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This PDF package has been put together to give you options when it comes to printing. Some PDF file downloads may contain some documents larger than an 8-1/2" x 11" image. Pages and patterns that are larger than 8%x11 have been provided in two formats:



Full Size: If you would like to have a full size print out, take the full size pages to your local print shop and they can print it for you.

Tiled: The tiled pages give you the option of printing the larger patterns at home. You print the tiled pages and then assemble them to make the larger patterns.



<u>Pattern PDF files</u> are typically laid out as follows: Cover (if applicable), instructions sheets (if applicable), pattern 1 – full sized, pattern 2 – full sized, pattern 2 – tiled, pattern 3 – full sized, pattern 3 – tiled. ...Etc.

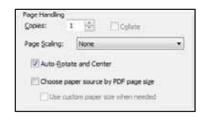
<u>Doodle Page PDF files</u> are typically laid out as follows: Front – full sized, front – tiled, back – full sized, back – tiled (Some Doodle Pages do not have backs).

<u>eBook PDF files</u> contain 1 (one) full eBook. All pages in the PDF are full sized. This means that you may have to take the PDF to a print shop for certain oversized books if your home printer cannot print the larger pages.

<u>Craftaid PDF files</u> contain 1 (one) full Craftaid pattern or Craftaid pattern pack that has been converted into a tracing pattern. All pages in the PDF are full sized. This means that you may have to take the PDF to a print shop for certain oversized Craftaid patterns if your home printer cannot print the larger pages. *NOTE: These digitized patterns do not include any of the physical plastic templates (Craftaids) that may be mentioned, nor does the purchase of this PDF file imply a promise to receive any physical plastic templates (Craftaids).*

NOTE: Digital kit patterns do not include any kit parts that they may reference.

Please note: When printing on a home printer, use the settings seen on the image to the right in the Page Handling area of the Adobe Reader print dialogue box. If your printer is cutting edges off, set "Page <u>S</u>caling" to "Shrink to Printable Area". This will, however, decrease the size of the pattern a very small amount.



NOTE: Some patterns may reference tools, and other items no longer available.

NOTE: You may take this PDF file to your local print shop to have the full-size pages printed for your own personal use.

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Archaeology & Paleontology Designs On A Leather

ARROWHEAD FOB

Plus A Look At "Why We Study Archaeology & Paleontology (Fossils)"

OBJECTIVE: Students will learn to stamp and color leather turning it into a useful and decorative project. Lesson includes history, science and new vocabulary words. Creativity, and dexterity skills will be exercised to design, personalize, color and assemble the project.

MATERIALS LIST

All Supplies Needed To Complete 12 Arrowhead Projects:

- Pre-Punched Veg Tan Tooling Leather Parts
- Stamping Tools & Handles
- Mallets & Sponges
- All-In-One Stain / Finish
- Sheep Wool
- Cova Color® Acrylic Paints
- Brushes
- Cords & Beads
- Stencils & Sharpie Pens
- Instructions & Handbook



YOU WILL or MIGHT NEED:

- Pencils For Planning & Scissors
- Plastic Water Bowls
- Classroom Markers, Acrylic Paints & Brushes
- Plastic Palettes, Plates Or Wax Paper For Paints

CLASSROOM TIME:

Minimum of 3 Sessions:

Design, Case & Stamp = 45 minutes Color the Projects = 45 minutes Assembly = 45 minutes





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GETTING STARTED:

SESSION 1 - Design:

 Copy blank templates on page 5, cut apart on dotted lines & hand out for planning designs. Also cut stencils apart and hand out along with pencils.

SESSION 2 - Case & Stamp:

- To prepare for casing & stamping, set-up sturdy tables for 3 or 4 students per table with one plastic bowl of water & two sponges per table. Have paper towels and a plastic trash bag handy for spills.
- Hand out to each student: Copy of page 6 instructions, one project part & one mallet.
- Share stamps and stamp handles.
- Follow the Leather Preparation and Stamping Instructions on the next pages.

SESSION 3 - Color & Assemble:

- Set up 1 or 2 staining tables for All-In-One Stain & Finish to be applied with sheep wool pieces. Cover tables with paper to protect them from spills.
- Add additional color with Sharpie Pens & Cova Colors. Use plastic palettes, plates or wax paper for mixing paints.
- Copy and hand out assembly instructions on page 7 along with the cords & beads.
- Practice, then demonstrate assembly steps.

ABOUT THE PROJECT:

The leather used for this project is called vegetable-tanned (Veg Tan) leather cut from cowhide. One side is smooth (the grain side) and one side is rough or suede (the flesh side). Veg Tan leather can have designs tooled on the smooth side using different tools and stamps.

The Leather Craft Handbook offers you more information on the various tools that are available and how to use them on future projects.

What Are Archaeology & Paleontology?



Archaeology by definition is the study of the life of ancient people by excavation of ancient cities, relics, artifacts, etc. Why do we want to do this? By learning more about our ancestors, we learn about what worked and what didn't work back then. As a result, we can "learn from their mistakes" and improve our way of life and hopefully, not repeat their failures.

Paleontology is the study of our long and interesting past by studying fossils (plants, animals, fungi, algae). From microscopic to full size specimens are discovered and studied. Many people think paleontology is the study of fossils. In fact, paleontology is much more.

Did You Know: There is an Archaeological Tool kit? The major tools in the kit include:

- the trowel
- the brush
- the library card & Internet
- the backhoe
- the scanning electron microscope
- the tape recorder
- the camera

Throughout history, different methods of record keeping were used to document discoveries. First was the journal. Later came the tape recorder and camera. Now modern survey equipment, sonar, magnetometers, and radar devises along with digital cameras make these discoveries faster and easier to locate and record. Also, new techniques are being developed to better preserve, restore and understand the artifacts being found.

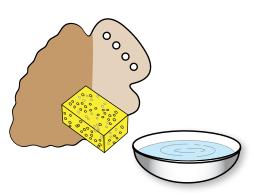
Archaeologists don't just gather information at dig sites. They also do a great deal or research by reading, surveying, laboratory analysis and oral history taken from individuals involved.

Continued . . .

LEATHER PREPARATION:

Before you can stamp a design on leather, it needs to be moistened. This is called "casing the leather". (Note: Sponges can be cut in half.) Students should share sponges and water bowls per table.

- 1) Apply water to the smooth (grain) side of your leather using a clean sponge and water. Dampen leather but not too much.
- 2) Set leather aside and wait until it begins to return to its natural color and feels cool to the touch. Then it is ready to stamp. While waiting for your leather to partially dry, plan the designs.
- 3) If some areas begin to dry too fast, lightly re-dampen with the sponge and water.



History Continued:

There are three stages of archaeological study. First comes background research on the topic, second the actual fieldwork at the site. Most time consuming is the final laboratory analysis, interpretation and write-up. The analysis could go on for years before a final report is written.

With continued study and discoveries concerning our earth's past comes the knowledge and ways to help ensure our future. Over the years, human kind has damaged our earth, polluting the land, waters, sky and space. By studying our past, we discover what mistakes were made and possible solutions.

Did You Know: Archaeologists don't just work on land, but also in the ocean? One of the most famous oceanographer archaeologists was French scientist Jacques-Yves Cousteau and his famous research ship the Calypso. In 1943, Cousteau co-invented the aqua-lung (underwater breathing apparatus) which opened up and redefined the world of underwater archaeology. Other well known oceanographer archaeologist include Peter Throckmorton, George Bass, Robert Ballard (finder of the Titanic) and many more.

The fields of Archaeology & Paleontology are vast and without boundaries. Discovering more about our past civilizations, plant and animals helps us understand our present and will help prepare us for a more successful future.

VOCABULARY:

Casing - Adding water to one or both sides of vegetable tanned tooling leather to prepare the surface for tooling.

Flesh Side - The rough (suede) underside of leather.

Grain Side - The hair side of the leather with the hair removed.

Tanning - The process using tannins to change a fresh animal hide into leather.

Tannins - Yellowish substance from oak bark and other plants used to tan leather.

Staining - Adding color to the leather using different types of stains and paints.

Stamping - Using metal stamps with designs or shapes on the end and a mallet to put a design on the grain side of vegetable tanned leather.

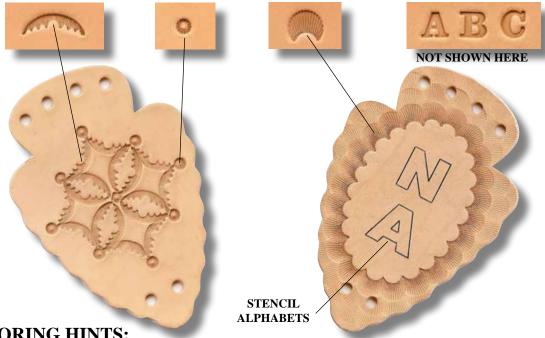
Vegetable Tanned (Veg-Tan) - Leather which have been tanned with vegetable material that are derived from certain plants and woods, often call bark tannins.



CREATE DESIGNS USING DIFFERENT STENCIL PATTERNS & STAMPS



Here are some ideas combining stencil patterns, stamps and alphabet stamps. The same samples are shown on page 1 with color applied. Different coloring techniques can be used: Leave backgrounds natural leather and add color using Sharpie Pens and Cova Color acrylic paints. Or, apply All-In-One Color Stain & Finish over the entire project and then add more color.



COLORING HINTS:

WHEN USING ACRYLIC PAINTS over All-In-One, make light colors stand out on the dark background by first painting the inside of the design with white acrylic paint. Let it dry completely (few minutes), then paint over the white with the desired color.

MIXING COLORS: The primary colors (red, yellow & blue) can be mixed to create the secondary colors (orange, green & purple). Add white to lighten and black to darken a color.

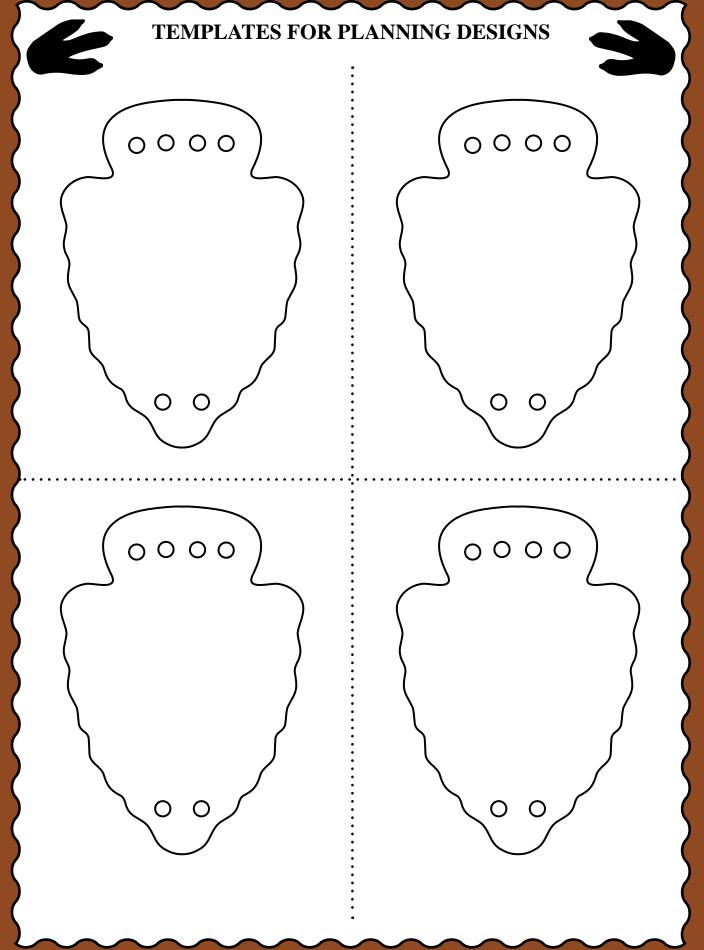


CLASSROOM EXPANSION IDEAS:

- ~ Study the explorations and discoveries off Jacques-Yves Cousteau & other oceanographer archaeologists.
- ~ Study the discoveries found in Europe, the Mid East and Far East.
- ~ Study discoveries and current explorations going on in North and South America.

RECYCLE ME!

"I am your Theme Bucket - be sure to recycle me! I would like to end up in your closet with many of my friends. I could store art supplies, extra leather project parts, or even help you organize your files. Create a new label for me so I can help you find what is stored in me. But until it's time to recycle, I am happy to bring fun & learning into your classroom by offering you Projects To-Go from Tandy Leather Factory."



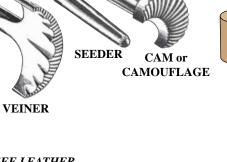
STAMPING Instructions:

(Shown here on a leather strip.)

1) After leather has been cased, hold stamp in a vertical (straight up and down) position. Be sure stamp is facing the desired direction.

- 2) Strike handle end of stamp firmly with mallet to leave a deep impression.
- 3) Repeat with same or different stamps.

Be sure to keep leather damp while stamping. Reapply water lightly with sponge as needed.



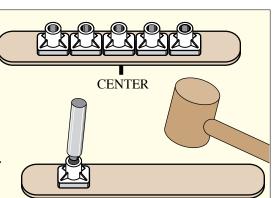
SEE LEATHER-CRAFT HANDBOOK FOR MORE ABOUT USING STAMPS

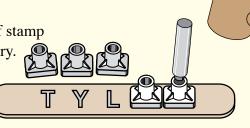


STAMPING Alphabets:

(Shown here on a leather strip.)

- 1) To stamp two or more letters in a row, first mark the center of the space where letters will be stamped.
- 2) Place stamps side by side, centered over the mark. Be sure stamps are facing the correct direction.
- 3) Remove all stamps except the first one to be stamped.
- 4) Insert stamp setter in top of stamp and strike firmly with mallet. Repeat if necessary until impression shows clearly in the leather.
- 5) Place 1st stamp back over its impression. Position 2nd stamp next to the first for proper spacing.
- 6) Remove 1st stamp. Insert stamp setter in top of stamp and strike firmly with mallet. Repeat if necessary.
- 7) Repeat with rest of letters.
- 8) Allow project to dry completely before applying All-In-One Stain & Finish.





STAINING THE LEATHER:

You will be using All-In-One Stain & Finish which is a color and finish combined for speed. Be sure to work quickly and in a special staining area away from other supplies.

- Shake bottle well. Transfer a liberal (heavy) amount of All-In-One onto a piece of sheep wool, but never directly onto the leather. NOTE: Only one coat is needed.
- 2) Then apply to leather quickly, rubbing in a circular motion until color is even and all cuts and impressions are full of stain.
- 3) Remove excess with a clean piece of sheep wool. Then, buff to a mellow gloss with a clean piece of sheep wool.

OPTION: After stain is dry, come back and add more color using colored markers or acrylic paints.



ASSEMBLY INSTRUCTIONS:

Beaded Front Bottom Decoration:

- 1) Cut cord in half. Tie a knot in one end.
- 2) Slide two beads on cord and push up to knot. Insert plastic tip on other end of cord out through one of the front bottom holes and in through the next hole.
- 3) Pull the cord until the first beaded strand is at the desired length.
- 4) Slide two beads on other cord end. Tie knot at desired point to secure beads. Trim off excess cord.

To Attach the Neck Cord:

- 1) Using remaining cord, slide on one long bead over the plastic tipped end of the cord.
- 2) Push plastic tip end of cord out top right hole on arrowhead; then in through second hole.
- 3) Pull cord until center of the cord is between center two holes at the top of the arrowhead.
- 4) Lace through next two holes (out and in) at top of arrowhead. Slide on other long bead.
- 5) Decide on the length of the necklace and tie a knot. Trim off excess cord.

TIP: To keep cut ends from unraveling, put a drop of classroom white glue on cut ends and let them dry completely.

Optional Key Fob:

Trim neck cord to desired length, thread on a key, then tie both ends together in a knot.

Optional Luggage Fob:

Trim neck cord to desired length. Tie both ends together in a knot. Slide knotted end through luggage handle. Then loop knotted end over the fob. Pull snug.

