

Weather/Climate Mapping--SmartBoard

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Overall Goal for the Lesson:

After this lesson, students will have knowledge of how to read and interpret climate and weather patterns on maps. They will be able to use this knowledge to research climate and weather patterns on an assigned climate region.

Description of classroom, grade level, and students:

This lesson is intended for a 10th grade classroom, with 30 students. Our classroom is equipped with a SmartBoard and projector, as well as a set of classroom computers. The classroom has students with disabilities.

Student Objective(s) for the lesson.

After being taught an interactive lesson about reading climate and weather patterns on maps using the SmartBoard, students will be able to compile and present accurate information via a handmade climate map of assigned region.

Length of Lesson:

This interactive SmartBoard lesson will take about 45 minutes to complete. An entire class period is recommended.

Schedule of Activities:

1. Using the SmartNotebook lesson, define meanings of mapping symbols for students.
2. Ask students to interact with SmartBoard to place symbols in correct positions on the maps.
3. Ask students to think about and share how hazards such as volcanoes, snow, ice, tornados, etc., might affect the inhabitants of a particular area.
4. If a significant amount of time is left in class period, ask students to begin their own research on the climate and weather patterns of an assigned climate region. (Students will have several days to gather and organize the research into a class presentation—a different part of the total Unit Plan.)
5. For homework, students will create a handmade climate map.

PASS Content Standards Addressed

Standard 1 :The student will use maps and other geographic representations, tools and technologies to acquire, process, and report information from a spatial perspective.

1. Demonstrate the use of mental maps to organize information about people, places, and environments in a spatial context.
2. Analyze the spatial organization of people, places, and environments on earth's surface.
3. Design appropriate forms of maps incorporating elements of geographic information such as: relative/absolute location, direction, size, shape, elevation, and scale.

PASS Instructional Technology Standards

Standard 3: The student will demonstrate knowledge of technology productivity tool.

1. Use technology tools and resources for managing and communicating personal/professional information (e.g., finances, schedules, addresses, purchases, correspondence).

Standard 5: The student will demonstrate knowledge of technology research tools.

1. Evaluate technology-based options, including distance and distributed education, for lifelong learning.
2. Routinely and efficiently use online information resources to meet needs for collaboration, research, publications, communications, and productivity.
3. Select and apply technology tools for research, information analysis, problem solving, and decision-making in content learning.
4. Investigate and apply expert systems, intelligent agents, and simulations in real-world situations.
5. Collaborate with peers, experts, and others to contribute to a content-related knowledge base by using technology to compile, synthesize, produce, and disseminate information, models, and other creative works.

Assessments: How will these activities be assessed?

The teacher will assess the students during the SmartBoard lesson by calling on each student to either answer a question about the effects of climate/weather patterns, or to interact with the lesson. Students who participate by doing one of these two things will receive the total points possible for this lesson.

In addition, students will need to create an accurate, handmade climate map at home to use with their presentation.

Student research will be assessed in other areas of the Unit, through a presentation, concept map (a separate lesson plan), and Wikispace interaction (also a separate lesson plan).

Accommodations: How might the lesson need to be adapted for students with special needs?

One student in the classroom has a visual impairment. When students and the teacher(s) interact with the SmartBoard, always make sure to say aloud and describe exactly what is being done while it is happening so that this student is not missing any information.

To accommodate a student with an intellectual disability, the Smartboard presentation will be repeated one-on-one with that student when other students start researching.

Materials Needed:

- SmartNotebook software to create a Reading Climate and Weather Patterns lesson.
- A SmartBoard
- A set of classroom laptops/textbooks for students to do their own research on climate and weather patterns