

Details



Completion Time: About a week

Permission: Download, Share, and Remix

PolarTREC Posters

Overview

In this lesson students research scientific field expeditions and learn what it is like working in the field. Students are able to ask questions of the research team as part of their project. Students then share what they have learned with their classmates.

Objectives

1. Students understand what really goes on in the field during a scientific study.
2. Students learn about polar science as they investigate the expeditions.
3. Students learn how to ask "significant" questions as they interact with the scientific team in the field.
4. Students learn about the international effort involved in polar science.
5. Students learn communication skills as they construct the poster and present the information to their classmates.

Lesson Preparation

Arrange for class computer access.

Procedure

- Assign groups of students individual PolarTREC Expeditions to follow (at www.polartrec.com).
- Discuss what makes a good informational poster and go over the rubric.
- Discuss the difference between significant questions and trivial questions in preparation for asking the research team a question online.
- Provide the appropriate amount of class time.
- Have students show and orally present their posters to the class.

Extension

Have students present the information orally to the class. You may want to develop an oral presentation

Materials

- Computer and Internet access
- Color printer (optional)
- Poster board
- Scissors
- Glue



rubric.

Resources

www.polartrec.com

Assessment

Use the PolarTREC poster rubric (attached)

Credits

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National Science Education Standards (NSES):

Content Standards, Grades 5-8

Content Standard A: Science As Inquiry

- a. Abilities necessary to do scientific inquiry
- b. Understandings about scientific inquiry

Content Standard E: Science and Technology

- a. Abilities of technological design
- b. Understandings about science and technology

Content Standard G: History and Nature of Science

- a. Science as a human endeavor
- b. Nature of science
- c. History of science

Content Standards, Grades 9-12

Content Standard A: Science As Inquiry

- a. Abilities necessary to do scientific inquiry
- b. Understandings about scientific inquiry

Content Standard E: Science and Technology

- a. Abilities of technological design
- b. Understandings about science and technology

Content Standard F: Science In Personal and Social Perspectives

- f. Science and technology in local, national, and global challenges

Content Standard G: History and Nature of Science

- a. Science as a human endeavor
- b. Nature of scientific knowledge
- c. Historical perspectives

Other Standards

N/A

Student Name: _____

Project: _____

PolarTREC.com Poster
(28" x 22" and Word-Processed Throughout)

CATEGORY	4	3	2	1
Knowledge Gained	Student can accurately answer all questions related to facts in the poster.	Student can accurately answer most (75%) questions related to facts in the poster.	Student can accurately answer about half of the questions related to facts in the poster	Student appears to have learned little about the PolarTREC expedition.
Information	The poster includes all required elements and is highly informative.	The poster is missing one of the required elements and is informative.	Missing two of the required elements or limited information.	Several required elements are missing. Incorrect or Little information.
Graphics: (Pictures, charts and graphs)	5 or more graphics that are related to the topic and make it easier to understand.	4 or more graphics that are related to the topic and most make it easier to understand.	3 or more graphics that are related to the topic. Relevance is unclear.	Some of the graphics do not relate to the topic.
Labels	All items of importance on the poster are clearly labeled and can be read from at least 3 ft. away.	Almost all items of importance on the poster are clearly labeled and can be read from 3 ft. away.	Some items of importance on the poster are clearly labeled and can be read from 3 ft. away.	Labels are too small to read from 3 ft. away OR no important items were labeled.
Citation - Bibliography	All graphics, labels and information are correctly cited.	Some of the graphics, labels and information are correctly cited.	Few of the graphics, labels and information are correctly cited.	The graphics, labels and information are not correctly cited.
Attractiveness	Word processed throughout, the poster is colorful and exceptionally attractive in terms of design, layout and neatness.	Word processed throughout, the poster is colorful and attractive in terms of design, layout and neatness.	Word-processed throughout, the poster is acceptably attractive though it may be a bit messy or lacks color.	Not word processed , OR the poster is distractingly messy, poorly designed, and is unattractive.
Grammar	There are no grammatical or mechanical mistakes on the poster.	There are 1-2 grammatical or mechanical mistakes on the poster.	There are 3-4 grammatical or mechanical mistakes on the poster.	There are more than 4 grammatical or mechanical mistakes on the poster.

Required elements.

1. **Title of the PolarTREC project. Who is on the expedition?**
2. **Purpose of the expedition. What work was done? Where exactly?**
3. **Summary of the Journal entries. Include pictures with captions.**
4. **Significant question about the expedition that you posted on the website. Answer?**
5. **Other interesting facts.**