

# IDENTIFYING AND LOCATING GLACIERS

(MODIFIED FOR ADEED)

## INSTRUCTIONS



### Science Concept:

Earth has many physical land features. (NOTE: Students should already be familiar with mountains, valleys, lakes, and rivers prior to this lesson.)

### Objectives:

The student will:

- identify physical features of Earth's surface;
- describes glaciers; and
- draw and label Earth's physical features.

### GLEs Addressed:

#### Science

- [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.
- [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).

#### Writing

- [3] W1.2.2 The student writes for a variety of purposes and audiences by using expressive language when responding to literature or producing text (e.g., journals, pictures supported by text or poetry).

### Vocabulary:

*mountain* - a large natural elevation of Earth's surface rising abruptly from the surrounding level

*river* - a large natural stream of water flowing in a channel to a sea, a lake, or another river

*lake* - a body of water (usually fresh) that is entirely, or nearly entirely, surrounded by land

*landform* - a natural feature of Earth's surface

*valley* - a low area of land between hills or mountains, typically with a river or stream flowing through it

*delta* - a triangular shaped piece of land made by deposits of mud and sand at the mouth of a river, typically where it diverges into several outlets

*glacier* - a slow moving mass of ice formed by the accumulation and compaction of snow on mountains or near the poles

### Materials:

- Masking tape
- Clay (Model Magic™ is recommended)
- Shampoo (one cup per group plus one cup per student)
- Baking pans (9 x 13 inches) (one per student plus one per group of students)
- Toothpicks (enough for all students to label their models)
- TEACHER INFORMATION SHEET: "Land Form I Am Game Cards"
- STUDENT INFORMATION SHEET: "Glacier Model Instructions"

\*NOTE: Students can make their own clay with a mixture of 2 parts flour, 1 part salt, and 1 part water.

# IDENTIFYING AND LOCATING GLACIERS

(MODIFIED FOR YFSD)

## INSTRUCTIONS



### Activity Preparation:

Cut out the cards on the TEACHER INFORMATION SHEET: "Land Form I Am Game Cards." Make copies as needed to ensure there is one card per student.

### 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 describing*

1. Explain students will play the "Land Form I Am" game. Distribute the cards (see Activity Preparation) and tape. Ask students to tape the cards to each other's backs. Each student should have one card on his or her back.
2. Instruct the class to walk around the room and pick a partner. Each student should describe the land feature pictured on the partner's back without using the name of the landform. The other student must correctly identify the landform using the given clues. Then, students should find new partners and repeat the process.

#### Explore

##### *Process Skills: inferring and observing*

3. Divide students into small groups. Distribute the STUDENT INFORMATION SHEET: "Glacier Model Instructions," a baking pan, clay, and a cup of shampoo to each group. Instruct students to follow the directions on the STUDENT INFORMATION SHEET to build a glacier model. Assist students as needed.
4. Ask students to write a description of their glacier model.

#### Generalize

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

5. Ask students the following questions and discuss.
  - A. Where might you find a glacier? (Between two mountains)
  - B. If we have glaciers in Alaska, where would you find them? (In the mountains)
  - C. In what direction do glaciers move? (Down a mountain)

#### Apply

##### *Process Skills: communicating, developing models, and describing*

6. Distribute a baking pan, clay, shampoo, and toothpicks to each student. Instruct students to independently construct a second model. Ask them to identify the glaciers and label the model with toothpicks and flags made out of masking tape.



## IDENTIFYING AND LOCATING GLACIERS

## RUBRIC

### Assessment Task

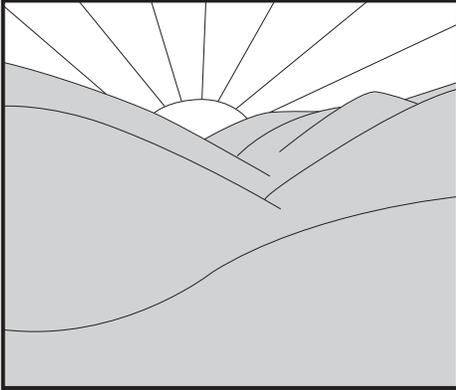
Pretend you are taking a trip to the mountains. Tell your teacher five or more physical features you would see. Draw, correctly label, and provide a written description of five or more physical features you would see. Be sure to describe where glaciers are located and explain why they are located there.

### Rubric

<b>Objective</b>	<b>GLE</b>	<b>Below Proficient</b>	<b>Proficient</b>	<b>Above Proficient</b>
The student identifies physical features of Earth's surface.	[3] SD2.1	The student orally identifies less than five physical features of Earth's surface.	The student orally identifies five physical features of Earth's surface.	The student orally identifies more than five physical features of Earth's surface.
The student describes a glacier's location.	[3] SA1.1	The student does not describe where glaciers are located.	The student describes where glaciers are located.	The student describes where glaciers are located and explains why they are located there.
The student draws and labels Earth's physical features.	[3] W1.2.1	The student draws, correctly labels, and provides a written description of fewer than five of Earth's physical features.	The student draws, correctly labels, and provides a written description of five of Earth's physical features.	The student draws, correctly labels, and provides a written description of more than five of Earth's physical features.

# LAND FORM I AM GAME CARDS

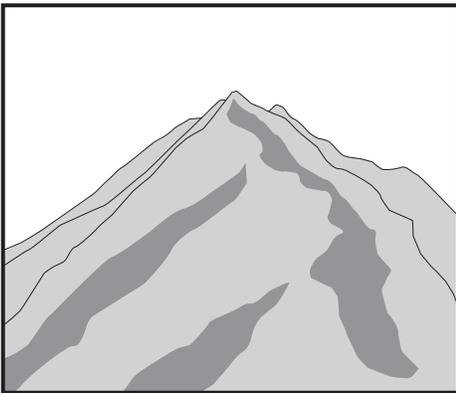
# TEACHER INFORMATION



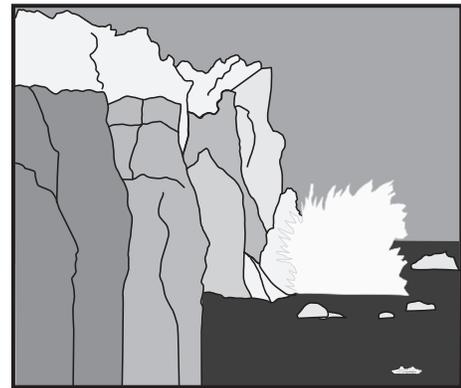
**Valley**



**Delta**



**Mountain**



**Glacier**



**Lake**

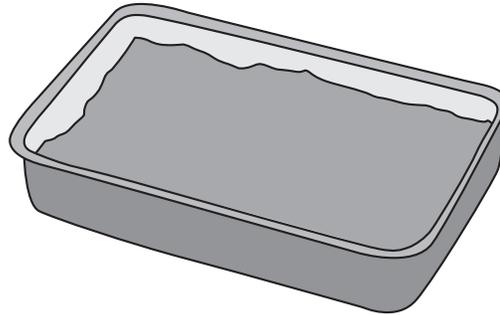
## GLACIER MODEL INSTRUCTIONS

## STUDENT INFORMATION



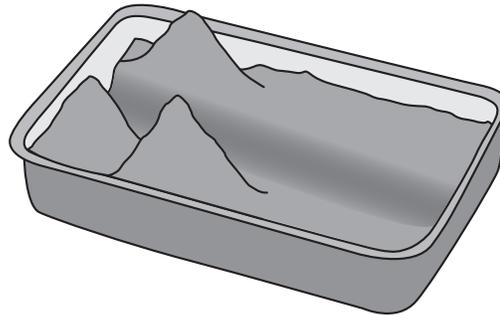
### STEP 1:

Use clay to model the ground in your baking pan. (Remember, all ground is not a flat surface.)



### STEP 2:

Add several mountains and a valley to the ground at one end of your baking pan.



### STEP 3:

Slowly pour shampoo into the valley to model a glacier.



### STEP 4:

Use the shampoo to model a river or lake at the end of the valley.

