

Unit: Essentials

❖ Cartography (Maps)

Social Studies Skills Standards:

WG.21.A Analyze and evaluate the validity, and utility of multiple sources of geographic information such as primary and secondary sources, aerial photographs, and maps.

WG.21.C Create and interpret different types of maps to answer geographic questions, infer relationships, and analyze change.

Essential Question:

1. How can I use maps to understand and represent geographic information?

➤ Map Uses

- Determine relationships
 - How different features of a place relate to one another.
- Analyze Changes

➤ Features of a Map

- Title (most overlooked)
- Legend
- Scale
- Compass Rose
- Grid/Longitude & Latitude
 - Equator/Prime Meridian
 - Hemispheres

➤ Types of Maps

- Physical
- Political
- Historical
- Thematic
- Resources
- Production/Products
- Population Density

❖ Physical Features

Readiness Standards:

WG.9.A Identify physical and/or human factors such as climate, vegetation, language, trade networks, political units, river systems, and religion that constitute a region.

Supporting Standards:

WG.9.B Describe different types of regions, including formal, functional, and perceptual regions.

Social Studies Skills Standards:

WG.21.B Locate places of contemporary geopolitical significance on a map.

WG.21.C Create and interpret different types of maps to answer geographic questions, infer relationships, and analyze change.

Essential Question:

1. What features of the Earth are necessary for me to continue my understanding of the world and it's history.

➤ Regions

- Formal Regions (based on a common property/characteristic) usually a single characteristic such as low rainfall such as the Kalahari Desert or landforms such as the Scottish Highlands.
- Physical Regions (based on physical characteristics) landforms, soils, climate, vegetation or animal life.
 - Regions in Texas
- Cultural Regions (based on cultural traits such as a common language, religion, political system, foods, customs or participation in trade networks; or some combination of these).
- Functional Regions (based on common purpose usually centered on hub such as a trading center or city).
- Perceptual Region (based on widely held attitudes or feelings toward a certain area).

➤ Antarctica

- South Pole
- Ross Ice Shelf

➤ Australia/Oceania

- Great Barrier Reef
- New Zealand

➤ Asia

- East & Southeast Asia
 - China
 - ◆ Hwang Ho (Yellow) River
 - ◆ Yangtze River
 - ◆ Gobi Desert

- ◆ Most populous country, historically isolated by physical barriers, Unified government for most of history, Communist government today, a major economic power world-wide
- Japan
 - ◆ Mt. Fuji
- Other
 - ◆ Mekong River
- South & Southwest Asia
 - Indian Sub-continent
 - Monsoons
 - Himalayan Mountains
 - Ganges River
 - Indus River
 - Red Sea
 - Suez Canal
 - Tigris & Euphrates Rivers
 - Persian Gulf
- Russia and Central Asia
 - Ural Mountains
 - Siberia
 - Steppes
 - Former Soviet Union, Tsars before that, Mongol rule before that; Orthodox Christianity
- Europe
 - Balkan Mountains
 - Caucasus Mountains
 - Danube River
 - Black Sea
 - Mediterranean Sea
 - Rhine River
 - Apennine Mountains
 - Pyrenees Mountains
 - Alps Mountains
 - High living standards, mostly Christian, variety of ethnic groups
- Africa
 - Sahara Desert
 - Atlas Mountains
 - Nile River
 - Suez Canal
 - Great Rift Valley
 - Zambezi River

- Niger River
- Congo River
- Lake Victoria
- Sub-Saharan Africa: many different ethnic groups, languages and religions
- North Africa: nomadic history, ethnically Arab, religiously Muslim
- South America
 - Andes Mountains
 - Amazon River
 - Amazon Rain Forrest
 - Orinoco River
 - Pampas
 - Rio de la Plata
 - Mainly Spanish and Portuguese language and Roman Catholic religion.
- North America
 - Great Lakes
 - St. Lawrence River
 - Mississippi River
 - Great Plains
 - Rocky Mountains
 - Appalachian Mountains
 - West Indies
 - Caribbean Sea
 - Central America
 - Panama Canal
 - Influenced heavily by Europe

❖ Earth's Processes

Readiness Standards:

WG.3.B Describe the physical processes that affect the environments of regions, including weather, tectonic forces, erosion, and soil-building processes.

WG.4.A Explain how elevation, latitude, wind systems, ocean currents, position on a continent, and mountain barriers influence temperature, precipitation, and distribution of climate regions.

Supporting Standards:

WG.3.A Explain weather conditions and climate in relation to annual changes in Earth-Sun relationships.

WG.3.C Examine the physical processes that affect the lithosphere, atmosphere, hydrosphere, and biosphere

WG.4.B Describe different landforms and the physical processes that cause their development.

WG.4.C Explain the influence of climate on the distribution of biomes in different regions.

Social Studies Skills Standards:

WG.21.B Locate places of contemporary geopolitical significance on a map.

WG.21.C Create and interpret different types of maps to answer geographic questions, infer relationships, and analyze change.

Essential Question:

1. What forces have shaped the Earth's landforms, climate and plant life?

➤ Atmosphere and Climate

- Latitude is Primary element
 - Earth's Tilt
 - Earth/Sun Relationship
 - High (polar), Mid (temperate) and Low (tropical) Latitude Climates
- Climate is weather over time
 - Weather consists of temperature, humidity, precipitations and winds
- Wind Currents
 - Trade Winds
 - Easterlies
 - Doldrums
 - Monsoons
- Ocean Currents
 - Gulf Stream
 - El Nino
- Rain Shadow Effect
- Vertical Climates

➤ Lithosphere

- Landforms (mountain, plateau, valley, canyon, plain, hill, loess, glacier)
- Erosion
 - Grand Canyon
- Deposition
- Weathering (caused by wind, water or ice)
- Soils
 - Top Soil
 - Soil Quality

- Tectonic Plate Movement
 - Mantle
 - Gravity (heavier plates pulled below lighter ones)
 - Mountain Building
 - ◆ Collision of continental plates (Himalayans) or subduction of oceanic and continental plates (Andes)
 - Rift Valleys (separation of plates)
 - Volcanoes
 - ◆ Magma
 - ◆ Vesuvius
 - ◆ Krakatoa
 - ◆ Hawaiian Islands
 - Earthquakes
 - ◆ Tsunami
 - ◆ Faults
 - ◆ Ring of Fire
- Hydrosphere
 - Water Bodies (Ocean, Sea, Lake, River, Straight, Channel, Canal, Estuary)
 - Water Cycle
 - Evaporation
 - Condensation
 - Precipitation
 - Run off
 - Oceans
 - Currents
 - ◆ Gulf Stream
 - Tides (Moon)
 - Atlantic
 - Pacific
 - Arctic
 - Indian
 - South
- Biomes
 - Grasslands
 - Savannas or Steppes
 - Deserts
 - Sahara
 - Tundra
 - Tropical Rainforest
 - Canopy

- Temperate Deciduous Forrest
- Mediterranean Climate

❖ Human-Environment Interaction

Readiness Standards:

WG.8.A Compare ways that humans depend on, adapt to, and modify the physical environment, including the influences of culture and technology.

WG.8.B Describe the interaction between humans and the physical environment and analyze the consequences of extreme weather and other natural disasters such as El Niño, floods, tsunamis, and volcanoes.

Supporting Standards:

WG.8.C Evaluate the economic and political relationships between settlements and the environment, including sustainable development and renewable/non-renewable resources.

Social Studies Skills Standards:

WG.23.B Use case studies and GIS to identify contemporary challenges and to answer real-world questions.

Essential Question:

1. How do people modify or adapt to their physical environment.

➤ Modification of the Environment

- Energy Use
 - Oil recovery
 - Mining
- Dams/Canals
 - Flood Control
 - Hydroelectric Power
 - Hover Dam
 - Three Gorges Dam
 - Suez Canal
 - Panama Canal
 - Grand Canal (China)
- Urban Growth
 - Link to industrialization
- Agriculture

- Agricultural revolution and the Fertile Crescent
- Global Warming
 - Greenhouse Gases
- Response to Natural Disasters
 - Seismic Events
 - Earthquakes (Haiti 2010)
 - Volcanoes
 - Tsunamis (Indian Ocean 2004)
 - Extreme Weather
 - Hurricanes
 - ◆ Katrina 2005
 - Tornadoes
 - ◆ Tornado Ally
 - El Nino/El Nina
 - Graphic Information Systems (GIS)
- Adaptation to the Environment
 - Climate
 - Growing Seasons
 - ◆ Monsoons
 - Impact on food, clothing and lifestyle
 - Landforms
 - People tend to settle in flat, fertile valleys and plains
 - Bodies of Water
 - Gulf Stream
 - Importance of fresh water
 - Early Riverine civilizations such as Egypt (Nile) and Mesopotamia (Tigris & Euphrates)
 - Plant and Animal Life
 - Hunting and gathering
 - Types available for domestication
 - Grasslands for grazing
- Sustainable Development
 - Renewable vs. Non-renewable resources
 - Using Resources Responsibly
 - Dangers
 - Destruction of Habitats
 - Depletion of Resources
 - Pollution
 - ◆ Climate Change
 - ◆ Acid Rain
 - ◆ Greenhouse Gases