

Geography and Art

Life Learning Academy Project-Based Curriculum

Project Title: Turning the World Upside Down

Project Design Team and/or Instructors: Josh Brankman

Subject Area(s): Geography and Art

Grade Level(s): High School Social Studies, 9-10

Project Overview:

This project is designed to introduce students to the art of map making and the complexities of map projections and design. Through selected readings, activities, and a mural project, students gain understanding of how maps are designed and the geo-political issues concerning the various map projections.

Educational Standards Addressed:

Historical and Social Sciences Analysis Skills

Chronological and Spatial Thinking:

1. Students compare the present with the past, evaluating the consequences of past events and decisions and determining the lessons that were learned.
2. Students analyze how change happens at different rates at different times; understand that some aspects can change while others remain the same; and understand that change is complicated and affects not only technology and politics but also values and beliefs.
3. Students use a variety of maps and documents to interpret human movement, including major patterns of domestic and international migration, changing environmental preferences and settlement patterns, the frictions that develop between population groups, and the diffusion of ideas, technological innovations, and goods.
4. Students relate current events to the physical and human characteristics of places and regions.

CA World History and Geography

10.3 Students analyze the effects of the Industrial Revolution in England, France, Germany, Japan, and the United States.

1. Analyze why England was the first country to industrialize.
2. Examine how scientific and technological changes and new forms of energy brought about massive social, economic, and cultural change (e.g., the inventions and discoveries of James Watt, Eli Whitney, Henry Bessemer, Louis Pasteur, Thomas Edison).
3. Describe the growth of population, rural to urban migration, and growth of cities associated with the Industrial Revolution.
4. Trace the evolution of work and labor, including the demise of the slave trade and the effects of immigration, mining and manufacturing, division of labor, and the union movement.
5. Understand the connections among natural resources, entrepreneurship,

labor, and capital in an industrial economy.

10.4 Students analyze patterns of global change in the era of New Imperialism in at least two of the following regions or countries: Africa, Southeast Asia, China, India, Latin America, and the Philippines.

10.10 Students analyze instances of nation-building in the contemporary world in at least two of the following regions or countries: the Middle East, Africa, Mexico and other parts of Latin America, and China.

Expected Student Learning:

Objectives	Outcomes
1. Students will become familiar with the history of map-making and the types of maps used by different people.	1. A) Students will research, using books and the Internet, numerous types of maps and chart their year of production. Students will discuss their maps in classroom discussions focused on potential information made available by the map examples. 1. B) Students will construct maps from memory and by using construction paper.
2. Students will become familiar with the socio-political and economic factors of map projections.	2. Through class discussions and readings, students will be able to identify the possible social, political, and/or economic issues associated with different map projects such as Mercator, Peters, and Robinson, etc.
3. Students will be able to design, plan, and produce a mural-sized map using a non-traditional projection of their choice.	3. Using acrylic paints, overhead projection sheets and projector, permanent markers, and tape, students will paint a map projection on a prominent wall in the school interior.

Project Outline:

- 1) Students read sections from “Seeing Through Maps” book.
- 2) Students research types of maps using the Internet and reference materials and present on their findings.
- 3) Students/class discuss main topics from readings.
- 4) Students attempt to construct maps from memory.
- 5) Students attempt to construct globes out of flat paper sheets.
- 6) Class chooses map projection to use for mural.
- 7) Students produce mural.
- 8) Students present map mural to school at lunchtime/assembly.

Texts and Supplemental Instructional Materials:

- 1) Kaiser, Ward L. and Denis Wood. Seeing Through Maps, ODT. 2001.

Key Assignments:

- 1) Class readings from Ward and Wood book. Focus on Chs 1-4 to begin.
Advanced groups/students/classes can continue on through the end of the book.
- 2) Students spend 1 hour to produce a world map from memory using blank paper.
Students should be encouraged to try, re-try, and focus on labeling as many countries, continents, bodies of water, etc. Students then share out with partners about what they focused on and how well they thought their maps turned out.
- 3) Map construction and conversation regarding the inherent problem with creating flat maps of spherical Earth.
- 4) Mural planning and production.

Maps

Activity #1a

Directions: Now that we've read and discussed a little bit about maps, it's your turn to create the world. In the space below, or on a separate piece of paper of your choice, draw, to the best of your ability, a map of the world. Be sure to label as many features as you can. Remember there are seven continents and lots of countries, bodies of water, mountain ranges, deserts, and cities that may end up on your map.

Maps

Activity 1b

Directions: Now that you've created your map, please answer the following questions about your map.

- 1) What is at the center of your map? Why do you think you might have placed that at the center versus another country/body of water/etc?

- 2) Find a current map of the world in a history book, encyclopedia, or atlas. In what aspects was your map fairly accurate? In what areas was your map most inaccurate?

- 3) In your map, which country did you draw as the largest? Which country did you draw as the smallest? How do you know that you were correct in the size?

- 4) In your map, how did you decide to place the continents in the locations you placed them? In other words, which continents/countries did you place at the "top" of your map? On the "bottom?" Think about the planet Earth. How do we know which direction is North? South? East? West? Are these directions fixed? Can they be changed? How would that affect the map you drew? How would it affect the world map?

Maps

Activity 2

Directions: Using a piece of construction paper, quickly sketch a map of the world on it. Don't worry about labeling bodies of water, countries, etc. Once you have your sketch finished, use the paper to shape it into a globe.

Afterwards, answer the following question:

- 1) What problems arose when you tried to create a globe with your map? What does this suggest about map-making? What is the problem inherent in making flat maps of the world?

Map Mural Planning Guide:

Teachers: Use this guide to plan your map mural project. While each process will be different, these six steps should get classes started in creating their map project.

- 1) After students have worked through the various activities and discussions regarding the different types of maps and map projections, the class should debate the merits of each discussed in Chapters 1-5 of the “Seeing Through Maps” text. By doing so, students should be able to debate the differences between the projections.
- 2) Once the class has debated the various projections, the class should, through a simple voting process, decide on a projection to use for the mural. A list of pros and cons for each aids in this process.
- 3) Once a projection version has been chosen, a clean reproducible copy of the map should be found and photocopied. Using the photocopy, a clear transparency (or set of transparencies) should be produced.
- 4) The next set of class sessions will be used to have students trace the map projection onto the wall using pencils.
- 5) Following, students will spend class periods using black permanent marker to go over the pencil markings, paint countries different colors using acrylic paint, and filling in the bodies of water.
- 6) Finally, students should produce a 5-minute presentation about the map they created to the student body. The presentation may include the pros and cons of the specific map type they used, the geo-political issues concerning maps and how they are displayed, or the history of the type of map.