

Let's Explore Antarctica Today!

Integration: Social Studies; Geography; Health (Mental/Emotional Health); Art; Language Arts

Grade Levels: K-3

Time: 3-4 class periods

Materials:

- Map of the world
student size available: www.nationalgeographic.com/xpeditions/main.html
- Map of Antarctica
- *Expedition Route Map* handout
- Maps of Antarctica without the Expedition route (for students)
available: www.nationalgeographic.com/xpeditions/main.html
- *Are We There Yet?* handout
- *Bancroft Arnesen Expedition Route* handout.
- Drawing materials

Objectives:

Students will:

1. Explain who lives on Antarctica.
2. Describe the Bancroft Arnesen Expedition.
3. Write, draw or act out an adventure of their own.

Lesson:

1. Ask students if they think that anyone lives on Antarctica. "Why?" or "Why not?"
Allow for discussion.
 - a. Tell students that until the mid-1900s there were no people living in Antarctica.
 - b. Tell students that now some scientists live in Antarctica part of the year and some for the entire year.
 - They study Antarctica and conduct experiments.
 - They live in buildings constructed to withstand the wind and the cold.
 - Their food and supplies are brought to them every six months.
2. Tell students there are also people that continue to explore Antarctica on their own. These people are called "explorers". Write "explorers" on the board.
3. Ask students what an adventure is. (an exciting experience)

4. Tell students that Ann Bancroft and Liv Arnesen are explorers that are off on an adventure. They want to be the first all-women's team to ski across Antarctica.
5. Give students information about Ann and Liv
 - a. Ann
 - Ann was born in 1956 and lives outside of Minneapolis, Minnesota.
(1) Point to Minneapolis on a map (optional)
 - She has been a teacher and a coach.
 - She has been on many expeditions (trips to explore) and was the first woman to ski to both the North and South Poles.
 - She loves to tell children and adults about her expedition.
 - b. Liv
 - Liv was born in 1953 and lives in Oslo, Norway (show students where Norway is on a world map).
 - She has been a teacher and a coach as well.
 - She has been on many expeditions including a climbing expedition on Mt. Everest, the tallest mountain in the world.
 - She speaks to groups of children and adults around the world and tells them about her adventures.
6. Tell students that Ann and Liv have been planning their expedition across Antarctica for a long time. They are calling it the Bancroft Arnesen Expedition.
7. Use the following information to give a developmentally appropriate explanation of the Expedition to the students.
 - a. Tell students that Ann and Liv will begin their journey in October 2000 when they fly to Cape Town, South Africa. (point to South Africa on the map).
 - b. After celebrating the start of the Expedition, they will fly to Antarctica on November 1, 2000 and land in an area called Queen Maud Land (show students the route from South Africa to Antarctica on a world map; point to Queen Maud Land on a map of Antarctica).
 - c. The next day, Ann and Liv will begin skiing south toward the South Pole, in single file. It is about 1500 miles (2400 km) away.
 - Give students something familiar to compare the distance to.
 - d. While they are skiing, they are pulling sleds behind them that hold all of their equipment and supplies. Each sled weighs about 250 lbs. (113 kg).
 - Give students something familiar to compare the weight to.
 - e. Ann and Liv will ski for 8-14 hours every day. They will only stop to sleep, to drink, and to eat. They will try to sleep for 8 hours every night, in a two-person tent in sleeping bags and layers of clothes. Any extra time will be spent writing in their journals, planning for the rest of the journey, sending email, communicating with classrooms around the world, etc.
 - Give students a comparison by asking how many hours they spend in school, how many hours they spend sleeping, etc.

OPTIONAL: Give students a handout with a circle drawn on it. The circle should be divided into 24 equal pieces (like a pie), to signify the hours in a day. Have students color in the number of hours they spend sleeping, eating, going to school, playing etc. Have them compare this visual with the amount of time Ann and Liv will spend skiing.

- f. If the weather is windy, Ann and Liv will use their sails. The sails look like parachutes and allow them to move farther on the ice.
 - Pictures of the sails are available at www.yourexpedition.com
 - g. Every day, Ann and Liv will ski 15 to 24 miles (24-40 km) at a rate of 1mph (1.6 km/h). On the days, when they use their sails they can cover 62 _ miles (100 km)!
 - Compare Ann and Liv's speed to that of a car.
 - h. During the expedition the temperature will be about -30°F (-34°C) and the wind will gust up to 100 mph (160 km/h).
 - Ask student's if they think that is cold.
 - Compare it to the temperature where you are today.
 - i. They will finally reach the South Pole between December 25, 2000 and January 1, 2001.
 - Remind the students that they left on November 2, 2000.
 - j. Ann and Liv will not stop for very long at the South Pole. After receiving a re-supply of food and equipment, they will continue to ski toward the other side of Antarctica. This part of the trip is 900 miles (1440 km) long.
 - k. Ann and Liv will follow the same daily routine as the first part of the trip. On this part of the Expedition they have to ski through the Transantarctic Mountains before the can reach McMurdo Station (a research station run by the United States) on the Ross Ice Shelf.
 - l. Ann and Liv will reach McMurdo Station around February 15, 2001. The entire Expedition, 2400 miles (3850 km), will take about 100 days (3 _ months).
 - Remind students that this is longer than a summer vacation from school.
 - m. After reaching the end of the Expedition, Ann and Liv will fly from Antarctica to Christchurch, New Zealand (point to New Zealand on the world map).
 - n. After a "welcome back" party, Ann will fly back to Minneapolis and Liv will fly back to Norway.
8. Tell students that they will trace the route of the Bancroft Arnesen Expedition. This can be done individually or in groups. Choose one of the following exercises for students:
- a. Activity #1:
 - Give each student an *Are We There Yet?* handout and an *Expedition Route Map* handout.
 - Read each of the sentences aloud and give students time to complete the direction.
 - b. Activity #2 (requires greater map skills):
 - Give each student a map of Antarctica that does not have the Bancroft Arnesen Expedition route on it.

- Have students label the locations mentioned on the *Bancroft Arnesen Expedition Route* handout and attempt to trace the route based on the information given. Allow students to look at a map of Antarctica for help.
 - It will probably be necessary to read the handout to the students.
9. Tell students to think about what type of adventure they would like to undertake if they had the chance.
- a. Have students discuss, draw, or write about their adventure.
 - b. Allow students, who wish, to act out their adventure and have the rest of the class guess what it is.

Assessment:

Teachers will assess:

1. Student's ability to describe the Bancroft Arnesen Expedition (as appropriate for their grade level).
2. Student's ability to follow directions.
3. Student's ability to articulate their own adventure.