

Wolf Elective Adventure- Digging in the Past

OVERVIEW: This adventure can open up conversations about multiple fields of science, but the fun of it really just boils down to one word... *Dinosaurs!*

Supplies Needed

- Access to the internet using a computer, tablet, or smart phone.
- Assorted recyclables from your house- toilet paper tubes, cardboard, plastic bottles, boxes, etc.
- Markers, crayons, art supplies, etc. as needed.
- Air-dry clay.
- A disposable aluminum tray.
- Plaster of paris.- to be made from water and flour OR water and glue.
- Safety glasses.
- A dust mask.
- Various small objects like rocks, leaves, plastic toys, etc.
- A hammer.
- A nail.
- Paintbrushes.
- Clear plastic cups.
- Flavored gelatin.
- Animal crackers.
- Pudding.
- Graham crackers.

Adventure Requirements

1. Play a game that demonstrates your knowledge of dinosaurs, such as a dinosaur match game.
2. Create an imaginary dinosaur. Share with your den its name, what it eats, and where it lives.
3. Complete *one* of the following:
 - 3A. Make a fossil cast.
 - 3B. Make a dinosaur dig. Be a paleontologist, and dig through a dinosaur dig made by another member of your den. Show and explain the ways a paleontologist works carefully during a dig.
4. Make edible fossil layers. Explain how this snack is a good model for the formation of fossils.

Suggested Teaching Approaches (notes for den leaders, parents or helpful adults)

Topic	Teaching Approach
1. Play a game about dinosaur knowledge.	There are examples of games like this in your handbook. But you can create a game for yourself by just collecting some information about different dinosaur species. If you print out information or names as well as pictures, you can play any number of matching games. Or print out pictures and names and group them into categories- for example, carnivores vs. herbivores.
2. Create an imaginary dinosaur.	Use materials around your house to build a dinosaur. Be creative. Look at the features on species that you already know of. Does your dinosaur walk on legs- two or four? Does it have horns or armor? Lots of dinosaurs have long necks. Does yours? You can make a long neck with a paper towel tube. Mix and match body features and make your own dinosaur. Now give it a species name and decide what it eats... and where it lives. People still discover new species of dinosaurs. Maybe someone will discover yours!
3A. Make a fossil cast.	Roll out some air-dry clay, and while it's soft, mash something into it to make an imprint. You can use a little toy or a leaf or a shell. Let the clay dry, and you've created a great replica of a fossil.
3B. Make a dinosaur dig.	<p>First you'll need to get some plaster of paris which means you may need to make some. It's easy. You can make it with warm water and either flour or glue.</p> <p>For flour, use 1 cup of water to 2 cups of flour. For glue, use 1 cup of water to 2 cups of white glue.</p> <p>Mix your ingredients well until there are no lumps. And make sure you use it quickly before it dries up. So only make it when you're ready to use it.</p> <p>Pour one layer of plaster into an aluminum tray. Then add some objects to excavate later. Little toys or rocks work great. Pour more plaster over your objects until they're buried. Then let your tray dry. It may take several days to dry completely.</p> <p>After your tray is dry, it's time to excavate. Trade your tray with someone else- if not from your den, maybe from your family. Then use a hammer and a nail, or a chisel, or paintbrushes to dig and discover what's been buried. Have fun!</p>

<p>4. Make edible fossil layers.</p>	<p>Here's your recipe: Make flavored gelatin and before it cools, pour 1 inch into clear cups. Also drop an animal cracker or 2 into the cooling gelatin. Because gelatin is hot, this part can be done by an adult. Your scout will then add layers to this edible snack. On top of the gelatin add some crumbled graham crackers. Then add another animal cracker. Bury the animal cracker with more graham cracker crumbles. Next add a layer of pudding. Drop in another animal cracker and cover it with more pudding. Now pretend your layers of gelatin, graham crackers, and pudding are layers of the earth and your animal crackers are the skeletons or remains of dinosaurs. As you eat your earth layers, note how some animal crackers are moist, some are almost dissolved, and some are dry and intact. Below is a diagram showing your recipe layers.</p>
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DESSERT LAYERS FROM BOTTOM TO TOP

Top	PUDDING Animal Cracker PUDDING GRAHAM CRACKERS Animal Cracker GRAHAM CRACKERS
Bottom	GELATIN with Animal Within