**ANCESTRAL PUEBLOAN PLASTER AND PAINT: PROCEDURE**

*Mesa Verde National Park has some of the best preserved plaster examples created by the Ancestral Puebloan people between 1200 and 1300 A.D. The park’s alcove sites contain well-preserved rooms like this one found at Cliff Palace.*

**Color Preparation: Observe, Question, Hypothesize**

1. List your observations of the plasters and paint below:
2. Look at your list of observations. Think of questions based on your observations:
3. Hypothesis: Use an “if … then … because” statement to explain which soil will match the desired color and try to explain why it matches. (Hint: science isn’t just explaining that something works, you have to be able to say why it works.)

If…\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

then…\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

because…\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

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*Note: Steps 4 through 12 are all considered the “test” or experimentation step of the scientific method used in this activity.*

1. Test hypothesis: Place one of the crushed soils into a mortar. Use a pestle to grind the soil into a fine powder.
2. Place the prepared soil powder into a disposable cup. Write your observations:

* What are the colors and textures of the soil?
* Is the soil mostly sand, silt or clay? (Remember, sand is really gritty, silt is a little gritty, and clay is sticky or slick, depending on the moisture content).
* What else do you notice?

1. Set prepared soil to the side for later use

**Mixing Color**

1. Get a cup with clay.
2. Add water to “thin” the mixture until it is like wet paint. *Note: Clay particles enable plaster to the have the ability to form very thin layers.*
3. Mix in soil color and add water as needed, to maintain consistency created in step 8. (i.e. plaster should not be too wet, but not too dry).

**Plaster Artwork**

1. With masking tape, carefully tape paper edges to clip board. This is done so that the artwork will dry flat and be easier to paint.
2. Lightly draw on paper with a pencil, until satisfied with a plaster composition.
3. **Brainstorm:** What do you think the Ancestral Puebloans used to plan their designs since they didn’t have paper, pencils, or clipboards?
4. Experiment with depth of color and mixing in different soils (you can borrow colors from neighbors or make a new color). Use different sizes and kinds of paintbrushes, sponges, and rags.
5. When finished, review your hypothesis from step three. Revise and re-write your hypothesis below:

If…\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

then…\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

because…\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

1. Can you form any other conclusions based on your artwork experiment?