

USING ABSOLUTE LOCATION TO IMPROVE YOUR MENTAL MAPPING

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Grade Level: 7th

Purpose/Overview: Students will understand how latitude and longitude can assist them in finding specific places. They will be able to apply knowledge of location when organizing information about regions and the people who live in them. They will determine what natural resources are available for the people who live in the regions around the rivers, deserts, seas, mountains, and peninsulas being studied.

National Geography Standards from *Geography for Life*

Geographic Elements & Standards:

The World in Spatial Terms –

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

Places and Regions

4. Physical and human characteristics of places

Oklahoma Academic Standards for the Social Studies:

Grade 7 World Geography: Eastern Hemisphere

7. PALS.1.C.7-9

Literacy Skills Standard 1: The student will develop and demonstrate Common Core Social Studies reading literacy skills.

- C.7. Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.
- C.8. Distinguish among fact, opinion, and reasoned judgment in a text.
- C.9. Analyze the relationship between a primary and secondary source on the same topic.

7.CS1.1-4:

Content Standard 1: The student will analyze data from a geographic perspective using the skills and tools of geography.

1. Cite specific geographic information to support analysis from primary and secondary sources located in texts, documents, newspapers, magazines, journals, political cartoons, and online news sources.
2. Integrate visual information, draw conclusions, and make predictions from geographic data and analyze spatial distribution and patterns by interpreting that data as displayed on globes, graphs, charts, satellite and other forms of visual imagery including data from bar and line graphs, pie charts, thematic maps, population pyramids, climographs, cartograms, contour/relief maps, GIS systems, and diagrams.
3. Apply the concept of scale, distance, direction, relative location, absolute location, and latitude and longitude.

4. Integrate visual information and apply the skill of mental mapping of the political and physical features of Earth's surface and to organize information about people, places, and environments.

7.CS3.1

Content Standard 3: The student will examine the interactions of physical systems that shape the patterns of Earth's surface in the Eastern Hemisphere.

1. Integrate visual information to identify on a physical map and describe the major landforms and bodies of water including
 - A. Landforms – the Iberian, Scandinavian, and Indochina Peninsulas; the Urals, Pyrenees, Alps, and Himalayan Mountain Ranges; the Sahara, Kalahari, and Gobi Deserts; and the Great Rift Valley.
 - B. Bodies of water – Danube, Volga, Nile, Congo, Niger, Tigris, Euphrates, Indus, Ganges, and Yangtze Rivers; Mediterranean, Arabian and North Seas; Persian Gulf; Bay of Bengal; Strait of Gibraltar; Atlantic, Arctic, Indian, Pacific, and the Southern Oceans.

Geographic Themes: Location, Place, Region, Environment and Society

Objectives:

1. Students will determine the area and latitude and longitude of specific land areas and bodies of water. For rivers they will determine lengths in miles, and for mountain ranges they will determine the range lengths and the heights of important mountains.
2. Students will locate the natural resources along the rivers, seas, and landforms which the local people are able to utilize.
3. Students will compare the various landforms and bodies of water to those with which they are familiar.

Materials:

Computer, LCD projector (or equivalent), and Internet access

Large wall map

Desk maps of the world (World Physical Map Maker Kit web site in **Resources**)

Atlases

Rulers

Note Taking Chart (included with lesson, enough copies for each student in class)

Absolute Location Data Sheet (at end of lesson, enough copies for each student in class)

Notebook paper or student journals

Sticky flags or small sticky notes

Copy paper

List of locations for students to research

Time Frame: Approximately seven to eight 60-minute class periods

Procedures:

Days 1-2 -- Ask students what latitudes are, and how and from where they are measured. Ask what longitudes are, and how and from where they are measured. Review absolute location and how to find it on a map. Give students the list of places on the Absolute Location Data Sheet to find in the atlas index and list in their notebooks. You may prefer for students to do this part of the lesson individually, in pairs, or in small groups. After they have had time to locate these places,

instruct students to present their answers. Correct as necessary when there are errors by having all students look up each place as you go along.

Once all places have been recorded in their students' notebooks, ask why some places were easier to find than others. Ask what they noticed about an easy-to-find location and its landforms or water regions nearby.

Days 3-4 -- Divide the class into manageable groups based on your class size. Assign each group at least one river, mountain range or desert, a peninsula, and a sea. Using a map or atlas and the absolute locations discussed earlier in the lesson, instruct students to find each body of water and landform to label on their desk maps.

Students may use any part of the atlas to assist in the next section. They may also use any additional resources you have available, including the computer lab or library. Students may answer each item on sticky notes or index cards. They will need to answer the following items and chart their answers:

1. Describe the location of your landforms and bodies of water. They need to be as specific as possible. Do they cross international boundaries? If so, which ones?
2. Describe the landforms and bodies of water as specifically as possible.
3. What natural resources would you expect to find in these areas? If students are stuck, refer them to the front part of the atlas where there are specific maps for things, such as natural vegetation, ecoregions, agricultural regions, and minerals.
4. How do you think people in these areas make their living?

Days 5-7 -- Each group will give a presentation about its specific locations. As they present, a group member may go to the large wall map and label each place being discussed. If your map is fairly small then allow them to use string and something to affix, either sticky notes or neatly written index cards on the wall beside the map. You could also have one desk map for each group if space is not an issue on your walls. If any groups are assigned the same locations, have them determine who will present which parts so there is no oral repetition.

Day 8 -- Students will take their information and make a 12 section game board. For each section there will be four pieces of information, one on each side of the section. One example of this is: Nile River is written on the bottom of one section, Africa will be written on the section directly under it so they match up. When they are cut apart, these pieces will be shuffled and students will switch their pieces for someone else to put back together.

Written Assignment:

Write a Summary Essay: Select two completely different land areas and two different bodies of water. Compare them in terms of area, physical description, location in the world, and available natural resources. Students may use their notes and maps for this assignment.

Assessment Options:

1. Informal Assessment: Teacher observation of student participation in group and whole-class discussions, individual and group note taking on Note Taking Charts, and 12 section card accuracy.

2. Formal Assessment: Written Summary Essay assignment.

Resources:

What is absolute location? An easy definition for the term.

<http://geography.about.com/od/geographyglossary/a/ggabsolutelocat.htm>

What is latitude?

<http://www.bing.com/search?q=what%20is%20latitude%3F&qsn&form=QBRE&pq=what%20is%20latitude%3F&sc=8-17&sp=-1&sk=&cvid=85f1b383d8a44153888661369c6a6453>

What is longitude?

<http://geography.about.com/od/locateplacesworldwide/a/longitude.htm>

What are latitude and longitude?

<http://whatis.techtarget.com/definition/latitude-and-longitude>

World Physical Map Maker Kit -- Reproducible desktop kit in four pages

http://education.nationalgeographic.com/education/maps/mapmaker-kit-world-physical/?ar_a=1

Latitude and Longitude Finder -- Type in a location and the absolute location is given

http://www.worldatlas.com/aatlas/latitude_and_longitude_finder.htm

Special Needs/Enrichment Activities: For special needs students, give more time to locate the information required for the Note Taking Charts or choose fewer locations to focus on for this particular lesson. Enrichment can be in the form of allowing students to illustrate the places they compared in their essays.

Absolute Location Data Sheet
for use with
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TO IMPROVE YOUR MENTAL MAPPING
Lesson Plan

Landforms

Peninsulas

Iberian

1. Spain
2. Portugal

Scandinavian

1. Norway
2. Sweden
3. Finland

Indochina

1. Viet Nam
2. Laos
3. Cambodia

Mountain Ranges

Urals

Pyrenees

Alps

Himalayas

Deserts

Sahara

Kalahari

Gobi

Great Rift Valley

Syria

Lebanon

Dead Sea

Gulf of Aqaba

Red Sea

Gulf of Aden

Ethiopia

Kenya

Tanzania

Malawi

Mozambique

Congo

Bodies of Water

Rivers

Danube

Volga

Nile

Congo

Niger

Tigris

Euphrates

Indus

Ganges

Yangtze

Seas

Mediterranean

Arabian

North

Gulfs, Bays, Straits

Persian Gulf

Bay of Bengal

Strait of Gibraltar

Oceans

Atlantic

Arctic

Indian

Pacific

Southern