



June PNG: DIG DEEPER!



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Hi PNGers! Hope you enjoy our last week of Digging Deeper!

If you have any questions, please reach out to your Librarian Liz:

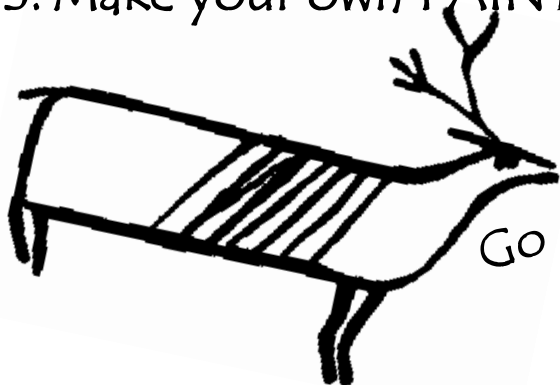
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Week 4: Dig Deeper into Stone Age Art!

We're digging deep into EARLY TECHNOLOGY. You get to make your very own stone age art! Your kit has materials to make 3 different tools. **Make these tools in the order listed**; your paper will have to dry and you'll need brushes to use the paint. Then, use the tools you made to create your own art piece!

1. Make your own PAPER
2. Make your own PAINTBRUSHES
3. Make your own PAINT



Go online for demo videos and lots of cool
archaeology resources!

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DIG DEEPER into Stone Age Art: What does PALEOLITHIC mean??

PALEO is from the Greek word *palaios*, which means OLD

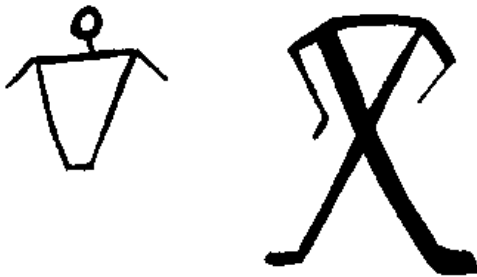
LITHIC is from the Greek word *lithos*, which means STONE

The PALEOLITHIC period the first part of the Stone Age

There are different periods of time in the STONE AGE:

- **PALEOLITHIC** (Old Stone Age), which begins with the first creation of stone tools about 3 million years ago
- **MESOLITHIC** (Middle Stone Age), which marks the end of the Ice Age
- **NEOLITHIC** (New Stone Age), which marks the beginning of farming

Notice how the exact dates are fuzzy!
Technology developed and Ice Age glaciers receded at different times in different places. We learn more with each new discovery in the fossil record and the archaeological record.



Check out “What does it mean to be human?” at carbondaepubliclibrary.org/png and think on these questions:

- How were the lives of paleolithic people the same as ours? How are they different?
- Imagine that we humans didn’t have a way of communication with each other—no language or writing. What would be the first or most important things you would want to tell someone? How would you tell them?
- When we think of technology, we think of computers. Are stone tools technology? What about language?



An Oldowan tool, named after the Olduvai Gorge in Tanzania where these stone tools were excavated. These stone tools were made by early humans during the Lower (earliest) Paleolithic period, about 2.6—1.7 million years ago.

Chimpanzees and orangutans use twigs to gather food. Tools made from other organic materials like wood and bone were probably used before Oldowan.

DIG DEEPER into Stone Age Art:

Make your own Paper!

HAVE AN ADULT
HELP YOU WITH
THE BLENDER!

1. MAKE YOUR MOLD

- Open your embroidery hoop by loosening the screw on the outside frame. Take out the inside frame.
- Lay your piece of mesh on top of the inside frame. Place the outside frame on top of the mesh and fit it over the inside frame (you might have to unscrew the outside frame a little more to fit it back around the inside frame). Your mesh should now be between the two frames.
- Flip over your hoop. Pull the mesh tight (you might want to press down on the inside hoop to do this). Tighten the screw to get the mesh as tight and secure as you can. Cut off excess mesh but leave a few inches in case the mesh slips.

2. MAKE YOUR PAPER SLURRY

First, rip up 1-2 sheets of newspaper. Try tearing into strips, stacking the strips, then tearing chunks off.

WITH A BLENDER

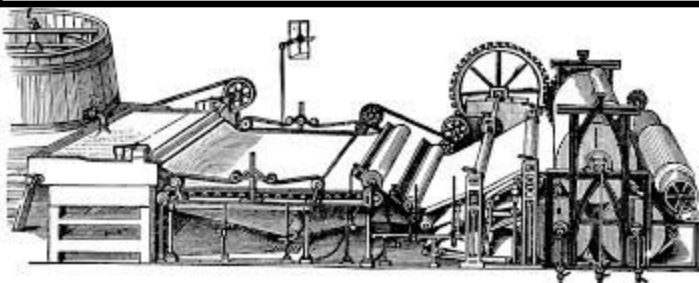
- Put your newspaper confetti in the blender and cover with water. Starting on a low setting, blend the paper until you have a pulp. Unplug the blender and put the pulp in a bowl.

WITHOUT A BLENDER

- Put your newspaper confetti in a bowl and cover with water. Let sit overnight.
- Rip up the wet newspaper as much as you can, aiming for a pulp consistency.

3. SHAPE YOUR PAPER


- Place your mold over a large bowl. Take a handful of paper slurry and flatten it on the mold.
- Continue adding and flattening your paper slurry on the mold until you have the size, shape, and thickness you want, squeezing out as much water into the bowl as you can. Make sure there aren't any gaps or holes in your paper. You can use a towel to flatten and squeeze the paper even more.
- Take your piece of felt and flatten it over the paper. Take the mold off the bowl and flip it. Your paper should now be laying on the felt. Carefully take the mold off of the top of the paper. To speed up the drying process, put a towel or some newspaper on top of your paper and flip, repeating this process every few hours.



The earliest evidence of pulp papermaking dates back to 2nd century China, more than 800 years ago. The pulp was usually made out of "rags" - recycled fibers from used textiles. Rags were replaced with wood pulp during the Industrial Revolution.

Before paper, humans used bark (amate), plants (like papyrus), wax, animal skin (parchment), and stone as writing surfaces.

DIG DEEPER into Stone Age Art: Make your own Paintbrushes!



REED & PHEASANT FEATHER BRUSH

- Use your smallest reed for this paintbrush.
- Inspect your feather and decide how big you want your bristle. Holding the top of the feather, gently peel the unwanted barbs off each side of the shaft.
- Slide your bristle up the reed with the bristle sticking out, shaping the bristle as you fit it into the handle. Trim the shaft if it's too long. If the shaft is too thin, thicken it by wrapping masking tape around it.

REED & HAIR BRUSH

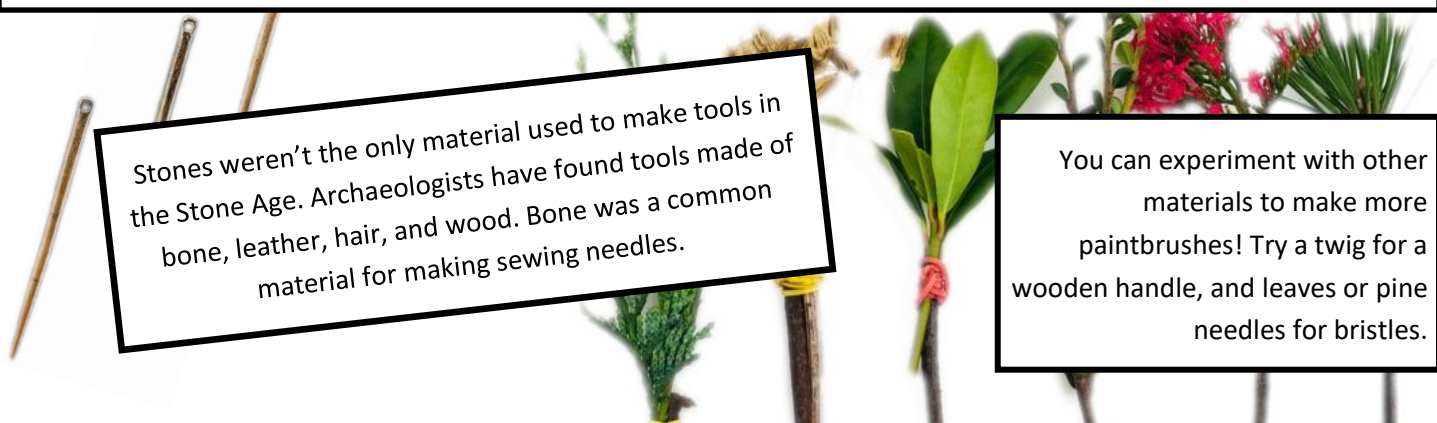
- Slide the taped end of the hair bundle into the reed. If the bundle is too thin, wrap more tape around the end to thicken it. Wait to trim and shape the hair bristles until after making your ferrule.

MAKE FERRULES FOR YOUR REED BRUSHES

Take a strip of leather and wrap it tight around the bottom of the handle so that half the leather extends further than the handle. You can use a piece of tape to temporarily hold the leather in place. Take a piece of waxed cord and wrap it around the leather, just below the end of the reed; leave some length at both ends of the wrap so you can make knots to secure your wrap. Trim excess cord.

DUCK FEATHER BRUSH

- Examine the structure of your feather; notice where the shaft stops being hollow. The bottom part of your feather will be the handle. The top half will be your bristle.
- Carefully cut the feather into 2 pieces. Try not to split or squish the shaft.
- Inspect the quill (the bottom point of the shaft). You want a SMALL hole. If needed, use a toothpick to hollow out the shaft, or cut a very small slice off the bottom point to make an opening.
- Inspect your other piece and decide how big you want your bristle. Holding the top of the feather, gently peel off the unwanted barbs from each side until you have a bare section that is about an inch longer than your handle; cut off excess if necessary.
- Slide the bristle up the bottom of your handle with the bristle sticking out, shaping the bristle as you fit it into the handle. Hollow out the quill more if needed.



Stones weren't the only material used to make tools in the Stone Age. Archaeologists have found tools made of bone, leather, hair, and wood. Bone was a common material for making sewing needles.

You can experiment with other materials to make more paintbrushes! Try a twig for a wooden handle, and leaves or pine needles for bristles.

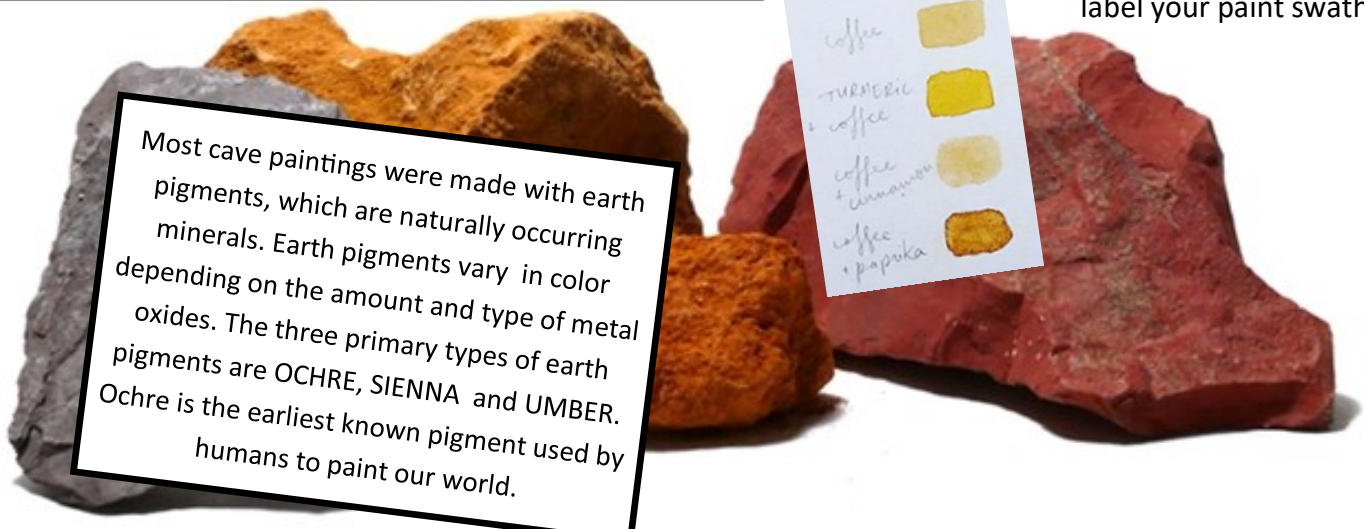
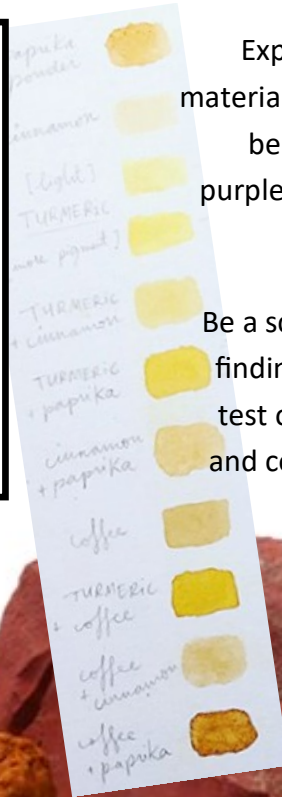
DIG DEEPER into Stone Age Art: Make your own Paint!

There are three different pigments in your kit: turmeric and paprika, which are spices (wash your hands before touching your face!); and instant coffee. You can mix and match these powders to get different paint colors!

- Spoon a little bit of a powder of your choice into a small red cup. Add water a little at a time as you mix with a paper stick until you get a paint consistency.
- Experiment with different consistencies and combinations!

Experiment with other natural materials to make more colors! Try berries to get blues, reds, and purples; try spinach for green; try cinnamon for brown!

Be a scientist and document your findings! Use a piece of paper to test out your different materials and combinations, making sure to label your paint swaths.



Most cave paintings were made with earth pigments, which are naturally occurring minerals. Earth pigments vary in color depending on the amount and type of metal oxides. The three primary types of earth pigments are OCHRE, SIENNA and UMBER. Ochre is the earliest known pigment used by humans to paint our world.

The Geometric Signs of Ice Age Europe

NOW YOU CAN MAKE YOUR OWN ART WITH THE TOOLS YOU MADE!

Use your paint and paintbrushes to paint cave art symbols on your paper!

