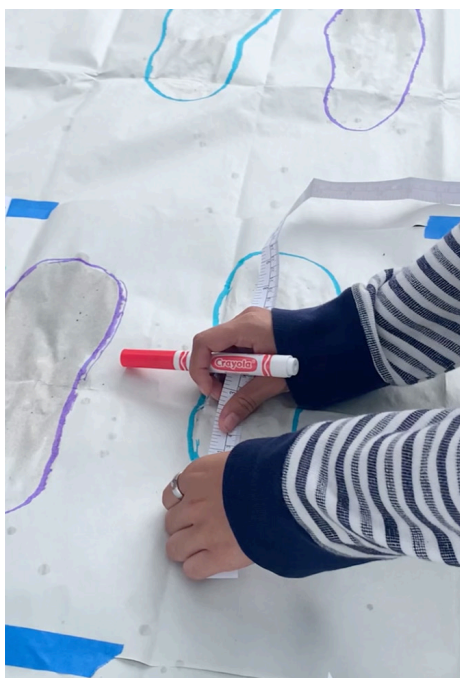


# TAKE & MAKE KIT

## Anthropology

TIME: 45 min

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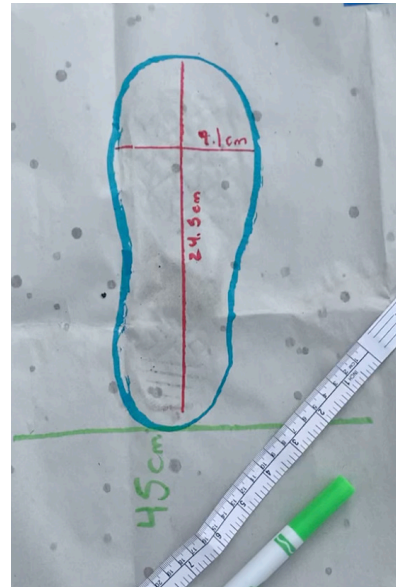


## What's in this kit?

Imagine burying a time capsule that could show the world a little bit about who you are today but it won't be uncovered for hundreds, no thousands, no, millions of years from now. That's what fossils do and it's fascinating to discover what clues they tell us about the past. In this kit you will work like a paleontologist and make a faux fossil.

### You will learn:

- Paleontology
- Anthropology
- Prehistoric humans
- Bipedalism



## Let's Get Started!

### Materials

Newsprint  
Parchment paper  
Air dry clay  
Cup of water  
Paint (optional)

### Tools

Measuring tape  
Pencil or markers  
Large bowl/bucket  
Tape (optional)

## Activity 1: Bipedalism

It's going to get a bit messy! You can complete this activity indoors or outdoors and with water or with paint. You can choose to wear your shoes or take them off and try this out barefoot. It's up to you to decide what works best for you and the materials you have on hand.

### Step 1 - Footprint trail

Lay out the newsprint sheets in a row and use something to hold it down like tape or paper weights. If using water, pour water over feet or into a bucket that you can dip your feet into. If using paint, have a helper paint the bottom of your feet while you sit in a chair.



While your feet are still wet, walk across the sheets of newsprint. **Note:** if using water, be prepared to draw outlines of your footprints because they may dry up before you can make observations.



## Did You Know?

In 1978, Mary Leaky's paleontologist team discovered footprints in a trail that was 88 feet long in Laetoli, Tanzania. The trail was preserved in volcanic ash and was dated approximately 3.6 million years old.

A lot could be learned from these footprints by making observations. Taking into account the stride (distance between each foot when walking), gait (placement of heel or toe), and the shape and size of the footprints, scientists discovered that these footprints were made by some of the early humans in the area.

## Vocabulary

**Bipedal** - Using only two legs for walking

**Paleontology** - The study of the history of life on Earth based on fossils

**Anthropology** - The study of human societies and cultures and their development

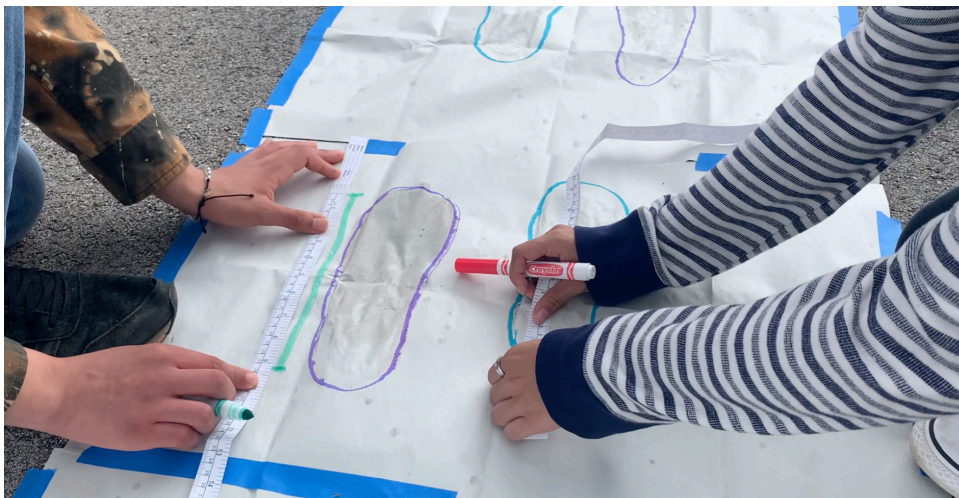
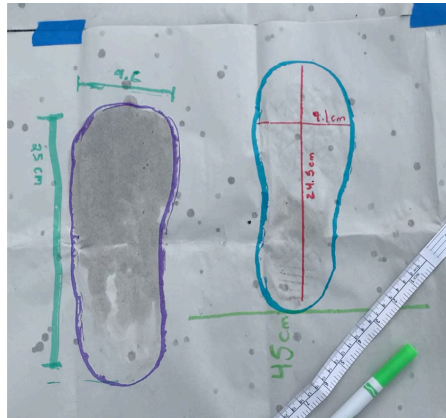
**Fossils** - The remains of plants, animals, fungi, bacteria, and single-celled living things that have been replaced by rock material or impressions of organisms preserved in rock

## Step 2 - Make observations

Use the measuring tape and record some observations about your footprints.

- Stride (distance between each foot when walking)
- Gait (placement of heel or toe)
- Width
- Length

Similar observations were made about the Laetoli footprints which helped the paleontologists determine that the footprints were early humans. This is significant to anthropology because it tells us more about the first humans around.



## What sets humans apart?

Humans are bipedal, meaning they can walk on two feet. This allowed the hands to be free which then made it possible for humans to develop the use of tools.

## Activity 2: Fossils



It is most likely that the early humans in Laetoli walked on wet volcanic ash and left footprints which were then preserved in more volcanic ash for paleontologists to discover. This fallen ash preserved the footprints which then became fossilized.

In this activity you can make your own faux fossil. We use plants but you can also make an imprint of your hands or feet.

## Step 1 - Collect specimen

Take a walk outdoors and collect some freshly fallen leaves or clip some plants from your garden.



## Step 2 - Roll out clay

Lay out the parchment paper to keep your work surface clean. Open the bag with the air dry clay but keep it inside the bag while you roll it out. If it's a little too hard to work with, try wetting your hands with a little water and then massaging your clay until soft. Give it a good push against the table, then smooth it out with the side of a flat cup or craft rolling pin. The desired thickness is about  $\frac{1}{4}$  inch.



Once you have a flat slab, give your fossil a specific shape like a square or circle or even something unique. Use a cookie cutter or a pencil to trace out the shape you want. Make them as big or as small as you want.

If you want to replicate something more organic, instead of cutting out a shape, leave the edges crackled or pull away parts to give the flat clay some texture around the edges.



## Step 3 - Imprint fossil

Take your plant and position it on top of the clay. Carefully roll over the surface with your cup or rolling pin to create the imprint. You can lay a sheet of paper on top for extra protection before you roll over it.



Remove the plant as best you can and reveal the imprint that resembles a fossil. Use a tweezers if you have some available.

Dip your hands in a cup of water and use your hands to smooth away any smudges you don't want.

If you'd like, you can use a pencil to create a hole at the top of the fossil to help hang it up in the future. Allow the clay to dry for at least 24 hours at room temperature.



## Challenge!

The scientist in Laetoli identified 3 sets of footprints in their excavation. How do you think they determined this?

Ask a friend or family member to try the first activity with you and compare your results. Do you notice any similarities or differences in the data? Each person's footprint and how they walk is different. Just like how you can differentiate between each person's trail of footprints, so could the scientists.

## Go Beyond

Make a time capsule! Think of something you want to share with other people in the future about your present self and the world you live in right now. What do you hope others in the future will learn about you when they find it? What do you think you'll be like in the future?

Write a letter and pick out some special items to place inside a small box. Don't forget to put your starting date inside the box. Seal this box and determine an opening date sometime in the future. Make it one year or three years or challenge yourself and go for an even longer period of time like 50 years! Leave a note on the box with the opening date and be patient until the time comes!

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