

GEO STAC Teachers Guide

Lesson Developer: Tim Rake

Subject Area: French

Grade Level: Seniors, high school

Lesson Description: Students will describe the geodemographics of former French colonies in Africa as defined by the human development index, population densities, birth and death rates, life expectancy. Students will compare the geospatial patterns of data with geospatial data for natural resource reserves on the African continent. Students will use this information to analyze and hypothesize, and/or make predictions about the development and stability (past, present or future) of former French colonies.

Recommended Time to Teach: (minutes)

National Standards:

Technology:

- 1) Research & information fluency: Students apply digital tools to gather, evaluate and use information.
- 2) 2) Critical thinking, problem solving and decision making: Students identify and define authentic problems and significant questions of investigation.

Social Science:

- 1) Students explore complex patterns, interactions and relationships.
- 2) Students analyze cause and effect relationships.

Foreign Language:

- 1) Students demonstrate understanding of the concept of culture through comparisons of the cultures studied and their own.
- 2) Students demonstrate an understanding of the relationship between the practices and perspectives of the culture studied.

Learning Objectives:

- **Geospatial Concepts:**
 - Regions – Students will identify the former French colonies in Africa as a region.
 - Comparison – Students will compare population densities, infant mortality rates, death rates, GDP, life expectancy and HDI for former French colonies with other regions of Africa and the world.

- Patterns – Students will describe the geospatial pattern of low HDI countries and/or countries who show leading indicators of “unhealthy” societies.
- Patterns – Students will describe the geospatial pattern of countries reporting oil reserves in Africa.
- Comparison – Students will compare the geospatial pattern of oil reserves to the geospatial patterns of other demographic data from Africa. They will describe what similarities (or differences) exist.

► **Other Discipline: Social Science**

- Association – Students will discuss the possible relationship between oil reserves (or lack thereof) and other demographic data and speculate as to any cause-and-effect that may explain the data.

Web-based GIS Tools: Students will use Layers, Query, Zoom-in

Materials: Students will need the student instruction sheet, a pencil, a computer terminal with internet access and the political map of Africa with its blank backside provided as an answer sheet.

Prerequisites: Student should have a primer lesson in geospatial technology. Student should also have completed the unit on “France: Metropole” in order to have some basic understanding about life in the former French colonies.

Beginning the Lesson

I will begin the lesson by summarizing briefly some of the themes of the films we have seen and the novel we have read over the last 8 weeks. To engage the students in this lesson I might ask them what they think characterizes these societies in general, in their own words.

Developing the Lesson

To a great extent, the lesson is “developed” in the progression of questions in the student instruction guide. But as they explore the “data” I will circulate among students and ask check for comprehension of questions, as well as questions students about what the layers of geospatial data is telling them.

Concluding the Lesson

I want to conclude the lesson essentially by discussing the very last question I have posed students, a question about analysis and interpretation. It is my hope that our discussion will bring to light some interesting possibilities about the relationships between the data.

Career Connections: Students will be made aware that – just as in this exercise in a language class – GIS technology is technology that is widely used across disciplines and is likely to be

used as a resource for providing knowledge, deepening our understanding and helping us to view the complexity of the world in a very real and visual format, whatever career we might choose..

Assessment/Evaluation: I will assess the learning objectives by reading and providing written feedback on the student answers to questions posed on the student instruction/worksheet. As a final assessment, students will write an essay in response to the question: *“You have studied Francophone culture in Africa through film, novel and now geospatial data. Based on what you know and what you have learned, what are the prospects for these societies to become politically stable and economically prosperous states in the 21st Century. Please use specific examples in support of your argument.”*