

GIS: Understanding Cartography w/GPS & GIS Technology

Summary

The purpose of this lesson is to collect GPS data for a trial hike and use the data to construct a trail map of the hike. Digital camera photos may be "hot-linked" as an additional component. These activities may be incorporated into the cartography component of the curriculum. This project reinforces the concepts of contour line drawing, making models and using technology to mimic real world applications of cartography.

Materials

- GPS units
- hiking compass
- trail map of area
- quadrangle (topo map) of selected area
- digital camera
- ArcView 3.2a software, PC computer
- paper and pencil
- worksheets and other materials in [GPS & GIS Hike Lab 2.doc](#) attached

Background for Teachers

The advances in technology over the last few years have made it possible to do many activities that previously had to be done by hand. You will be integrating technologies to produce a map and trail guide of our hike.

Instructional Procedures

This is a cumulative project and will be completed over several days. Break activities up accordingly. All needed materials are found in "[GPS & GIS Hike Lab.doc](#)" attached.

Students will go on a hike at a predetermined route at one of our local state parks.

Students need to collect data (latitude, longitude and elevation) using GPS units.

They will then input this data into Arcview and create a map of the area in which they hiked.

Once the data is imputed they are to print and draw contour lines.

Once this activity is complete, students will check their accuracy by constructing contour lines using the Arcview software.

Students may include digital camera photos may be "hot-linked" as an additional component.

The worksheets and detailed procedures and instructions are graphic-laden and will not be reproduced in this space. They will have to be opened from the link above.

Bibliography

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Authors

[Utah LessonPlans](#)