

I Spy Environments

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.

Intended Learning Outcomes:

1. Use Science Process and Thinking Skills
4. Communicate Effectively Using Science Language and Reasoning

Content Connections:

Math III; Social Studies VI-1

Science Standard

V

Objective

1

Connections

Background Information

This activity is an opportunity for students to use their knowledge of environments in an activity that will also allow them to explore fine art paintings from the Springville Art Museum. In small groups, students will investigate a variety of paintings of places in Utah in different seasons and different environments using different mediums. They will then decide on physical characteristics of these using a graphic organizer.

You will need photos of the postcards that contain paintings of landscapes from the museum. These can be easily downloaded from the museum's Web site. Directions for *Creating Your Own Postcards* are included on p. 7-35. You can also obtain sets of postcards from the museum and use only the ones containing landscapes. Many of the pictures are also available from your school library in the Utah art prints.

Invitation to Learn

Several days ahead of time, hang a variety of the Springville Art Museum art posters around the classroom. Use posters that show landscapes, specifically of deserts, wetlands, or forests from Utah. As you begin this lesson, mentally choose one of the landscapes. Then play a game of 20 questions where students may only ask questions with yes/no answers. For example, you might choose the painting, *Moonrise in the Canyon Moab*, by Birger Sandzen. Students might ask, "Does the painting have lots of trees? (No) "Are there mountains in the painting?" (Yes) When the teacher's painting has been guessed, let a few students try it. Then respond, "Some of the observations that identify physical characteristics of environments are the same things that were in the questions you asked. You have good eyes!"

Instructional Procedures

Materials

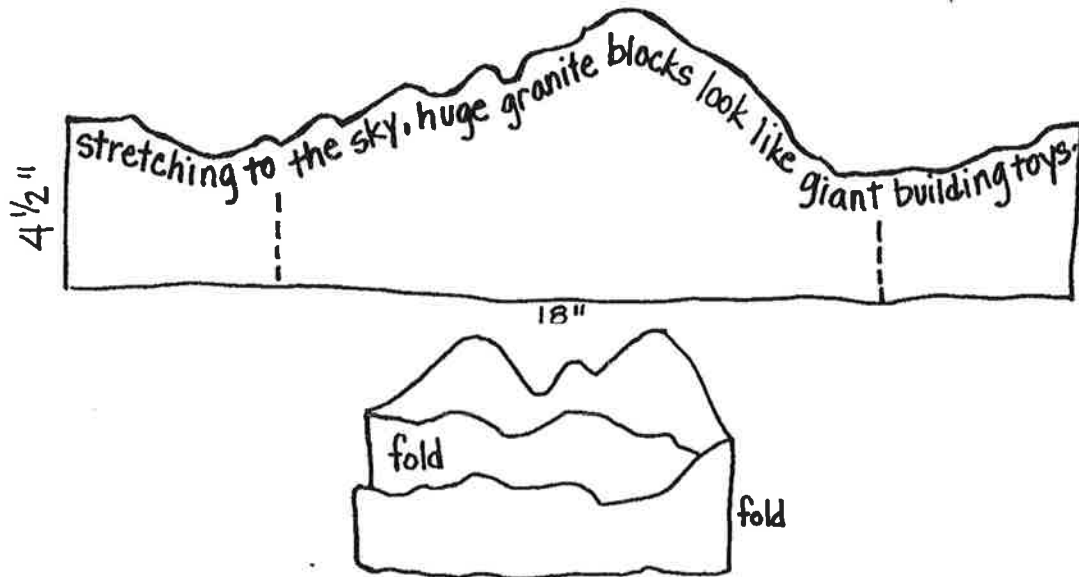
- Four to six postcards for each group of four to six students (see *Additional Resources*)
- Utah Art Graphic Organizer*
- Suggestions for Adjectives List*
- Art posters from Springville Art Museum
- Brown construction paper
- Chalk (optional)
- Literature books to model information about environments written in poetic language

1. Distribute postcards to the groups and have the students talk with each other about the artwork. Post a list of suggested questions that they can discuss among the group.
 - What environment, or environments, do you see?
 - What time of year is it?
 - What might the temperature be?
 - Is there any evidence of precipitation?
 - Do any of the paintings have common characteristics?
 - What clues (inferences) were used to decide any information?
 - Can you see any geometric shapes in the paintings? Name them.
2. As a class, share discoveries about the paintings. If you are able to display the reprint posters from the Springville Art Museum, use these to help students discover additional information located on the back (e.g., artist name, location, media used, etc.).
3. Have students take one specific painting and fill out the *Utah Art Graphic Organizer* (p. 7-34) to record information that will help classify the painting for a specific environment. The graphic organizer asks students to identify shapes, common lines, and colors in their paintings. This will use some of their math skills to find parallel and perpendicular lines, as well as geometric shapes. Have them list the common colors they see in the paintings.
(The next steps can be another lesson or a continuation for this one.)
4. If you live in an area where there are mountains, forests, or deserts, take the class outside and have them look around and quickly sketch what they see. Observe the colors and common lines and shapes. If there are mountains, be sure they observe the line where Earth meets the sky.
5. Brainstorm a list of adjectives students would use to describe what they see and tell someone else how the painting, or the outside observations, made them feel. Use the list of *Suggestions for Adjectives List* (p. 7-36) as a resource for the mountain writing activity.
6. Create a *Mountain Journal* (p. 7-31).

Possible Extensions/Adaptations/Integration

Language Arts

Mountain Journals



Students need a piece of paper that is long and skinny—the size can vary. It can be as simple as brown construction paper cut to 4 1/2" x 18".

1. Fold the paper into thirds so the ends of the sheet overlap each other. (Each student can decide how much of an overlap s/he wants to have.) Unfold back to a long skinny line.
2. Sketch ideas for a mountain silhouette on scratch paper. This is the line where land meets sky. Choose one for the journal.
3. Lightly draw the silhouette of mountains on the top of the paper. Remind students that they can always cut more off it they need to, but they can't put paper back on. This can also be done as a "torn" paper activity, giving a nice texture to the top of the book.
4. After cutting out the silhouette, students can check the shapes and make any adjustments needed.
5. An option that adds a nice touch to the book is to use chalk to add highlights or details to the mountains.
6. The book can either be a science journal with data collected about physical characteristics of mountains or a poem that describes these characteristics.
7. If descriptive or narrative poetry is done, encourage students to use the *Suggestions for Adjectives List* to enhance their writing.

Art Connections

If possible, allow students to choose the medium they want to use. If necessary, review some of the art principles about space such as:

- Objects get smaller as they recede into the distance.
 - Objects are higher in a picture as they get further away.
 - Objects lose detail as they get farther away.
 - Objects get bluer or grayer as they get farther away.
 - Objects in front overlap objects that are behind them.
1. Have students create a landscape that shows an environment from Utah and try to use some of the physical characteristics they have identified.
 2. Display and discuss the paintings while evaluating not only art targets for fourth grade but the science concepts studied.

Possible Extensions/Adaptations/Integration

- Place an overhead on top of the pictures and outline the geometric shapes in the paintings. Any parallel or intersecting lines? Any quadrilaterals? Cylinders? Rectangular prisms? What about angles? What about flips or slides?
- Find the painting locations on a map of Utah. Do the locations validate their inferences?
- Trip to the Springville Art Museum, or another exhibit near your school that will help students practice learned skills.
- Springville Art Museum visit to school.
- Create another folded book with a shape that represents another environment.

Assessment Suggestions

- Share the mountain books with another class.
- Conduct “tours” of the art posters for younger students to explain the physical characteristics of the painting they study. Then share the mountain books in small readers’ circles. Observe students dialogue to assess comprehension and application of information.
- If students create their own landscape paintings, do the activity above with their original art. Have students evaluate their landscapes and find ways in which they are similar to the artists’ paintings. Do they use color blends, lightening and darkening colors, shades and tones?

Additional Resources

Springville Art Museum will visit schools throughout the state and conduct day-long art presentations for the whole school, as well as provide teachers with sets of artist postcards for classroom use. Contact names: Amanda and Jessica 1-801-489-2727.

Books

Examples of environmental pictures and models for narrative language:

Mountain Dance, by Thomas Locker; ISBN 0-15-202622-3

“Mountains rise through the clouds in a slow dance that goes on and on...”

Mountain Alphabet, by Andrew Kiss; ISBN 0-88776-384- “Avalanche slopes are aglow with aspen in autumn.”

Earthshake: Poems from the Ground Up, by Lisa Westberg Peters; ISBN 0-06-029265-2 “Melt a chunk of continent...”

Family Connections

- During a week (include a weekend) have students, along with family members, keep a tally of how many different environments the family observes. Discuss together the physical characteristics, or clues, they observed and used to classify them.

Utah Art Graphic Organizer

Name of Painting _____
Artist _____

we think...

Rainfall _____ Temperature _____
Clues _____ because _____ Clues _____

Elevation Observations ~~~~~

LANDFORMS	PLANTS	ANIMALS
Name _____ Shapes, colors Common lines	Name _____ Shapes, colors Common lines	Name _____ Shapes, colors Common shapes

Name _____

Creating Your Own Postcards

You may want to supplement the Postcard Set with additional images. You can purchase images at museums or from catalogues, or cut out pictures of posters from art poster catalogs and paste them on cardstock. However, one of the best ways to get these images is to download and print them from the Internet. The postcard activities include suggestions to help you choose supplemental images. Art history textbooks may be helpful. They can give you ideas of artists or styles that relate to your lesson materials.

To create postcards from images you have found on the Internet, open a word processing program like Word Perfect or Microsoft Word. Next, open Netscape or Internet Explorer and use a search engine to find an image you want to use as a postcard. Another way to search is to go to art sites, such as artcyclopedia.com and the Springville Museum's web site www.sma.nebo.edu, and search their databases.

Once you have found a desired image, move your cursor to anywhere on the image. This will select the image. If you are using an IBM type computer, then click and hold the right mouse button until a pop-up menu is displayed. Move the cursor to select the menu choice "save image as." A new menu will appear that will allow you to name and save the file in any directory you choose on your hard drive or floppy disk. Now go back to your word processor and select "insert" from the menu bar, and a new pop-up menu will appear. From the insert pop-up menu, select "graphics," and then a new pop-up menu will appear. Choose the option "from file." This will allow you to insert the image you saved as a file from Netscape or Microsoft Internet Explorer.

Once the image is inserted in your document, you may increase the size of the image by moving your cursor over one of the dots at the corners until a double arrow appears at the corner. Now, hold and click on the left mouse button and at the same time, hold the control key down. This will allow you to increase or decrease the size of the image without distorting the proportions. A good size for a postcard is four by six inches.

Next, space down the page two or three lines and type the information for the label. The label should contain the following information:

- The name of the artist, the year the artist was born, and the year the artist died.
- The title of the artwork and the year the artwork was created.
- The size and media of the artwork.
- Who owns the artwork.

Include a short biographical sketch and some background information about the artwork if desired.

If possible, print this document using a color printer. Cut and crop both the image and text to fit the 4" x 6" format. Glue the paper with the label and additional information on the back of the image, using a small amount of glue from a glue stick. Now run both through a laminator, if possible, and trim the edges. It is most economical to run several postcards at a time through the laminator.

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Suggestions for Adjectives List

(The best list is always student generated!)

big	huge	large
beautiful	nice	tall
wide	chunky	rambling
giant	towering	rocky
crumbled	sloping	grey
blue	white	green
dirty	wonderful	dangerous
treacherous	majestic	wasatch
purple	snowy	rugged
mysterious	volcanic	vertical
spacious	ancient	fierce
elevated	time-worn	misty
imposing	craggy	dangerous
venerable	stunning	

Sometimes student will begin to list nouns instead of adjectives. Create a new list of these words for reference in the writing. (Just make sure they know these are nouns!)

cliffs	hiking	gullies
wildflowers	animals	range
faults	folds	mudslides
rivers	altitude	

Theme: Utah Natural History

Science Literacy: Cycles

“Obtain knowledge based on observable evidence.”

