

Forecast

Overview:

Students examine a map from the *Geophysical Institute Auroral Forecast* website and use it to write a forecast. See “Infusing Native Language in the Science Curriculum” to incorporate Native language into this lesson.

Objectives:

The students will:

- examine a map displaying the extent of auroral activity; and
- write an auroral forecast.

Materials:

- Glue or tape
- TEACHER INFORMATION SHEETS: “Forecast Cards”
- VISUAL AID: “Model Forecast”
- STUDENT WORKSHEET: “Forecast”

Activity Preparation:

Cut out the forecast cards on the TEACHER INFORMATION SHEET.

Activity Procedure:

1. Distribute one card to each student. Explain that each student has a map for an auroral forecast showing a different date and a different level of aurora activity. For higher levels of auroral activity, two maps are on one card so that the extent of visibility is clear.
2. Explain the shaded area represents the area where the aurora is likely to be overhead. The solid line south of the shaded area represents the extent of the area where auroras will be visible but not overhead. The information listed on the card after the date is the activity level and its corresponding number.
3. Use the VISUAL AID: “Model Forecast” to show students how to use the map and information given to them to write a forecast.
4. Distribute the STUDENT WORKSHEET: “Forecast.”

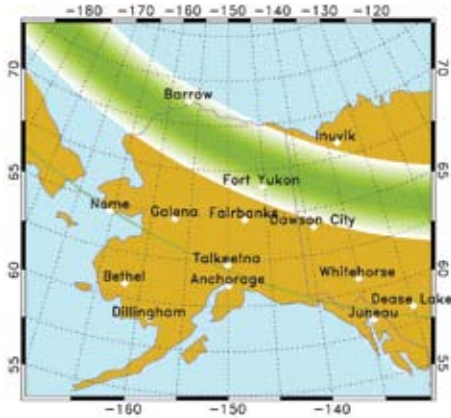
Extension Ideas: (1) Ask students to read their forecasts as if they were on the local news. (2) Line students up in order of date or aurora activity level. (3) Compare student forecasts to the actual forecast at the Geophysical Institute Auroral Forecast website: (<http://www.gedds.alaska.edu/AuroraForecast/>)

Answers to Student Worksheet:

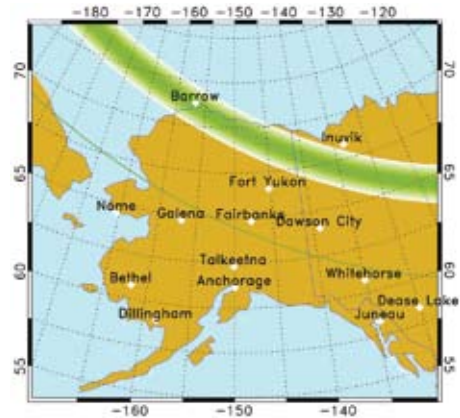
Student forecasts should correspond with the information on the map they were given. Answers will vary from student to student as all the maps are from different dates.

Forecast Cards

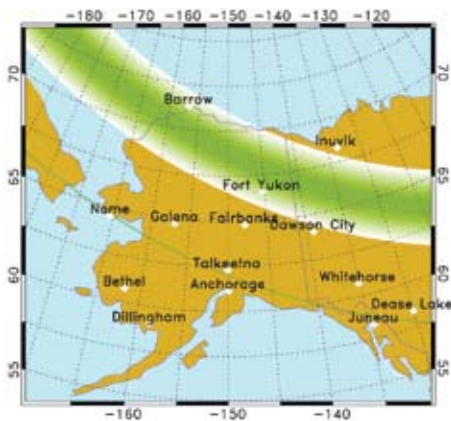
Sunday, September 10, 2006 (1 = Quiet)



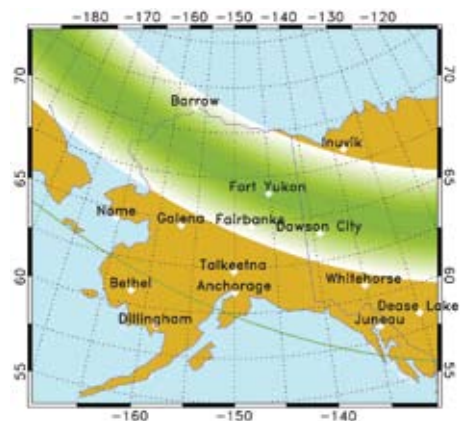
Wednesday, March 21, 2007 (0=Minimal)



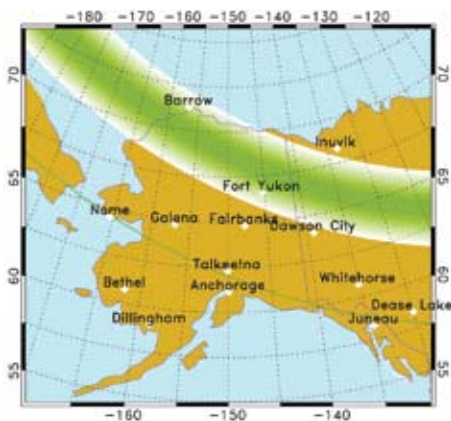
Wednesday, November 8, 2006 (1 = Quiet)



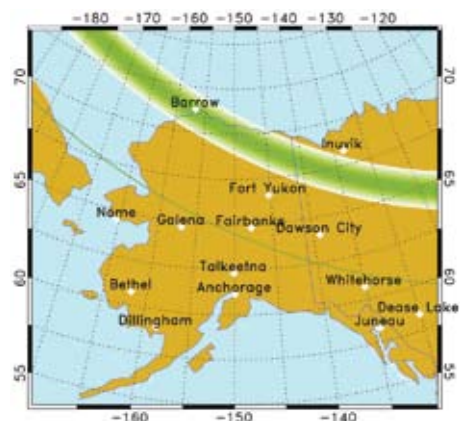
Sunday, December 3, 2006 (2 = Low)



Sunday, September 10, 2006 (1 = Quiet)

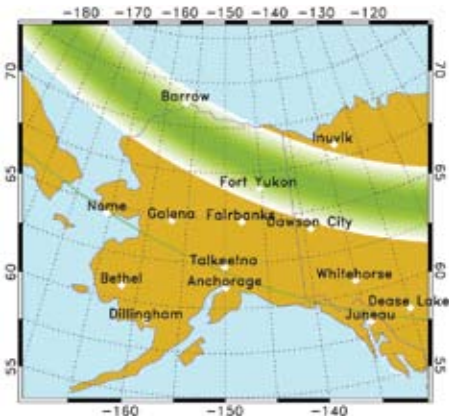


Wednesday, March 21, 2007 (0=Minimal)

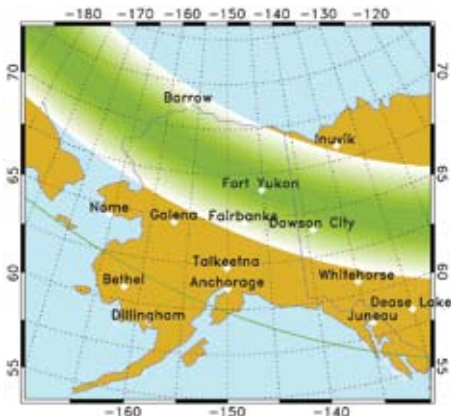


Forecast Cards

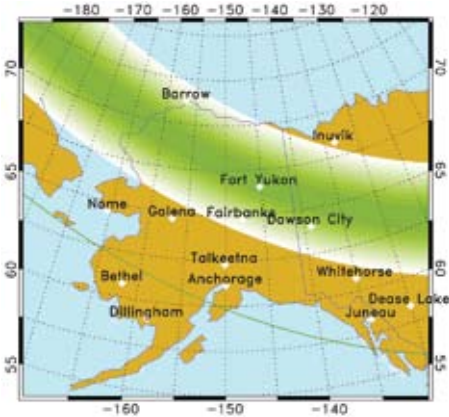
Wednesday, November 8, 2006 (1 = Quiet)



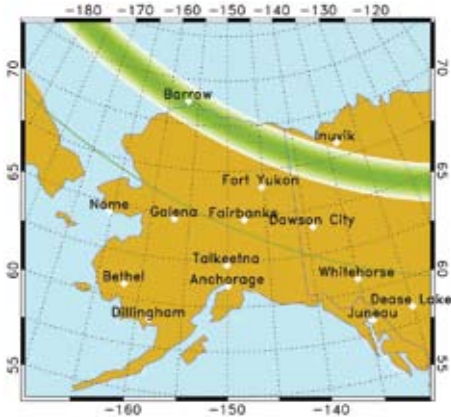
Sunday, December 3, 2006 (2 = Low)



Saturday, October 28, 2006 (2 = Low)

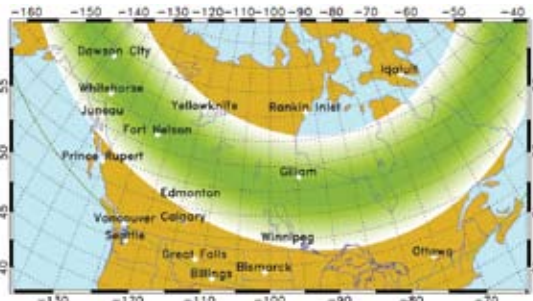
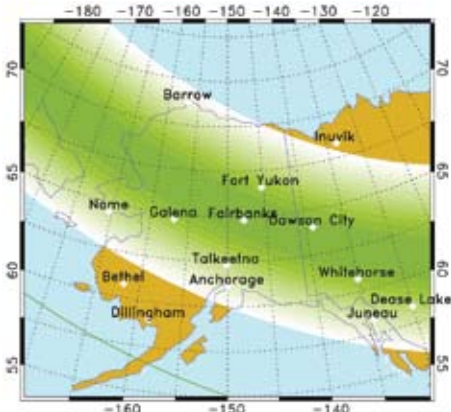


Tuesday, March 20, 2007 (0 = Minimal)

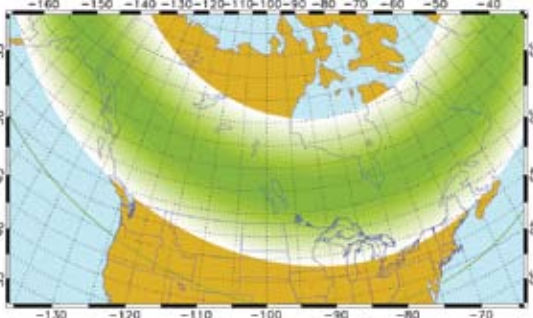
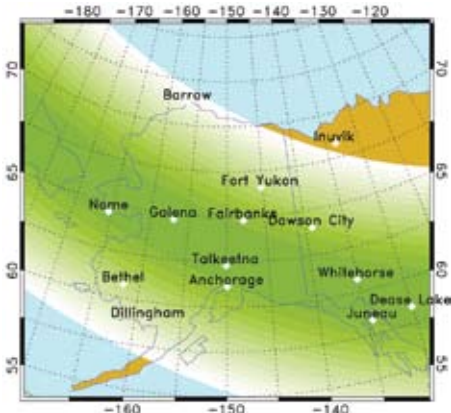


Forecast Cards

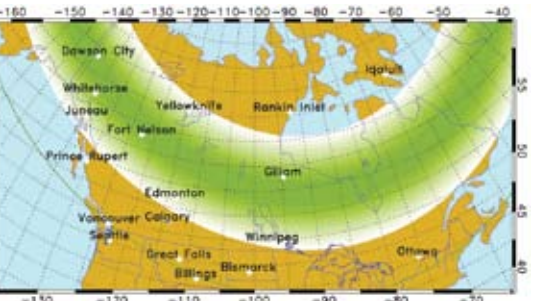
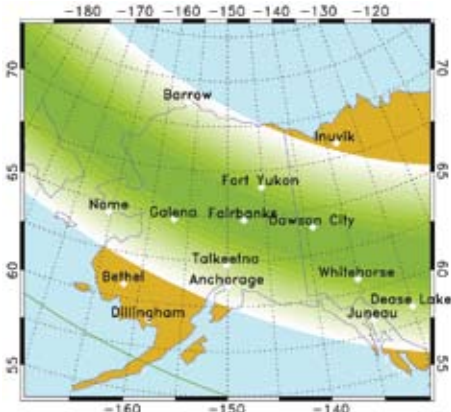
Tuesday, September 19, 2006 (4 = Active)



Friday, April 14, 2006 (6 = High +)

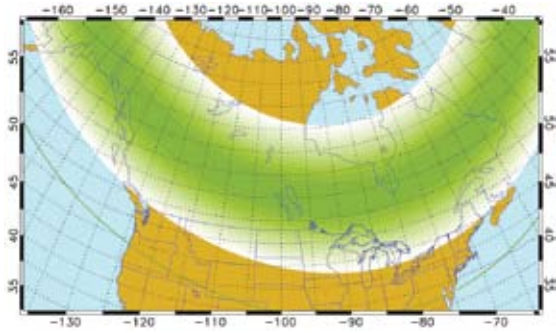
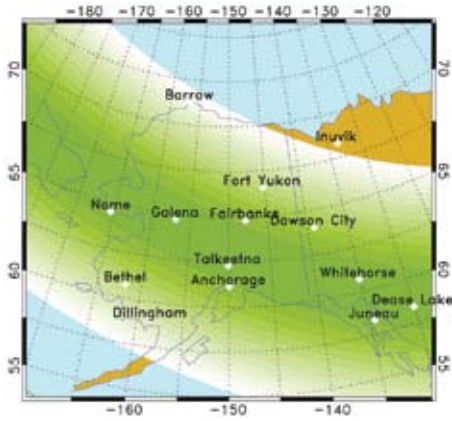


Friday, October 20, 2006 (4 = Active)

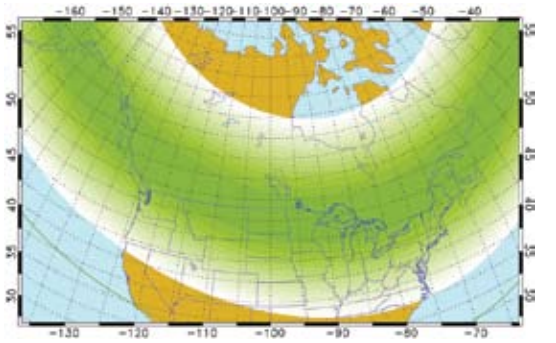
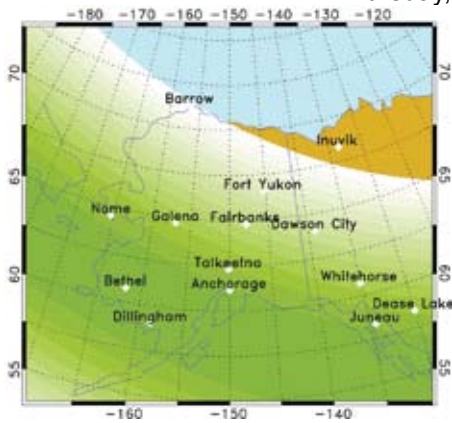


Forecast Cards

Saturday, December 9, 2006 (6 = High +)



Thursday, October 30, 2003 (8 = High +++)



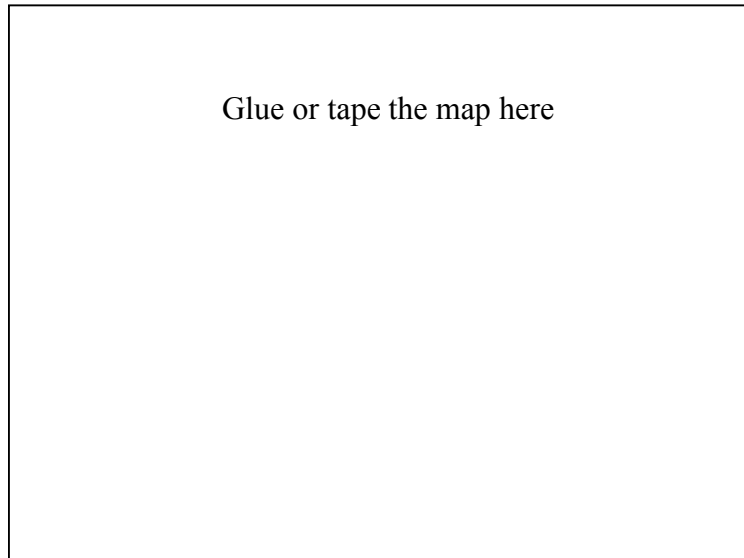
Name: _____

<h2>Forecast</h2>

Directions: Use the map to write the aurora forecast.

Aurora forecast for _____

(Day of Week), (Month, Day, Year)



Forecast:

Auroral activity will be _____. Weather permitting, _____-level displays will be visible overhead from _____ and visible low on the northern horizon as far south as _____.