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GPS Navigation Activity

Carmen Besler

West Dubuque Elementary, Dubuque School District

Jayne Meyer

Mt. Vernon Elementary, Mt. Vernon School District

See next page for additional authors

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Author

Carmen Besler, Jayne Meyer, Jodi Russell, and Marlene Weber

GPS Navigation Activity

Created by: Carmen Besler, Jayne Meyer, Jodi Russell, and Marlene Weber
West Dubuque Elementary, Dubuque School District; Mt. Vernon Elementary, Mt. Vernon School District; West Dubuque Elementary, Dubuque School District

Grade Level (Req.): 3rd-5th grade	Content Area (Req.): Physical Geography, Technology	Unit (Opt.):
Connections to Other Disciplines (Opt.):		
<ul style="list-style-type: none"> • • • 		
Time Frame (Req.): One 50 minute period	Goal (Req.): To help students understand how to use a GPS to find a location based on latitude and longitude.	
	Objective (Req.): Students will be able to find a location using new coordinates.	
Materials Needed (Req.):	New Vocabulary (Opt.):	
<ul style="list-style-type: none"> • Handheld GPS system • Several small trinkets for students to locate • List of predetermined coordinates • World map with latitude and longitude marked • Trained adult helper • • 	<ul style="list-style-type: none"> • • • • 	
Anticipatory Set/Introduction [Inquiry Question is required] (Req.): Can you find a specific location using a GPS?		
Instructional Sequence/Procedure (Req.):		
<ol style="list-style-type: none"> 1. Place trinkets at predetermined locations prior to lesson. 2. Start the lesson by reviewing latitude and longitude on a world map. 3. Instruct students on the use of the GPS. 4. Have students work cooperatively as a large group to find a common location using the GPS. 5. Allow students time to explore the GPS instrument with emphasis on having them use the latitude and longitude coordinates as well as the compass to navigate. 6. Give additional instruction as needed on finding waypoints. 7. Partner students and give a set of coordinates to find the hidden trinkets. 8. Extension Activity: As students become more familiar with the GPS, they could be challenged to locate the coordinates for different places such as areas around the school grounds. To increase student understanding of latitude and longitude, these coordinates could then be charted on a graph to make a map. 9. Note: As an alternative to using trinkets as tokens for students to locate, you could place geography vocabulary words in the location and have students unscramble the words to make a sentence related to their geography studies. 10. 11. 		

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Formative Evaluation (Req.): Class participation

Assessment (Req.): Based on their level of success with finding the hidden trinkets.

Iowa Core Curriculum Standards Used (Req.):

- Geography, grade 3-5: Understand the use of geographic tools to locate and analyze information about people, places, and environments.
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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, Tools, and Technologies to Acquire, Process, and Report Information From a Spatial Perspective
- How to Analyze the Spatial Organization of People, Places, and Environments on Earth's Surface
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Five Themes of Geography Used (Req.):

- Location
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School District Standards and Benchmarks (Opt.):

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21st Century Universal Constructs (Opt.): Collaboration

Other Disciplinary Standards (Opt.):

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Other Essential Information (Opt.):

Other Resources (Opt.):

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