2012

Absolute vs. Relative Location

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<table>
<tr><td>Grade Level (Req.): 9th-12th grade</td><td>Content Area (Req.): Geography</td><td>Unit (Opt.):</td></tr>
<tr><td colspan="3">Connections to Other Disciplines (Opt.):</td></tr>
<tr><td rowspan="2">Time Frame (Req.): 3 days – 2 50-minute class periods and ~10 minutes of a 3rd day</td><td colspan="2">Goal (Req.): To help students understand the difference between absolute and relative location.</td></tr>
<tr><td colspan="2">Objective (Req.): Students will be able to identify the terms absolute and relative location. Students will be able to discern which method of description is best used to pinpoint a particular location, dependent on context.</td></tr>
<tr><td colspan="2">Materials Needed (Req.):
Location worksheet
ActivBoard flipchart [Location] (need Promethean ActivBoard w/ LCD projector)
GPS locator</td><td>New Vocabulary (Opt.):</td></tr>
<tr><td colspan="3">Anticipatory Set/Introduction [Inquiry Question is required] (Req.): How can both absolute and relative location be used to correctly and efficiently identify a particular location?</td></tr>
<tr><td colspan="3">Instructional Sequence/Procedure (Req.):
Day One: Start the lesson by introducing the concept of location. Point out that everything in existence *has* a location. On Earth, a particular location can be described absolutely using coordinates of latitude and longitude or relatively using descriptive and directional terms in conjunction with landmarks. Use visual aids on LCD projector to support lecture material.
Begin student instruction on proper usage of GPS locator. Explain how they work using satellites and latitude and longitude to provide an absolute location for the locator unit. Instruct students on the functions of the locator and correct procedure on how to use it. Provide an example of a previously placed object to demonstrate the unit's tracking capabilities.
End the day with question and answer session on the GPS locator and preview of the next day's activities.
Day Two: Class will meet outdoors according to previous arrangement. Review previous day's activities, including the terms absolute and relative location. Engage students in a brief discussion of which method works best to find a particular place. Play devil's advocate if necessary to promote the benefits of both methods.
Assign students into two groups. One group will be equipped with the GPS locator and given coordinates while the other group will be given simple relative locational directions. Groups will compete with each other to see which can retrieve previously placed objects on the school</td></tr>
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grounds the fastest.

6. For the first round, students will be seeking an object with the relative group receiving clear and unique relative locational directions. The group with the directions should retrieve the object first.
7. For the second round, students will seek an object with the relative group receiving vague and ambiguous relative locational directions. The group with the GPS locator should receive the object first.
8. End of the day with a debriefing session questioning students which method was more effective. Guide discussion until students come to the conclusion that context is very important in determining the use of absolute versus relative methods to describe locations. Assign location worksheet to emphasize this point, due the next day.
9. Day Three: Direct students to turn in their worksheets. Engage in brief discussion of the questions asked to determine if students seem to understand the concepts of absolute location and relative location as well as which method of description works best in particular circumstances.
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Formative Evaluation (Req.): Student participation in the class activity and on proper completion of the review worksheet.	Assessment (Req.): Questions about the activity will also be present on the test at the conclusion of the unit.

Iowa Core Curriculum Standards Used (Req.):

- Geography, grade 9-12: Understand the use of geographic tools to locate and analyze information about people, places, and environments.
- Technology Literacy (21st Century Skills), grade 9-12: Demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology.
- Technology Literacy (21st Century Skills), grade 9-12: Use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
- Technology Literacy (21st Century Skills), grade 9-12: Apply digital tools to gather, evaluate, and use information.
- Technology Literacy (21st Century Skills), grade 9-12: Demonstrate critical thinking skills using appropriate tools and resources to plan and conduct research, manage projects, solve problems, and make informed decisions.
- Technology Literacy (21st Century Skills), grade 9-12: Demonstrate a sound understanding of technology concepts, systems, and operations.
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Common Core Curriculum Standards Used (Opt.):

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NGS Standards Used (Req.):

- How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information
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Five Themes of Geography Used (Req.):	School District Standards and Benchmarks (Opt.):
• Location • • • •	• • •

21st Century Universal Constructs (Opt.):

Other Disciplinary Standards (Opt.):

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Other Essential Information (Opt.):

Other Resources (Opt.):

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