Learning about Utah Environments Through Literacy

Science

Standard V: Students will understand the physical characteristics of Utah's wetlands, forests, and deserts and identify common organisms for each environment.

Objective 1: Describe the physical characteristics of Utah's wetlands, forests, and deserts.

Indicators: a. Compare the physical characteristics (e.g. precipitation, temperature, and surface terrain) of Utah's wetlands, forests, and deserts

b. Distinguish between weather and erosion.

Science Intended Learning Outcomes

1- **Use science process and thinking skills—**c, d, h
2- **Manifest Science Attitudes and Interests**—a, c, e
4- **Communicate effectively using science language and reasoning—**a, b, c

Literacy

Unit III: Enduring Understanding:

- Students will use LANGUAGE ARTS skills to understand the plants and animals of Utah.

Essential Questions:

- What are the characteristics of Utah's environments?

Student "I Can" Statement:

- This means I can compare Utah's wetlands, forests, and deserts.

Background Information

Fourth grade students are required to learn about the physical characteristics of Utah's wetlands, forests, and deserts. They also need to identify common organisms living in each environment.

The different elevations of Utah's terrain have a big impact on the temperature and rainfall within Utah, therefore influencing the type of environment they choose to live in. Animals adapt to the climate conditions at these different elevations. These adaptations include body changes, the shelter they choose, and the type of food they eat.

There are two activities below. The first activity will require students to read and learn about the three environments of Utah and compare them with each other. The second activity will require students to use map-reading skills to make connections between elevation, climate, and temperature.

Procedure:

Part I Choose one of these procedures in this part.

Choice One:

1. Pass out a copy of *Utah, A Great Place to Live"* to all the students.

2. Make groups of 3's out of the class. Each student in each group is to pick a subject he/she wants to read about: wetlands, forests, or deserts.

   a. The student, reading about the wetlands of Utah, will read part of "Wonderful Wetlands". Have the student begin by reading the second paragraph on page 12.1.2, "The wetland is wet…" and read through to the bottom paragraph on page 12.1.2. If more details are desired, then have the students go to http://www.ucmp.berkeley.edu/exhibits/biomes/freshwater.php to read more about wetlands.

b. The student, reading about the forests of Utah, will read part of "Fantastic Forests". Have the student begin by reading the first two paragraphs on page12.1.5. Then have the student skip to page 12.1.6 and read the second and third paragraphs. To finish off the reading, have the student read the last two paragraphs on the same page. If more details are desired, then have the student go to http://www.ucmp.berkeley.edu/exhibits/biomes/forests.php to read more about mountains.

c. The student, reading about the deserts of Utah will read the "Dazzling Desert" beginning on page 12.1.7 to page 12.1.8. If more details are desired, then have the student go to http://www.ucmp.berkeley.edu/exhibits/biomes/deserts.php to read more about the deserts.

3. When the students are done reading, have them use the graphic organizer to help organize what was read. Have them put the main idea about the reading in the center of the circle. In the surrounding circles, have them write related details from the reading about the main idea. They may connect more circles to the center circle to write more related details to the main idea. Also they may connect circles to the related detailed circles for better understanding of the related details.

4. Have each student share within each group what was learned of each student.

5. Have each group talk about the similarities and differences of each of the Utah environments

Choice Two:
If the choice above is too rigorous for your class, then do the procedure below.

1. Pass out a copy of *Utah, A Great Place to Live"* to all the students.

2. As a class, read the whole section "Wonderful Wetlands" as a shared reading. While you are reading to them, have them use the graphic organizer to help them find the details related to wetlands.

1. As a class, read the whole section "Fantastic Forests" as a shared reading. While you are reading to them, have them use the graphic organizer to help them find the details related to forests.

2. As a class, read the whole section the "Dazzling Desert" as a shared reading. While you are reading to them, have them use the graphic organizer to help them find the details related to deserts.

3. As details are written about each environment, they may connect more circles to the center circle to write more related details to the main idea. Also they may connect circles to the related detailed circles for better understanding of the related details.

4. After the shared readings are completed and the graphic organizers are filled in, have the students talk about the similarities and differences of each of the Utah environments.

Part II Choose one of these procedures in this part.

Choice One:

1. Put the students in groups of 3's.
2. Hand out the booklet, "Life Zones Of Utah Mountains" to each student.
3. Read the first page as a group of the Life Zones for the students to understand that there are names for the different elevations of mountains.
4. Explain that the different elevations will affect the temperature and precipitation at those different elevations.
5. Also explain that the plants and animals prefer to live at these different elevations because of the different temperatures and amount of precipitation that exists at each one.
6. Hand out the four maps of Utah: Temperature (A), Elevation (B), Precipitation (C), and Environment (D) to each of the groups.
7. Have them look at the four maps of Utah: Temperature (A), Elevation (B), Precipitation (C), and Environments (D).
8. Explain to them what each map represents.
9. Explain to them about the key and how the different designs in the squares are used to refer to the different sections on the maps of Utah.
10. Tell the students that as a group they will be looking at maps A, B, and C and comparing each one with each other.
11. Tell them that as they do that, they will be answering the questions of what they discover by comparing each with each other.
12. Lastly, we will be using map-reading skills to make connections between elevation, climate, and temperatures of the different Utah environments.
13. Give each student the questions to determine answers from the information found by comparing the maps.
    a. Study maps A and B.
        i. What is the relationship between elevation and temperature in Utah?
    b. Study maps B and C.
        i. What is the relationship between elevation and rainfall in Utah?
    c. Study maps A and C.
        i. What is the relationship between temperature and rainfall in Utah?
    d. Study maps B and C.
        i. Find the region with the most rainfall.
        ii. Is this areas at high, medium or low elevation?
    e. Study maps C and D.
        i. Find the region with the least rainfall.
        ii. Is the temperature higher or lower than other regions?
    f. Study maps B and D.
        i. What elevation is wetland environments mostly located in?
    g. Write a sentence or two that would summarize your conclusion of the connections you have found between elevation, climate and temperatures.

Choice Two:

If the choice above is too rigorous for your class, then do the procedure below.

1. Put the students in groups of 2's.
2. Hand out the booklet, "Life Zones Of Utah Mountains" to each student.
3. Read the first page as a group of the Life Zones for the students to understand that there are names for the different elevations of mountains.
4. Explain that the different elevations will affect the temperature and precipitation at those different elevations.
5. Also explain that the plants and animals prefer to live at these different elevations because of the different temperatures and amount of precipitation that exists at each one.

6. Hand out the four maps of Utah: Temperature (A), Elevation (B), Precipitation (C), and Environment (D) to each of the groups.
7. Have them look at the four maps of Utah: Temperature (A), Elevation (B), Precipitation (C), and Environments (D).
8. Explain to them what each map represents.
9. Explain to them about the key and how the different designs in the squares are used to refer to the different sections on the maps of Utah.
10. Tell the students that as a class we will be looking at maps A, B, and C and comparing each one with each other.
11. Tell them that as we do that, we will be answering the questions of what we discover by comparing each with each other.
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13. Give each student the questions to determine answers from the information found by comparing the maps.
    a. Study maps A and B.
    i. What is the relationship between elevation and temperature in Utah?
    b. Study maps B and C.
    i. What is the relationship between elevation and rainfall in Utah?
    c. Study maps A and C.
    i. What is the relationship between temperature and rainfall in Utah?
    d. Study maps B and C.
    i. Find the region with the most rainfall.
    ii. Is this areas at high, medium or low elevation?
    e. Study maps C and D.
    i. Find the region with the least rainfall.
    ii. Is the temperature higher or lower than other regions?
    f. Study maps B and D.
    i. What elevation is wetland environments mostly located in?
    g. Write a sentence or two that would summarize your conclusion of the connections you have found between elevation, climate and temperatures.

Utah Environment Questions

1. Study maps A and B.
   - What is the relationship between elevation and temperature in Utah?

2. Study maps B and C.
   - What is the relationship between elevation and rainfall in Utah?

3. Study maps A and C.
   - What is the relationship between temperature and rainfall in Utah?

4. Study maps C and D.
   - Find the region with the least rainfall.
   - Is the temperature higher or lower than other regions?

5. Study maps C and D.
   - Find the region with the least rainfall.
   - Is the temperature higher or lower than other regions?

6. Study maps B and D.
   - What elevation is wetland environments mostly located in?

7. Write a sentence or two that would summarize your conclusion of the connections you have found between elevation, climate and temperatures.

References:

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