



Hominin Skulls

Who are our earliest ancestors?

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BEST FOR GRADES

4-8

ESTIMATED TIME

5-10 Minutes

You Will Need

- Access to Science-U website

Directions

1. Watch the video.
2. Grab and rotate each skull in the Skull Game below to examine its characteristics.
 - 2.1 Keep in mind that these are casts and signs of age could be misleading because they are not actually bone.
3. Click on the checkboxes and try to put the skulls in order from oldest to youngest. You will be alerted if you are incorrect and congratulated when you are correct.
4. After successfully completing level one, complete the same task with three more skulls.
5. How did you do this time?
6. Which ones were difficult to place?
7. Review the skulls later in this document to see them all in order.



Hominin Skulls Discovery Questions & Keywords

After the Online Game

What made you choose the order?

Now that you know the order, do you notice similar characteristics of skulls that are closer to each other on the evolutionary tree?

Keywords

Anthropology

Study of human origins, biology, behavior, and culture.

Casts

A replica of a fossil created when a mold is filled with materials that harden into the shape.

Chronological

Arranged in order of time.

Fossils

An impression, caste, or mold of an organism that has been preserved in some way.

Hominin

Classification including modern humans, extinct human species and immediate ancestors.

Relatedness

Connected by common ancestry or common characteristics.

Species

A group of organisms closely related.

Phylogenetic Tree

A diagram that shows the evolutionary relationship between different organisms over a specific time period.



Hominin Skulls

Who are our earliest ancestors?

How do scientists classify fossils?

Scientists classify organisms much the same way that we classify objects all around us. For example, when you go to the grocery store, you know that you can find milk, yogurt, and cheese in the dairy section. You can also find eggs there, but that's a mystery for another day!

We keep the dairy products together because they have common characteristics.

Looking at these skulls, scientists take measurements to estimate the size of the brain. Researchers also look at other characteristics such as eyebrow ridge, jawline, teeth, and evidence of walking upright. Paleontologists will examine patterns in the teeth and materials where the fossil is found to look for clues on diet and behavior.



When scientists look at fossils, they also use a variety of methods to evaluate how old the fossils are and where they might be on the phylogenic family tree. Scientists can use chemical decay as well as other known fossils nearby to estimate how old the samples are.



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Discovery question answer key for parents and teachers.

After the Online Game

What made you choose the order?

Answers will vary based on what the scientist observes.

Now that you know the order, do you notice similar characteristics of skulls that are closer to each other on the evolutionary tree?

Answers will vary based on what the scientist observes.



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Who are our earliest ancestors?



Australopithecus aethiopicus

Between 2.3 and 2.7 Million Years Ago (MYA) "about 3 million years old!"



Homo erectus

Earliest about 2 MYA.



Australopithecus africanus

Between about 3.3 and 2.1 MYA



Homo neanderthalensis

Until about 40,000 years ago.



Homo habilis

About 2.31 MYA to 1.65 MYA. Beginning of our Homo species!



Homo sapiens - today!

Oldest age 233,000 to 196,000 years ago.



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Hominin Skulls Phylogenetic Tree

