

GIS: OrangeWorld

Summary

Explores the properties of various map projections. Learners draw world maps on an orange and then flatten the peel to illustrate how distortion is introduced. Learners then construct world maps using ArcView and compare various map projections.

Materials

ArcView or ArcVoyager software

one orange or orange substitute per student group

quality permanent markers

the following datasets found in the [standard ESRIDATA folder](#) located in the ESRI folder commonly installed on the C:drive

latlong: produces a graticule on the screen

geogrid: displays the major lat/long lines (equator, etc.)

World30: provides ocean background

Countries: Displays countries on the screen

documents included with this lesson:

- [orange00.pdf](#)

: Acrobat reader file containing detailed instructions for carrying out and evaluating the project

- [prochart.doc](#)

: A microsoft word document containing a chart of various map projections and their appropriate use. The chart is taken from the USGS Mercator poster of map projections. (Map Projections, ESRI 1994 is another excellent source of information about various projections and their uses) A simple internet search using the keywords "map projections" will produce links to a number of valuable resource sites.

- [prochart.gif](#)

A graphic version of the projection chart

- [orangeWo.ppt](#)

A powerpoint presentation offering examples of the process and product of OrangeWorld

Instructional Procedures

Detailed instructions for carrying out and evaluating the project are found in the [orange00.pdf file](#) attached. Screen shot graphics are embedded in the document.

A [powerpoint presentation](#) offering examples of the process and product of OrangeWorld is also attached.

Bibliography

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Authors

[Utah LessonPlans](#)