

PolarTREC Lesson Plan Template

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Date: 9/12/14



Title:

Two Views of Changing Climate

Topic:

- Using repeat photography models to document change
- Understanding that climate change takes place over time
- Create an artistic account of vegetation change in Denali Park

Completion Time:

Please specify the amount of time it takes to complete the specified lesson.

- About 1 period

Permission:

Please specify your preference for sharing this lesson:

- **Download share and remix:** Viewer may download the submission, use it as needed, share it with others, and change components to suit their needs. Additional changed versions of the submission can be resubmitted to the Learning Resources.

Grade Level:

Select the grade level category that most applies to your lesson:

- All ages
- Elementary and up
- Middle School and up
- High School and up

Overview:

In this lesson, students will observe repeat photography samples from Denali National Park that show the change in vegetation over time due to change in climate. This activity introduces students to using observation techniques and visual art vocabulary and skills to create an interactive work of art.

Objectives:

- Students will use repeat photography to compare and contrast vegetation growth over time.
- Students will learn the art vocabulary associated with creating landscapes in visual art.
- Students will predict what the impact of climate change will have on vegetation in the future.

Materials:

- Repeat photography photos of Denali National Park (print 2 for each student)
- 2 copies of white copy paper
- Black permanent marker
- Ruler
- Crayons
- Scissors
- Glue
- Black construction paper 8"x15"

Lesson Preparation:

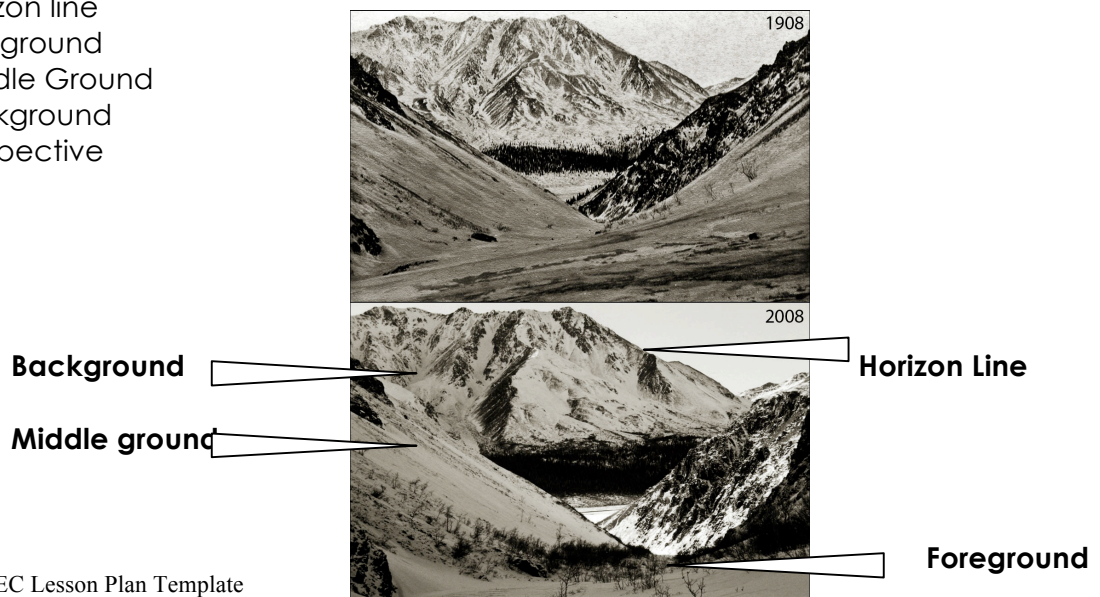
Introduce students to things in their day that change; ie. daily weather, seasons, clouds, clothes...create a list. With this list, students can begin to make comparisons of how things change. Understanding that some things change quickly such as your clothes, other things change slowly, such as the seasons. Propose a scenario to the students about climate. What would happen if things got really cold? Hot? Rained all the time? How would this effect you? Introduce students to the concept of compare and contrast. (what I do now and what I would have to do to adapt) Lead a discussion about if it rained everyday, I would have to.... If it was hot all the time that would make it hard to.... If it never warmed up things that would be affected would be.... Direct the discussion to include things in nature. What about the animals, plants?

Procedure:

Share with students the repeat photography examples from Denail Park. Explain to them that there are scientists looking at how the climate has been changing and what the effects are over many years. Talk about how photography is one way to document change. Many of us were not here 50 years ago to see what the plants looked like, but with photographs of the same places many years apart, we can see how something has changed. Scientists are working to help us understand this change and what effects it will have.

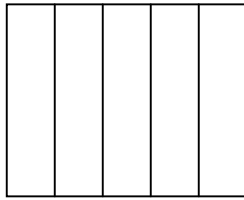
As you are showing the examples of the repeat photography, introduce the art vocabulary when viewing the landscape.

- Horizon line
- Foreground
- Middle Ground
- Background
- Perspective



Art Activity

1. Pass out 2 color photographs (some may be only black and white and that is ok) from Denali Park to each student. Students will need pencils and a ruler.
2. Pass out two pieces of copy paper to each student. Students will draw a 6" x 6" box on one side. Turn the sheet over and **trace the lines of the 6" x 6" box.** Draw 4 lines **1" apart inside the 6" x 6" box.** (blank box is on one side, traced box with lines is on the other. **(Make sure lines run VERTICALLY when students begin drawing.)** This will be important when making the final "two view" artwork.

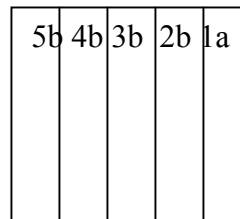
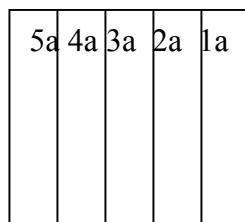


2. Students will make 2 drawings of their photographs on the blank box side of the paper. Encourage them to keep the drawings simple and include a horizon line, foreground middle ground and background. Draw the level and distribution of the vegetation accurately.
3. While students are drawing, pass out black permanent markers.
4. Students will go over their pencil lines, working on enhancing texture and shapes.
6. Pass out crayons, old peeled ones work best.
7. Use the side of the crayons to color in the landscapes. Encourage color blending and working with value...light areas and dark areas.

Assembling the Two View drawing:

1. Turn over painting to show the vertical lines. Have students label lightly with a pencil, strips according to the diagram. **They will label one drawing with this sequence;**

5a, 4a, 3a, 2a, 1a



The next will be 5b, 4b, 3b, 2b, 1b

2. While students are working, pass out the 8"x15" black const. paper, ruler and glue sticks.
3. **Place the ruler on the front edge of the black paper.** Begin gluing strips down, alternating between **5a, 5b, 4a, 4b, 3a, 3b, 2a, 2b, 1a, 1b**. Make sure to glue them down well and have a border along the top and bottom.
4. When finished gluing, begin folding the strips back and forth in an accordion fold. **The first black edge should fold up toward painting.** It should look like a fan when finished. This folding can be challenging for some and even if folds are off will still work. By taking your time and folding along the edges of the strips results in a more successful "two views" project.
5. **Glue just the end flaps down** to a colorful piece of construction paper.
6. Sign name in the lower right hand corner.

Extension:

To make the lesson more of a quick activity, you can use the actual photographs and just use the template to create the artwork.

Resources:

Denali Repeat Photography <http://denalirepeatphotos.uaf.edu:8080/>

Assessment:

Formative assessment:

- 1) As students are working, ask them to identify the foreground, middle ground, and background in their drawings.
- 2) Ask students to compare the two photographs. Discuss what changes they see.
- 3) Have students make predictions as to why the vegetation has changed over time.

Author / Credits:

Based on a lesson Hokusai: Two Views of Mt. Fuji designed by Jenifer Cameron
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Standards:

Science in Personal and Social Perspectives
Content Standard F

As a result of activities in grades K-4, all students should develop understanding of

Personal health
Characteristics and changes in populations
Types of resources
Changes in environments

Science and technology in local challenges

Alaska Math Standards:

Standard A 2 MEA-1 (measuring to the nearest inch), 2 F&R (identifying and continuing patterns)

Alaska Art Standards: A 1, 3, 4; B 4