



Home Lesson

Eggcellent Eggs

Appropriate Age or Grade Level: **K to 1**

Estimated Duration: **55 minutes** (35 minutes to make, 20 minutes to hatch)

Objectives/Key Concepts: Learn that dinosaurs were reptiles and very similar to birds in the fact that they also laid eggs.

Materials:

- Small dinosaurs
- Baking soda (1/2 cup per child)
- Vegetable oil (1 tsp per child)
- Citric acid (2 Tbsp. per child)
- Food coloring/liquid water colors (1-2 drops per child)
- Tbsp. tsp and 1 cup measuring spoons
- Small bowls
- Popsicle sticks for mixing
- Small tray for drying eggs
- Small bin for water (hatching eggs)

Instructions:

1. To begin lay out a tray or towel for easier clean up.
2. Discuss that birds lay eggs and that paleontologists have found proof that dinosaurs laid eggs also.
3. Now it's time to lay our own dinosaur eggs! (NOTE: We won't be able to hatch the eggs until tomorrow. Sometimes it takes a little time for the baby dinosaur to want to come out of its shell.)
4. Add 1/2 cup of baking soda to a bowl.
5. Add a couple drops of food coloring of your choice to your baking soda and mix it up.
6. Add 2 Tbsp of citric acid to the bowl once you have your food coloring mixed in.
7. Add 1 tsp of vegetable oil and mix well.
8. Your mixture should be dry and crumbly. Place your dinosaur in your mixture and form an egg around it. (NOTE: If your mixture isn't molding well, slowly add vegetable oil 1/4 tsp at a time until you get the desired consistency.)
9. Take your egg and place it in a place to dry overnight. Remember, your dinosaur needs time to grow so don't bother it until the next day.
10. Once your egg has fully dried, it's ready to hatch. Lay your egg in a bin of water and watch your baby dinosaur slowly emerge.

Background Information:

- **Why are dinosaur eggs important to scientists?** Paleontologists get very excited when a dinosaur egg is found because, depending on how it was situated, it can often give insights into dinosaur behavior. By studying dinosaur eggs, paleontologists can learn how closely dinosaurs are related to birds.
- **Are dinosaurs related to birds?** Yes! In the past 20 years more dinosaur eggs have been found than ever before and are used when studying the bird/dinosaur connection.
- **What is the evidence of birds and dinosaurs being related?** Research shows that what we used to think of as bird specific qualities, such as feathers and specific beaks, began to emerge long before scientists once thought. Birds also closely resemble dinosaur embryos which have been studied through research on dinosaur eggs.
- **When did dinosaurs begin changing to birds?** There was no immediate changes in dinosaurs when they began to resemble modern birds. This happened over a very gradual time in a series of evolutionary traits emerging at different times. Scientists think the first change began when dinosaurs adapted by using bipedal locomotion (walking on two feet).
- **How do scientists study the connection?** Scientists study how birds and dinosaurs are related through studies of evolution, genetics and developmental biology. They have also been able to test certain amino acids that can be found in dinosaur egg shells that closely resemble the ones found in modern bird eggs.
- **How big were dinosaur eggs?** Dinosaur eggs have been found in many different sizes ranging from one foot wide to as small as just one inch wide. Scientists have yet to find a connection between the size of the egg and the size of the adult dinosaur.
- **Where were eggs laid?** Dinosaurs laid their eggs in nests although all nests that have been found are different. They vary from intricate nests with mud rims that must have been constructed to simple pits dug into the earth. They are sometimes found with other nests or all alone. The fossilized nests and burrows of dinosaurs can give scientists a look into different dinosaurs' social behavior as well as parental care.

Bibliography:

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<http://www.enchantedlearning.com/subjects/dinosaurs/anatomy/Repro.shtml>

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