

# MOUNTAINS AND VALLEYS (MODIFIED FOR ADEED)



## Science Concept:

Mountains and valleys are different land formations.

## Objectives:

The student will:

- identify characteristics of a mountain and a valley;
- classify examples of mountains and valleys; and
- write a letter about mountains and valleys.

## GLEs Addressed:

### *Science*

[3] SD2.1 The student demonstrates an understanding of the forces that shape Earth by identifying and comparing a variety of Earth's land features (i.e., rivers, deltas, lakes, glaciers, mountains, valleys, and islands).

[3] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.

### *Writing*

[2] W1.2.1 The student writes for a variety of purposes and audiences by producing a variety of written forms for a specific audience (i.e., journal entries).

## Vocabulary:

**characteristic** – a distinguishing (or special) feature or quality

**landform** – any recognizable, naturally formed feature on Earth's surface; landforms have a characteristic shape and can include such large features as plains, plateaus, mountains, and valleys, as well as smaller features such as hills and canyons

**mountain** – generally massive and usually steep-sided, raised portion of Earth's surface; can occur as single peaks or as part of a long chain; can form through volcanic activity, by erosion, or by the collisions of two tectonic plates

**valley** – long, narrow region of low land between ranges of mountains, hills, or other high areas, often having a river or stream running along the bottom; most commonly formed through the erosion of land by rivers or glaciers

## Materials:

- Chart paper or board
- Marker
- 12 X 18-inch paper (one sheet per student)
- Scissors (one pair per student)
- Glue
- Magazines and other sources of pictures that include mountains and valleys (two or three per student)
- Lined paper (one sheet per student)
- Pencil (one per student)
- Science journal (one per student)
- Shoebox-size plastic container (one per group)
- Sand (four-to-five cups per group)
- *Ladybird First Facts About the Earth* by C. Arnold

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## Resources:

Arnold, C., and Henderson, M. (1989). *Ladybird first facts about the Earth*. Auburn, ME: Ladybird Books.

## Activity Preparation:

1. On a 12- X 18-inch piece of paper, prepare two columns by drawing a line lengthwise down the middle of the paper so the paper is divided into two equal columns. Label the left column "Mountain" and the right column "Valley." Copy the sheet so that each student in the class will have one prepared sheet.
2. Find enough pictures of mountains and valleys so each student has access to two or three each. These can be from magazines, calendars, brochures, the Internet, etc.
3. Put between four to five cups of sand into a shoebox size plastic container for each group of three students.

## Activity Procedure:

Please refer to the assessment task and scoring rubric located at the end of these instructions. Discuss the assessment descriptors with the class before teaching this lesson.

### Gear Up

#### *Process Skills: communicating and observing*

1. Write the word "Mountain" on the board and ask students to tell you everything they know about mountains. Write student responses on the board with the students' initials next to individual ideas. Write the word "Valley" on the board and ask the student to tell you everything they know about valleys. Write student responses on the board with the students' initials next to individual ideas.
2. Point out one way to remember "mountain" is that the letter "M" looks similar to a mountain and points upward. Point out that one way to remember "valley" is that the letter "V" looks similar to a valley and points downward.
3. Read pages 1-2, and pages 10-11 from the book *Ladybird First Facts About the Earth*. Discuss.

### Explore

#### *Process Skills: observing, describing, and communicating*

4. Divide students into groups of three. Pass out plastic containers prepared with sand to each group. Remind students of the book in the Gear Up and some characteristics mentioned about each of the landforms.
5. Explain students will take turns making mountains and valleys with the sand that is in the plastic container. While one person is making a mountain or a valley, the other two people will write down and draw some things they notice about mountains and valleys in their science journal to be used for later class discussion.

### Generalize

#### *Process Skills: describing and communicating*

6. Discuss the following questions as a class:
  - a. What did you do to make a mountain?
  - b. What did you do to make a valley?
  - c. Tell me some characteristics of your mountain.
  - d. Tell me some characteristics of your valley.
  - e. Where do you see mountains and valleys?

### Apply

#### *Process Skills: observing and communicating*

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7. Take students for a walk around the school. Students should look for things that have similar characteristics to mountains and valleys. In their science journals, students should make two columns: one labeled "Mountains" and one labeled "Valleys." Students should record observations in their science journal by writing and/or drawing.

### Sources:

Arnold, C., and Henderson, M. (1989). *Ladybird first facts about the Earth*. Auburn, ME: Ladybird Books.  
The American Heritage. (2005). *Student science dictionary*. New York, NY: Houghton Mifflin.

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# RUBRIC

## Assessment Task

1. Ask student to use their knowledge of mountains and valleys to cut out or draw at least two pictures of mountains and at least two pictures of valleys. Students should classify the pictures by placing them correctly on the 12- x 18-inch piece of paper (see Activity Preparation).
2. Ask students to write a letter to a friend telling them what they know about mountains and valleys. The letter should include at least four complete sentences that identify at least two characteristics of mountains and at least two characteristics of valleys.

## Rubric

Objective	GLE	Below Proficient	Proficient	Above Proficient
The student identifies characteristics of a mountain and a valley.	[3] SD2.1	The student does not attempt, or identifies less than two mountain characteristics and less than two valley characteristics.	The student identifies two characteristics of mountains and two characteristics of valleys.	The student identifies more than two characteristics of mountains and more than two characteristics of valleys.
The student classifies examples of mountains and valleys.	[3] SA1.1	The student does not attempt, or classifies mountains and valleys as distinct landforms by placing fewer than two examples of each under the correct columns for "Mountains" and "Valleys."	The student classifies mountains and valleys as distinct landforms by placing two examples of each under the correct columns for "Mountains" and for "Valleys."	The student classifies mountains and valleys as distinct landforms by placing more than two examples of each under the correct columns for "Mountains" and for "Valleys."
The student writes a letter about mountains and valleys.	[2] W1.2.1	The student does not write a letter, or writes a letter about landforms that includes fewer than four complete sentences.	The student writes a letter about landforms that includes four complete sentences.	The student writes a letter about landforms that includes five or more complete sentences.