



Gold Seal Lesson

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Grade Span			ICLE Application Model			
K-4	5-8 XX	9-12	A	B	C XX	D

Instructional Focus:

Basic Concepts and Knowledge

Students develop an understanding of scientific concepts using facts, theories, principles, and models.

Science as Inquiry

Students demonstrate knowledge and skills necessary to perform scientific inquiry.

Writing

Students write for a variety of purposes and audiences with sophistication and complexity appropriate to the grade level.

Performance Task

1. Pick an outdoor activity you like or would like to try, such as skiing, hiking, scuba diving, sailing, or bicycling.
2. Look on a globe and find one city on each continent (including North America) you think would be good for that activity at this time of year. Write those cities down and include a brief explanation why you think they would be good for the activity.
3. Next, find one city on each continent you think would NOT be good for that activity at this time of year. (If you cannot think of a city, think of a country.) Write those cities down also and explain your reasoning.
4. From travel books, an encyclopedia, or other sources, determine whether you are correct. Be sure to at least find the temperature and whether the cities you picked have the appropriate features (for example, heavy snowfall for skiing).
5. Make a table, dividing your cities into those that are good for the activity you chose and those that are not. Include a column for the average temperature for this time of year and another column for other reasons why it is good or not good for the activity. Next, include columns for latitude, elevation, and other important features that might explain the cities' climates and conditions. Find information to fill in those columns.
6. Look at your table. Underneath it, answer the following questions:
 - Were you correct in your original thoughts about the cities? How were you incorrect, and why?
 - Comparing temperature and latitude, is there a relationship? What might explain an especially warm temperature in a city with a high latitude?
 - Is there a relationship between temperature and elevation?
 - What city is closest to yours in terms of latitude? Does it resemble yours in terms of climate?

ICLE Essential Skills

Describe or measure positions on the earth's surface using coordinate systems (lines of latitude - longitude), and fields of isolines, isobars, and iso-surfaces. (s 26)

Identify and comprehend factors that affect climate patterns such as latitude, elevation, large water bodies and ocean currents, mountain barriers, wind belts, and storm tracks. (s 28)

Exhibit good data management skills by collecting, organizing, and graphing data. (s 19)

Gather information from a variety of sources, including electronic sources, and summarize, analyze, and evaluate its use for a report. (ela 3)

Present information in well-organized fashion that will be clear to the target audience. (ela 11)

Scoring Guide:

City selection and reasoning 35 Points	<ul style="list-style-type: none"> • Student selects two cities on each continent (one that would be good for the activity and one that would not) • For each choice, student provides explanation based on geographic features, especially latitude and elevation
Table 30 Points	<ul style="list-style-type: none"> • Appropriately labeled and formatted • Information is complete • Information is correct • Student identifies relevant features other than temperature, latitude, and elevation, such as ocean currents
Questions 35 Points	<ul style="list-style-type: none"> • Student answers all questions • Answers are consistent with student's data • Student recognizes possible relationships between features and conditions

Keywords

English Language Arts	Mathematics	Science
Reading Research	Algebra	Earth Science Climate Maps
Writing Expository	Geometry	Life Science
Communications	Statistics	Chemistry
Literature	Calculus	Physics
Other	Trigonometry	Other Problem Solving Data Collection Data Analysis
	Other	