

EXTREME WEATHER

Lesson Plan

Detecting Droughts

Lesson Plan for *Droughts*
Grade 3

Objective

To help students understand how varied rainfall can produce droughts and practice solving simple word problems based on this concept.

Things Needed:

- *Droughts* book
- Detecting Droughts handout (attached)

Before the Activity

Have students read the *Droughts* book. Print several copies of the Detecting Droughts handout and cut them so each scenario is on a separate slip of paper.

Activity

Open the *Droughts* book to page 10 and choose a student to read that page out loud:

- “A drought can occur anywhere. It is based on an area’s normal supply of water. For example, a **rain forest** may get 80 inches of rain in an average year. If only 30 inches fall, a drought could start. In contrast, a **desert** may get only 10 inches on average. There, 30 inches would be much wetter than usual.”

Next, turn to page 16 and ask another student to read the first three sentences on that page:

- “Droughts end when rainfall returns to normal. Areas sometimes need months of rain to end a drought. And some droughts last for years.”

Determining exactly when a drought begins and ends can be difficult. But scientists still work to predict droughts. They compare an area’s rainfall each year to its usual amount. Divide the class into groups of three or four and give each group one of the Detecting Droughts scenarios. Each



scenario describes an area and how much rain it gets. Ask students to pretend they are scientists. They should try to determine if their area is experiencing a drought.

Evaluation

Give the groups a few minutes to discuss their answers. Then call on a volunteer to share the group's answer. Use the following sample answers to evaluate each group's work:

- Scenario 1: One year matches the average rainfall, which the book says is 10 inches a year. In the other two years, the desert gets more rain than normal, so it is not experiencing a drought.
- Scenario 2: A desert gets 10 inches of rain, so twice as much rain would be 20 inches. The forest gets less than 20 inches of rain all three years, so it is experiencing a drought.
- Scenario 3: One year matches the average rainfall, which the book says is 80 inches a year. The other two years are just slightly lower than usual, so there probably isn't a drought.
- Scenario 4: A rain forest gets 80 inches of rain. Half of that is 40 inches. All three years got less than 40 inches of rain, so this plain is experiencing a drought.

Standards

This lesson plan may be used to address the Common Core State Standards' reading standards for informational texts, grade 3 (RI 3.1).



Detecting Droughts

Scenario 1

Your team of scientists is studying a desert. You track how much rain falls in this desert for three years. In year one, the desert gets 11 inches of rain. In year two, it gets 10 inches of rain. In year three, it gets 11 inches of rain again. Is the desert experiencing a drought?

Scenario 2

Your team of scientists is studying a forest that usually gets twice as much rain as a desert does. You track how much rain falls for three years. In year one, the forest gets 12 inches of rain. In year two, it gets 13 inches. In year three, it gets 17 inches. Is the forest experiencing a drought?

Scenario 3

Your team of scientists is studying a rain forest. You track how much rain falls in this rain forest for three years. In year one, the rain forest gets 80 inches of rain. In year two, it gets 79 inches. In year three, it gets 79 inches. Is the rain forest experiencing a drought?

Scenario 4

Your team of scientists is studying a wide plain. This plain usually gets half as much rain as a rain forest does. In year one, the plain gets 35 inches of rain. In year two, it gets 32 inches. In year three, the plain gets 30 inches of rain. Is the plain experiencing a drought?

