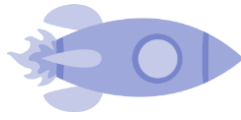


# MYSTERY



**Blessed Are Who?**

**This is the Science Guide for Day One.  
The complete Guide is available online at  
[bannerblue.org](http://bannerblue.org).**



## Day One: Digging Up the Past

**Key Beatitude:** Blessed are **the merciful**, for they will receive mercy.

**Character Story:** Esther

**Experiments Overview:** Today the kids will take part in two separate experiments. First, they will carefully uncover dinosaur remains like actual paleontologists. Second, they will recreate dinosaur fossils like a museum scientist.

**Guiding Question:** What can we learn when we dig up the past?

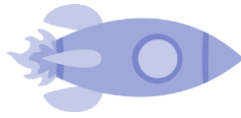
### Questions to ask the kids while you're exploring together:

- What's your favorite dinosaur?
- What do you think it would have been like to live with the dinosaurs?
- Why do dinosaurs have things like spikes and shields or even their big teeth and claws?
- Was it also dangerous in the time of Esther?
- What was her protection from danger? *God's promises, her cousin's help, and the courage that God gave her!*

### First Experiment: Discovering Dinosaurs

This fun, hands-on, activity uses a simple salt dough recipe to conceal dinosaur toys that the kids can uncover.





**Learning Objective:** Whenever we investigate the past, whether it's uncovering dinosaur remains or learning about an ancient figure like Esther, we need to take great care in understanding what came before. Not only do we discover what used to be, we can also see the impressions that it has left on our world. Esther was strong and incredible like a dinosaur and she left an impression of faith and love on the world.

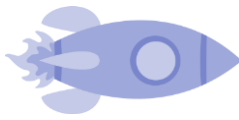
**Supplies Needed** (enough to make 3 large rocks – approximately 6 x 3 inches):

- Dinosaur Figures (small; at least 1-3 per kid)
- 2 Cups of Flour
- 1 Cup of Salt
- 1 Cup of Ground Coffee
- 1 Cup of Water
- Chisels or screw drivers (at least one per kid)
- Paint brushes
- Measuring cup
- Mixing Spoon
- Large mixing bowl

### Preparing for the Experiment:

1. In a large mixing bowl combine all of the above ingredients together. Stir together, scraping the sides, until a soft pliable dough has formed.
2. Assemble the dinosaur fossil rocks by molding the dough around the dinosaur toys.

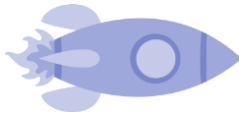




3. Leave to air dry for at least two to three days or speed up the process by baking in a 200°F oven for about 4 hours or until dry and hard, rotating every 30 minutes.

### **Experiment Instructions:**

1. Before giving the kids their own dinosaur rock to experiment with, demonstrate how to carefully use the screwdriver to chip away at the rock and how to use the paint brush to gently brush away smaller pieces. You should even try to preserve the impression that the dinosaur toy makes in the rock.
2. Depending upon how many rocks you have premade and how many kids are present, break the kids up into groups and give them a rock and tools. Remind the kids that they need to carefully break apart the rocks in order to preserve what is inside and to preserve the impressions left in the rock. Look up online which dinosaurs you've uncovered.



## Second Experiment: Duplicating Dinosaurs

Now the kids will recreate dinosaur bones themselves using salt dough.



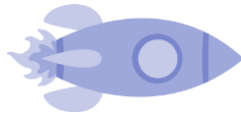
**Learning Objective:** These bones are what made the dinosaurs so strong. Some bones were big and some were small. They all had different shapes and they all fit perfectly together to make a dinosaur. Even one missing bone would leave a dinosaur incomplete and weak. When we think about Esther we should remember everything that went into making her great. When we recreate Esther today, like recreating a dinosaur, we should include all of what made her great.

**Supplies Needed** (enough to make 3 large bones – approximately 9 inches x 2 inches):

- 2 Cups of Flour
- 1 Cup of Salt
- 1 Cup of Water
- Mixing Spoon
- Large mixing bowl

### Preparing for the Experiment:

1. In a large mixing bowl combine all of the above ingredients together. Stir together, scraping the sides, until a soft pliable dough has formed.
2. Form the dough into balls that the kids can easily mold. The dough can be refrigerated and saved for later, if need be.



### Experiment Instructions:

1. Give each kid a ball of dough to form into any dinosaur bone shape. Look up fossil pictures online for inspiration. Place all the completed bones on a baking sheet.
2. Bake the bones at 250 degrees for about 3 hours or until dry and hard. Let the bones cool before handling them.

