block for that trait.

**Trait #1-Opposable Thumb**

Look at Figure E1.10 on page 93 in your textbook and compare the hands of the five primates. Notice that the length of the hands and fingers are different. Primates that live in trees tend to have short thumbs that stick out to the side and the other fingers that are long to swing from the branches. Primates that spend more or all of their time on the ground have shorter fingers in relation to the hand. They also have thicker partial or fully opposable thumbs. Fully opposable thumbs are able to touch the pads of all the other fingers on that hand. Partially opposable thumbs can only touch the closest fingers.

Activity

1. Carefully empty the plastic bag that contains common household items. Take turns holding the items as if you were using it. What parts of your hand touch those items? Which and how many fingers are used to grasp them?
2. Now take out the roll of masking tape. Have one person volunteer to have their thumb taped to their hand to that it can’t be used. Have them pick up the same items. What did you notice?
3. What are the benefits of having an opposable thumb? What are the costs?

**Trait #2-Bipedalism (walking upright)**

Look at Figure E1.11 on page 94 in your textbook. It shows the skeletons of two primates. One is bipedal and the other is not. What are some traits you notice in the skeleton of the human (bipedal) that are different from the gorilla (not bipedal)?

Activity

1. Ask someone to walk across the room. Observe the movement of their legs, feet, and hips.
2. Now watch the following videos of a chimpanzee (not bipedal) moving on two legs- <https://www.youtube.com/watch?v=qwu3in3YGO0>
3. What differences did you observe in the movements between the human and chimp?
4. Visit the following Smithsonian site and click on the “Walking Upright” tab on the left. <http://humanorigins.si.edu/human-characteristics/walking>
5. Scroll down to “Fully bipedal by 1.9 million years ago”. Make a chart like the one below and fill in the information.

|  |  |
| --- | --- |
|  | Human (bipedal) |
| Skull |  |
| Upper leg |  |
| Lower knee |  |

1. Finally, read about the costs and benefits of being bipedal.

(Keep this link open as you will return for other activities)

**Trait #3-Large Cerebrum**

Although humans have the largest brains of any primates, size alone is not the reason why we have such highly developed abilities. After all, there were probably some large dinosaurs with very big brains.

The area of the brain that most affects ability is called the FRONTAL LOBE (shaded below). It controls traits such as planning for the future, complex language and abstract thinking. Compare the size of the human frontal lobe to other primates.

 

Activity

1. Look at the brain model and find the green frontal lobe. Turn the model so the colored parts are facing away from you. Notice how the frontal lobe sticks out so far? This is why we have a flat forehead while other primates have foreheads that slope backwards. We need more room for our big brains! What do you think this says about our thinking abilities compared to our primate relatives?
2. Return to the Smithsonian link and click on the “Brains” tab to the left.
3. Read until you reach the heading “Why the sudden increase in brain size? Make a list of 5 important facts about the human brain.
4. Finally, scroll down and read about the “Benefits and Costs of a Big Brain”

**Trait #4-Language**

Although many organisms can communicate, humans are unique because we have language. Languages have rules of grammar and hundreds of thousands of words that allow us to share a limitless number of thoughts and ideas.

Activity

1. Have you ever interacted with a dog and told it to do something and it obeyed you? Or has a dog every communicated a need to you that you understood? Is this exchange language?
2. Watch the video of Koko the gorilla. <https://www.youtube.com/watch?v=SNuZ4OE6vCk>
3. Is sign language a true “language”? Do you think Koko has “language” in the human sense?
4. Return to the Smithsonian link and click on the “Language and Symbols” tab to the left.
5. Watch the video at the top of the page (The first part is silent)
6. Scroll down to the section “When did Humans Start Writing” and read to the end
7. Is there a difference between communication and language?

**Trait #5-Culture**

Culture can be described as a shared set of beliefs and behaviors passes from one generation to the next. Humans have many different types of cultures which encompass such traits as celebrations, food and language.

Activity

1. Think of some activities or behaviors you participate in with your family that you consider part of your culture. Share these with the members of your group? Are there some differences? Similarities?
2. Return to the Smithsonian link and click on the “Social Life” tab to the left.
3. Watch the video at the top of the page (The entire video is silent)
4. Read the first two sections on “Group Survival” and “Sharing Resources” and then skip down and read “Gathering at the Hearth”. How did these factors lead to the development of human cultures?
5. What is the benefit of having a “culture”?

**Trait #6-A Long Childhood**

Different animals spend varying amounts of time with their parents until they are able to survive on their own. This period is referred to as “childhood”.

Activity

1. Think of the following animals: dog, snake, robin, chimpanzee. How much time do these animals spend with their parents before they can survive on their own? How able are these animals to move around and fend for themselves after birth? Do you see any pattern between the two?
2. Return to the Smithsonian link and click on the “Social Life” tab to the left.
3. Watch the video at the top of the page paying special attention to the sections on human childhood. (The entire video is silent)
4. Scroll down and read the sections “More Time to Grow” and “Two Roads to Adulthood”.
5. What are the benefits of a long childhood?