Analyzing Patterns of Human Development

Lesson Developer: Leslie Simmons, Willamette HS
Subject Area: Social Studies
Grade Level: High School

Lesson Description: This lesson will be a stand alone lesson on world demographic data taught towards the end of a year-long World Studies class. This activity will reinforce many of the concepts learned throughout the year regarding the connections between colonization, national wealth, and standard of living. Students will look at the HDI map layer and describe global **spatial patterns** of high and low HDI. Students will use the *Identify tool* to fill a table of data on selected countries. Students will use the information to make comparisons and hypothesize reasons for the data. A lesson extension will have students look for **correlations** between data. Students will also learn key vocabulary prior to the lesson or as part of the lesson.

I plan to pair students in multilevel pairings to insure a high success rate. I will use a projector to demonstrate use of *layers*, the *legend* and the *identify tool* and model for students how to collect the data for the table.

During the debrief of the lesson I will make connections to careers to encourage students who enjoyed working with GIS to pursue it further in college.

Recommended Time to Teach: (90 minutes)

Education Standards:

Common Core Standard English Language Arts Standards: English language Arts Standards
».History / Social Studies » Grade 12

CCSS.ELA-Literacy.RH.11-12.7: Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., visually, quantitatively, as well as in words) in order to address a question or solve a problem.

Common Core Standard English Language Arts Standards: English Language Arts Standards »
Science & Technical Subjects » Grade 11-12

CCSS.ELA-Literacy.RST.11-12.3: Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

ITSE National Technology:
3. Research and Information Fluency
a. Plan strategies to guide inquiry
b..Locate, organize, analyze, evaluate, synthesize, and ethically use information
from a variety of sources and media

c. Evaluate and select information sources and digital tools based on the appropriateness to specific tasks

d. Process data and report results

4. Critical Thinking, Problem Solving, and Decision Making

c. Collect and analyze data to identify solutions and/or make informed decisions

5. Digital Citizenship

b. Exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity

6. Technology Operations and Concepts

a. Understand and use technology systems

b. Select and use applications effectively and productively

National Geography Standards

1) How to use maps and other geographic representations, geospatial technologies, and spatial thinking to understand and communicate information

2) How to analyze the spatial organization of people, places, and environments on Earth's surface

3) How to apply geography to interpret the present and plan for the future

Geospatial Concepts:

Patterns—Students will describe spatial patterns of high and low HDI.

Association (Correlation) – Students will look for correlations between level of HDI and GDP

Connections – Students will look for connections between colonization (country and length of colonial period) and HDI.

Other Concepts:

Economics of Imperialism: The normal relationship between colonial power and colony is one that economically benefits the colonial power. Colonial powers take raw materials, develop a favorable balance of trade and limit the development of the colony. Students will look to see if there is a connection between colonization and HDI and GDP in those countries.

Career Connection:

The United Nations and other International organization use maps to study global development while focusing on improving human development in developing nations.

Web-based GIS Tools: Students will use the following Web-based GIS Tools: Legend, and Identify

Materials: Students will need access to the computer lab (scheduled well in advance), copies of the student handout and pencils

Prerequisites: Students will need to understand and be able to apply the content specific and GIS vocabulary used in the lesson: Human Development Index, HDI, Gross Domestic Product, Spatial Patterns, Correlation, Demographic Statistics and Hypothesize. Students will need to watch the teacher model using the layers, the legend and the identify tool prior to the lesson. Students will also need to know how to get back to the base map when mistakes are made.

Beginning the Lesson

Anticipatory set: Define GIS and Introduce students to GIS careers with a 6 minute video available on You tube called "GIS Promotional". GIS is a way to apply an interest in geography and maps to a career because it is used in an increasing number of careers.

Developing the Lesson

1. Class will review the relationship of colonial powers to colonies and the lack of development during colonization for most of these countries.

2. The students will be presented with the vocabulary to be used in the lesson.

3. The teacher will demonstrate using active layers, reading the legend and using the information tool to acquire the data for the table.

4. In teacher created pairs the students will complete the student activity.

Concluding the Lesson

The teacher will debrief the lesson with the class and discuss spatial patterns of HDI. What correlations were students able to see between level of HDI and GDP? What correlations if any were there as to who colonized a country and the level of HDI in that country? Is their a correlation of level of HDI with the length of time the country was colonized?

Assessment/Evaluation: The students will primarily be assessed by their completion and accuracy on the student handout. Students will also be assessed through discussion after the activity. Additional evaluation will come on the end of the year test.