**Area of Learning: SOCIAL STUDIES — Physical Geography**

**BIG IDEAS**

- Incorporating data from a variety of sources allows us to better understand our globally connected world.
- Natural processes have an impact on the landscape and human settlement.
- Interactions between human activities and the atmosphere affect local and global weather and climate.

**Learning Standards**

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<tr>
<th>Curricular Competencies</th>
<th>Content</th>
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<tr>
<td>Students are expected to be able to do the following:</td>
<td>Students are expected to know the following:</td>
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<tr>
<td>• Use geographic inquiry processes and geographic literacy skills to ask questions; gather, interpret, and analyze data and ideas from a variety of sources and spatial/temporal scales; and communicate findings and decisions (evidence and interpretation)</td>
<td>• structure of, feedback within, and equilibrium of natural systems</td>
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<td>• Assess the significance of places by identifying the physical and/or human features that characterize them (sense of place)</td>
<td>• distinguishing features of the atmosphere, hydrosphere, cryosphere, lithosphere, biosphere, and anthroposphere</td>
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<td>• Assess the interpretations of geographic evidence after investigating points of contention, reliability of sources, and adequacy of evidence (evidence and interpretation)</td>
<td>• connections and interactions between the spheres</td>
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<td>• Draw conclusions about the variation and distribution of geographic phenomena over time and space (patterns and trends)</td>
<td>• features and processes of plate tectonics and their effects on human and natural systems</td>
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<td>• Evaluate how particular geographic actions or events affect human practices or outcomes (geographical value judgments)</td>
<td>• features and processes of gradation and their effects on human and natural systems</td>
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<td>• Evaluate features or aspects of geographic phenomena or locations to explain what makes them worthy of attention or recognition (geographical importance)</td>
<td>• natural disasters and their effects on human and natural systems</td>
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<td>• Identify and assess how human and environmental factors and events influence each other (interactions and associations)</td>
<td>• features and processes of Sun–Earth interactions and resulting patterns of climate, landscapes, and ecosystems</td>
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<td>• Make reasoned ethical judgments about controversial actions in the past and/or present, and determine whether we have a responsibility to respond (geographical value judgments)</td>
<td>• climate, weather, and interactions between humans and the atmosphere</td>
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<td>• characteristics of global biomes, including climate, soil, and vegetation</td>
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<td>• features and processes of the anthroposphere and their effects on natural systems.</td>
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<td>• natural resources and sustainability</td>
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Use geographic inquiry processes and geographic literacy skills to ask questions; gather, interpret, and analyze data and ideas from a variety of sources and spatial/temporal scales; and communicate findings and decisions (evidence and interpretation):

**Sample activities:**
- Undertake a field site visit to compare and contrast different plant communities.
- Use topographic maps to understand modern terrain patterns associated with historical events (e.g., glaciation).
- Use satellite imagery of cloud cover to look at atmospheric circulation patterns.
- Use GIS to map flood potential.
- Use air photos to view mountainous environments in order to examine life zones and hydrological patterns and processes.
- Use regional weather charts to explain current and near future local weather conditions.
- Develop an understanding of the concept of spatial scale by examining an issue at three scales (e.g., how is a changing climate impacting local water use, regional precipitation patterns, and global distribution of moisture?).

**Assess the significance of places by identifying the physical and/or human features that characterize them (sense of place):**

**Sample activities:**
- Identify unique characteristics that help to make a place stand out, and determine how they were formed (e.g., river valleys and flood plains, volcanic activity).
- Develop boundaries on a map to delineate areas of regional differentiation (e.g., climate regions).

**Assess the interpretations of geographic evidence after investigating points of contention, reliability of sources, and adequacy of evidence (evidence and interpretation):**

**Sample topics:**
- environmental issues around:
  - resource development
  - urban sprawl
  - infrastructure development in the form of dams or pipelines

**Draw conclusions about the variation and distribution of geographic phenomena over time and space (patterns and trends):**

**Key topics:**
- Recognize patterns – geographic or environmental phenomena that repeat over time and space.
- Recognize trends – variations in the consistency of a natural phenomenon in a particular setting over a period of time.

**Sample activities:**
- Research the Ring of Fire, which encircles the Pacific, and how it has affected life in coastal British Columbia.
- Examine the impact of urban growth on soil erosion, the water cycle, agricultural land.
- Study the location of the world’s jungles or deserts: why are they there, how long have they been there, and how are they currently changing?
- Research how mountains are formed and where they are found.
• Evaluate how particular geographic actions or events affect human practices or outcomes (geographical value judgments):
  
  Sample topic:
  - climate change and rising sea levels, and how they affect the planet and people in different regions

• Evaluate features or aspects of geographic phenomena or locations to explain what makes them worthy of attention or recognition (geographical importance):
  
  Sample topics:
  - landforms and how they occurred (e.g., glaciated landscapes, volcanic features, stream drainage patterns, deserts)
  - weather patterns, and possible changes to them
  - extreme weather (hurricanes, tornadoes, hail, ice storms) and distribution of these events

• Identify and assess how human and environmental factors and events influence each other (interactions and associations):
  
  Sample topics:
  - human modification of the lithosphere for resource extraction, settlement, agriculture
  - human modification of the atmosphere by changing the rate of exchange of gases (e.g., release of CO2 through burning of fossil fuels)
  - human modification of the biosphere by hunting, domesticating, bio-altering, and geographically relocating other species
  - storm protection of coastal cities by wetlands
  - settlement patterns associated with access to natural resources (e.g., risk of farming on a flood plain in rich soils developed by river flooding)
  - global climate change and ocean acidification
  - deforestation
  - coral reef bleaching
  - depletion of ozone layer
  - global atmospheric circulation patterns
  - acid precipitation
  - wild species at risk
  - drainage patterns, agriculture, and coastal dead zones
  - weather modification

• Make reasoned ethical judgments about controversial actions in the past and/or present, and determine whether we have a responsibility to respond (geographical value judgments):
  
  Key questions:
  - How much responsibility do we have for the environment?
  - Should people sacrifice some of their standard of living to halt global climate change?
  - Can the oceans survive human impacts?
  - What are the reasons for and against limiting natural resource extraction? Do you think we should limit extraction?