**Area of Learning: SOCIAL STUDIES — Physical Geography Grade 12**

**BIG IDEAS**

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| 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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| **Curricular Competencies** | **Content** |
| *Students are expected to be able to do the following:*   * **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)** * **Assess the significance of places by identifying the physical and/or human features that characterize them (sense of place)** * **Assess the interpretations of geographic evidence after investigating points of contention, reliability of sources, and adequacy of evidence (evidence and interpretation)** * **Draw conclusions about the variation and distribution of geographic phenomena over time and space (patterns and trends)** * **Evaluate how particular geographic actions or events affect human practices or outcomes (geographical value judgments)** * **Evaluate features or aspects of geographic phenomena or locations  to explain what makes them worthy of attention or recognition (geographical importance)** * **Identify and assess how human and environmental factors and events influence each other (interactions and associations)** * **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)** | *Students are expected to know the following:*   * structure of, feedback within, and equilibrium of  natural systems * distinguishing features of the atmosphere, hydrosphere, cryosphere, lithosphere, biosphere, and anthroposphere * connections and interactions between the spheres * features and processes of plate tectonics and their effects on human and natural systems * features and processes of gradation and their effects  on human and natural systems * natural disasters and their effects on human and  natural systems * features and processes of Sun–Earth interactions and resulting patterns of climate, landscapes, and ecosystems * climate, weather, and interactions between humans  and the atmosphere * characteristics of global biomes, including climate, soil,  and vegetation * features and processes of the anthroposphere and their effects on natural systems. * natural resources and sustainability |

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| **SOCIAL STUDIES – Physical Geography Curricular Competencies – Elaborations Grade 12** |
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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? |