

When we try to pick out anything by itself, we find it hitched to everything else in the Universe - John Muir

Our Branch on the Tree of Life

The human story is interwoven with the story of every other living thing on earth. Our earliest ancestors from millions of years ago had ancestors millions of years old who had ancestors millions of years old and so on. They certainly didn't look like we do today. But then again, neither did the Earth!

Humans as we know them today, look and behave as they do because each earlier generation inherited beneficial traits, allowing them to adapt and survive in a changing environment. We can observe how these traits have changed over time by looking at fossils.

Fossils are evidence of past life, typically in the form of ancient mineralized bone or teeth (body fossils).



[Coelophysis fossil](#) (New Mexico State fossil-cast)



[A. afarensis](#) footprint cast

But sometimes fossils are evidence of past living activities (trace fossils) and show up as fossilized footprints, tracks, trails, burrows and the like.

Journey to the past and meet our earliest ancestors!

Explore the websites below to learn:

1. Where early human fossils were found
2. When each species lived
3. What the environment was like at the time

Smithsonian Interactive Timeline of Human Evolution

<https://humanorigins.si.edu/evidence/human-evolution-timeline-interactive>

AMNH Meet the Relatives interactive

<https://www.amnh.org/exhibitions/permanent/human-origins/meet-the-relatives>

Howard Hughes Medical Institute Biointeractive Timeline activity

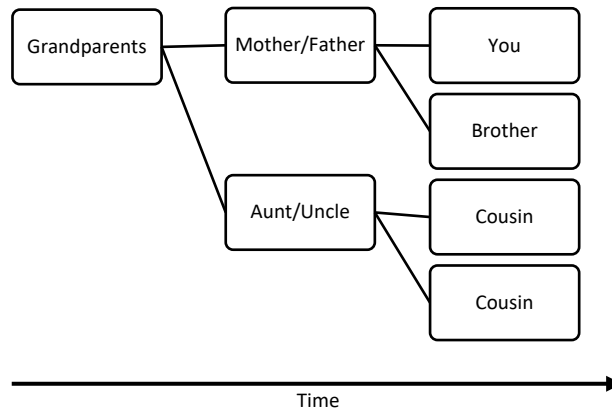
<https://www.biointeractive.org/classroom-resources/human-origins>

Then try the activities on the following pages to demonstrate what you've learned about how our physical and behavioral traits have changed over time.

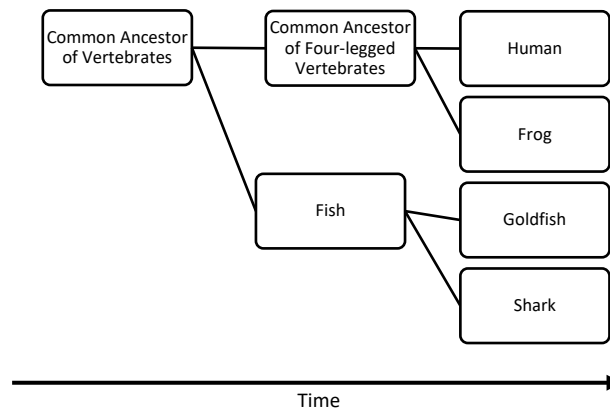
1. Complete a timeline of the branches of the human family tree
2. Design your own trading cards/flash cards

Human Family Tree

Common family trees you may have seen show the relationship between yourself and other members of your family. In this family tree, you can see that there is a common ancestor connecting you and your cousins, but you can also see that you share a common ancestor which your cousins do not; your parents.



Scientists also use family trees when looking at human evolution and where we come from. Instead of individuals though, scientists look at different species and their common ancestors.

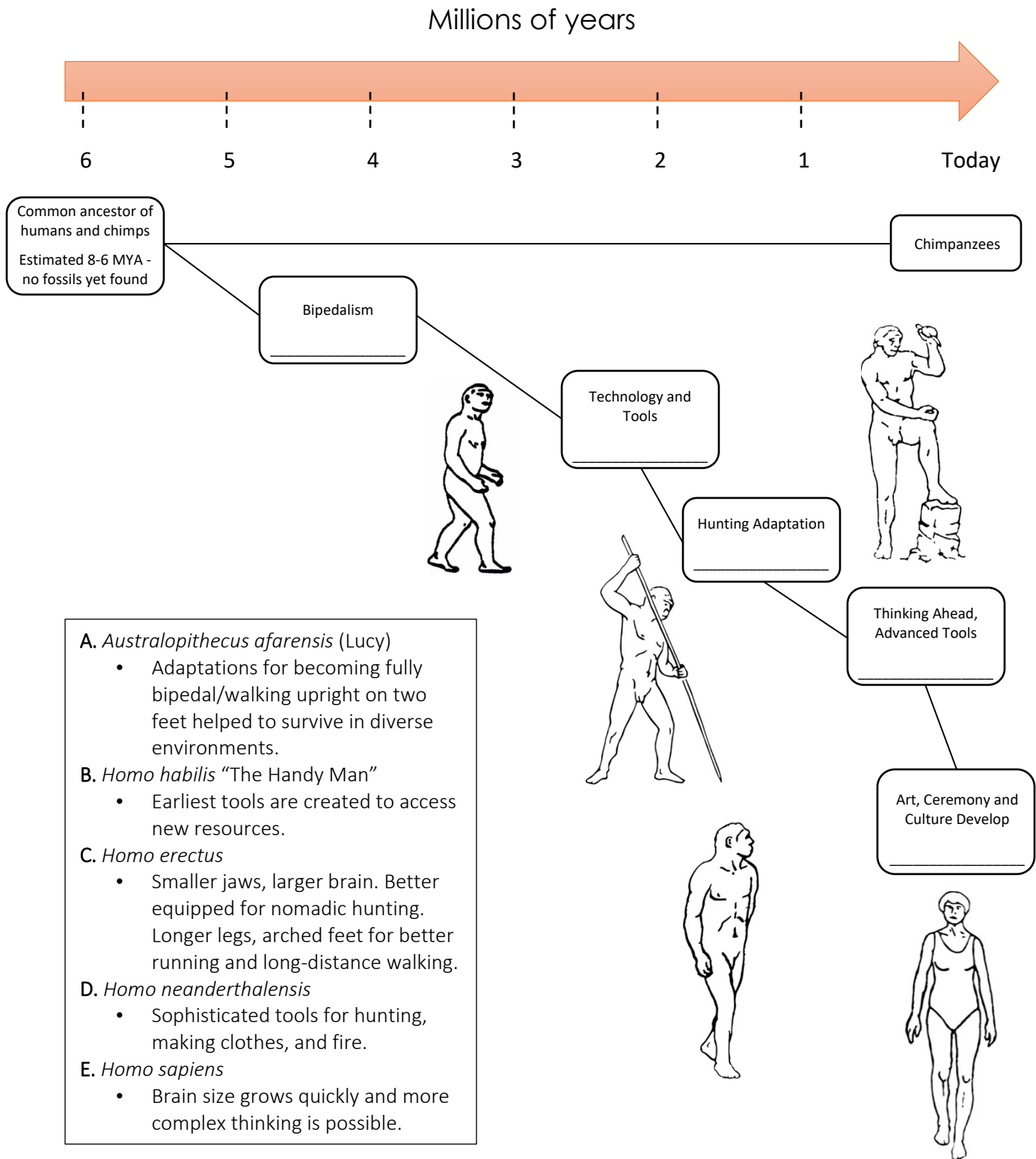


How does one common ancestor evolve into more species?

When faced with new environments, the things living in those environments are faced with challenges. Some traits are advantageous and helpful and are passed on to the next generation. Other traits are not as successful. They are less likely to be inherited and are more likely to disappear. Through this process over very, very long periods of time, generations adapt and change into new species.

Explore the branches that led to us becoming human!

Pay close attention to the traits these ancestors have and label them into the correct category on the timeline.



Maxwell Museum Ancestor All-Stars

Fun Fact Flash Cards!

Print two-sided, fill in the information, then cut them out and keep for easy reference.

Australopithecus afarensis



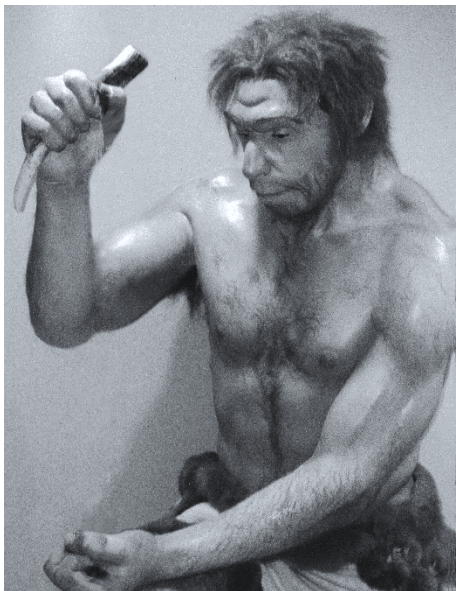
aka "Lucy"

Homo habilis



aka "Handy Man"

Homo neanderthalensis



aka "La Chapelle/La Ferrassie"

Homo sapiens

Paste your picture here!

aka "_____"

Species: *Homo habilis*

Known fossil sites: Eastern and Southern Africa

Years before present: approx. 2.4-1.4 million years ago

Fun Facts:

- Was fully bipedal but had ape-like long arms and protruding jaws
- Name means “handy man” because it was thought this was the first tool user
- Is the earliest member known of the genus *Homo*

Species: *Australopithecus afarensis*

Known fossil sites: Eastern Africa

Years before present: approx. 3.85-2.95 million years ago

Fun Facts:

- Was fully bipedal, although probably spent some time in trees
- Fossil evidence shows she had arthritis in her back
- Was 3 feet 7 inches tall
- Was named after the Beatle’s “Lucy in the Sky” song

Species: *Homo sapiens*

Add information about you!

Name: _____

Age: _____

Fun Facts and Hobbies:

Species: *Homo neanderthalensis*

Known fossil sites: Europe and Southwestern to Southern Asia

Years before present: 400,000 – 40,000 years ago

Fun Facts:

- Species named for the Neander Valley of Germany where it was first found in 1855
- This model is based upon specimens from Southern France
- Had ceremonial habits and social systems

Visit this [website](#) to learn about our earliest human relatives. Print these pages 2-sided, draw your favorite ancestors and complete the information. Cut them out and trade some with your friends!

Species:

aka " _____ "

Species:

aka " _____ "

Species:

aka " _____ "

Species:

aka " _____ "

Species:

Known fossil sites:

Years before present:

Fun Facts:

Species:

Known fossil sites:

Years before present:

Fun Facts:

Species:

Known fossil sites:

Years before present:

Fun Facts:

Species:

Known fossil sites:

Years before present:

Fun Facts:

Resources:

Smithsonian Interactive Timeline of Human Evolution

<https://humanorigins.si.edu/evidence/human-evolution-timeline-interactive>

Hominin species summaries – Smithsonian

<https://humanorigins.si.edu/evidence/human-fossils/species>

American Museum of Natural History (AMNH) Hall of Human Origins

<https://www.amnh.org/exhibitions/permanent/human-origins>

AMNH Meet the Relatives interactive

<https://www.amnh.org/exhibitions/permanent/human-origins/meet-the-relatives>

Howard Hughes Medical Institute Biointeractive Timeline activity

<https://www.biointeractive.org/classroom-resources/human-origins>

Scishow Kids – Our Ancient Human Cousins

<https://www.youtube.com/watch?v=w3X87gCNjg>

The Children’s Hour podcast – Maxwell Museum of Anthropology

<https://www.childrenshour.org/anthropology/>

PBS Humankind evolution

<http://www.pbs.org/wgbh/evolution/humans/humankind/index.html>

PBS Finding Lucy

<https://nm.pbslearningmedia.org/resource/tdc02.sci.life.evo.findinglucy/finding-lucy/>

Institute of Human Origins – Arizona State University (ASU)

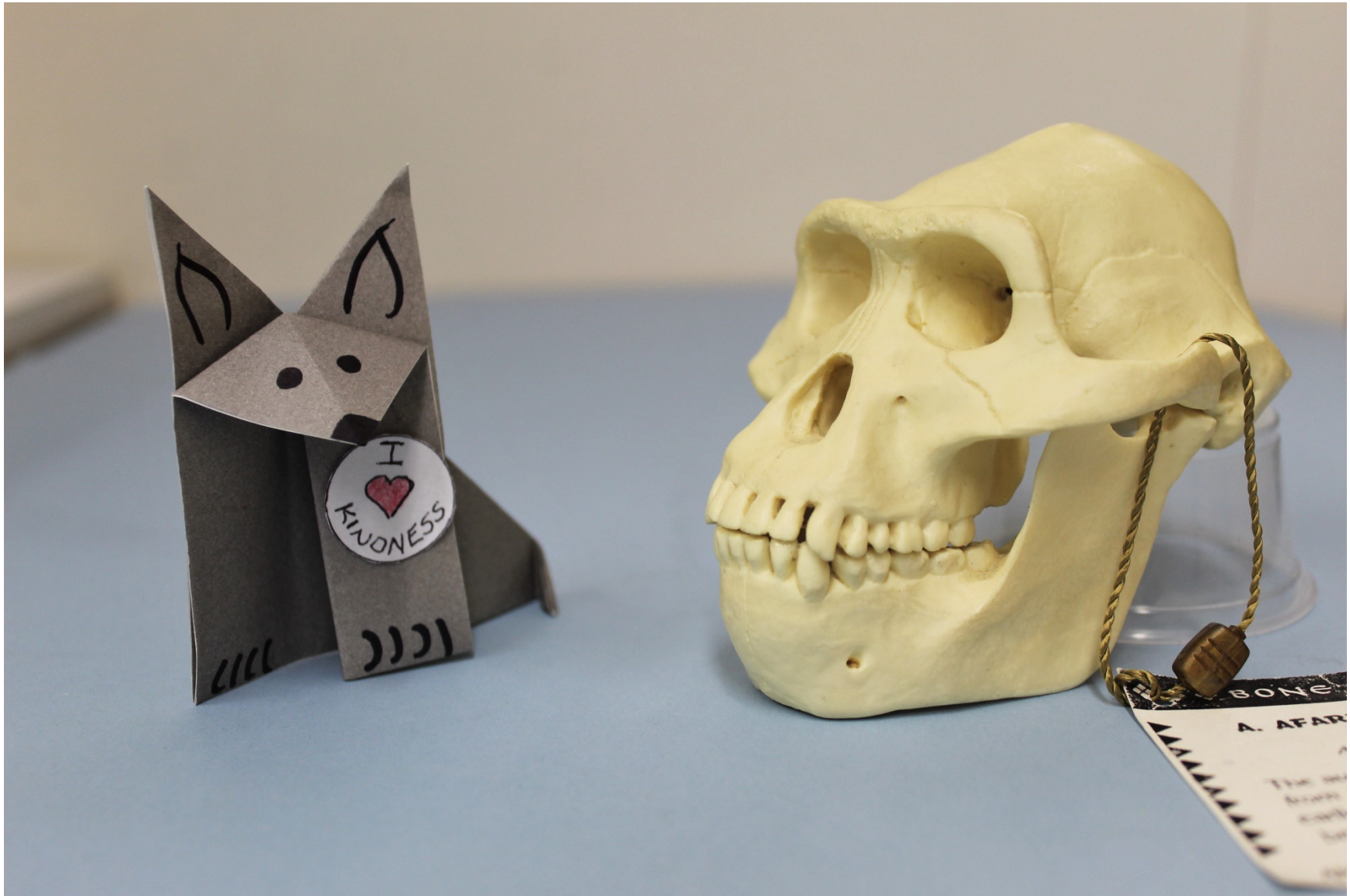
<https://askananthropologist.asu.edu/stories/changing-climates-and-changing-faces>

Ask an Anthropologist – ASU

<https://askananthropologist.asu.edu/explore/listen-watch>

Timeline answers:

Bipedalism: **A**, Technology and Tools: **B**, Hunting Adaptation: **C**, Thinking Ahead, Advanced Tools: **D**, Art, Ceremony and Culture Develop: **E**



Lulu and Lucy discuss the merits and drawbacks of bipedalism vs quadrupedalism