

## Geodemographics

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**Subject Area:** Geography – Introduction to Human Geography

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**Lesson Description:** Students describe spatial data patterns representing ethnicity and ancestry. The data for this exercise is from the UN GEO Data Portal. Students describe the spatial distribution of various demographic variables such as birth rate, death rate, infant mortality, literacy and life expectancy. Students describe the spatial pattern and correlation of these variables using Boolean logic queries.

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### ITSE National Technology Standards

- 1) Develop positive attitudes toward technology uses that support lifelong learning, collaboration, personal pursuits, and productivity.
- 2) Use technology tools to enhance learning, increase productivity, and promote creativity.

### Geography Standards - Geography for Life 9-12<sup>th</sup>

- 1) Understand the distribution and complexity of earth's cultural mosaics
- 2) Understand how to use maps and other geographic representations, tools, and technologies to acquire, process, and report information from a spatial perspective
- 3) Understand how to analyze the spatial organization of cultural features on earth's surface

**Objectives:** The students will be able to:

- 1) Describe the spatial patterns of various demographic statistics.
- 2) Evaluate geospatial condition by identifying places with similar condition. .
- 3) Design Boolean Logic queries
- 4) Evaluate correlations as positive, negative or non existent to understand spatial association of places.

### Prerequisites:

- 1) Students should have completed the MAPS-GIS Tutorial activity and be familiar with geospatial skill such as viewing data layers, performing a Boolean logic queries and analyzing spatial patterns.
- 2) Students should be familiar with basic concepts of demographic data collection and interpretation - for example birth rate is expressed as number per 1,000 population.

**Materials:** Computer access with high-speed internet, student activity sheet.

**Lesson Estimated Time:** Approximately 60 minutes

**Lesson Procedure:** Students will be given this activity as a homework assignment. In class, following the completion of the assignment the class will discuss the overall patterns and correlations and discuss the concept of spatial modeling related to service planning for changing population dynamics.

**Assessment/Evaluation:** Student worksheet and classroom discussion.

### References and Citations:

- 1) GEO: Global Environmental Outlook: <http://www.grid.unep.ch/geo/>
- 2) Understanding demographic data  
[http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content\\_storage\\_01/0000019b/80/1e/43/c8.pdf](http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1e/43/c8.pdf)