Lesson Plan

1. Prepare materials students will need for the engineering challenge.

A day in advance, prepare for the “Dino Dig” activity. You will need:
- 6 cups of puffed rice cereal (such as Rice Krispies),
- a 10-ounce bag of marshmallows,
- 3 tablespoons of butter,
- a large microwave-safe bowl,
- a spoon,
- a 24-cup muffin tin,
- wax paper,
- 24 animal crackers, and
- small plastic bags.

Place the marshmallows and butter in the bowl. Microwave the contents for 2 minutes. Stir the mixture, then microwave for one minute. Mix in the rice cereal.

Fill each cup of a nonstick muffin tin halfway with the rice mixture. Place an animal cracker in each cup, then cover with more rice mixture. Firmly press the top of each treat with wax paper.

Remove the treats from the cups and store in small plastic bags.

2. Generate prereading questions, then read the article.

Ask students to turn to page 10 and use one hand to conceal the headline. Have them study the illustration and share any questions they have related to it. (Questions could include: “What type of animal is this?” or “Why is the animal being splashed by a wave?”)

Record these questions on the board. Read the article as a class, switching readers after each paragraph. Then revisit your questions and discuss the answers the article provided.

3. Use a skills sheet to review the scientists’ investigation.

Have students complete the “Think It Through” skills sheet (T11). Discuss the answers as a class.

4. Use an activity to practice digging up a fossil.

Explain that researchers had to be careful while extracting the nodosaur fossil so they didn’t damage it. Have students complete “Dino Dig” (page 13) in small groups. Remind students to record their observations. Have groups share their results with the class.

Standards

NGSS:
Core Idea: ESS1.C: The history of planet Earth
Practices: Planning and carrying out investigations
Crosscutting Concepts: Structure and function

COMMON CORE:
Reading Informational Text: 5. Analyze the structure of the article.

TEKS:
Science: 3.2A, 4.2A, 5.2A, 6.2A
ELA: 3.16, 4.14, 5.14, 6.13