

- Consider social, ethical, and environmental implications of the findings from their own and others' investigations
- Critically analyze the validity of information in secondary sources and evaluate the approaches used to solve problems
- Communicate scientific ideas, claims, information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations
- Express and reflect on a variety of experiences and perspectives of place.
- Contribute to finding solutions to problems at a local and/or global level through inquiry
- Construct, analyze and interpret graphs (including interpolation and extrapolation), models and/or diagrams
- Use knowledge of scientific concepts to draw conclusions that are consistent with evidence
- Analyze cause-and-effect relationships

## Social studies 9

**Big Idea :** The physical environment influences the nature of political, social, and economic change.

### Content:

physiographic features of Canada and geological processes

- connections between Canada's natural resources and major economic activities
- Compare and contrast physical features and natural resources in different regions of Canada
- Role-play negotiations between a wide range of stakeholders involved in the decision to build a new mine or oil pipeline
- What effect has the physical geography of Canada had on Canadian and regional identity?
- What perspectives do different groups (e.g., environmental groups, people employed in the forest industry, First Peoples, urban and rural populations) have on the use of natural resources?

### Competencies:

- Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas; and communicate findings and decisions
- Make reasoned ethical judgments about actions in the past and present, and determine appropriate ways to remember and respond (ethical judgment)

## Sciences 10

### Big Idea :

Energy is conserved, and its transformation can affect living things and the environment.

### Content:

- practical applications and implications of chemical processes , including First Peoples knowledge.
  - semiconductors, resource extraction (e.g., ore, fracking), pulp and paper chemistry, food chemistry, corrosion/prevention, tanning, traditional medicines, phytochemistry, pharmaceuticals, environmental remediation, water quality, oil spill cleanup
- nuclear energy
  - positive and negative impacts, including environmental, health, economic
- local and global impacts of energy transformations
  - pollution, habitat destruction, carbon dioxide output
- mechanisms for the diversity of life:
  - artificial selection in agriculture (e.g., monoculture, polyculture, food sustainability)

### Competencies:

- Seek and analyze patterns, trends, and connections in data, including describing relationships between variables (dependent and independent) and identifying inconsistencies
- Construct, analyze, and interpret graphs (including interpolation and extrapolation), models, and/or diagrams
- Analyze cause-and-effect relationships
- Demonstrate an awareness of assumptions, question information given, and identify bias in their own work and secondary sources
- Exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations and to evaluate claims in secondary sources
- Consider social, ethical, and environmental implications of the findings from their own and others' investigations
- Critically analyze the validity of information in secondary sources and evaluate the approaches used to solve problems
- Contribute to care for self, others, community, and world through individual or collaborative approaches
- Contribute to finding solutions to problems at a local and/or global level through inquiry
- Communicate scientific ideas, claims, information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations

## Social Studies 10

Big idea:The development of political institutions is influenced by economic, social, ideological, and geographic factors.

### Content:

- environmental, political, and economic policies:
  - environmental issues, including climate change, renewable energy, overconsumption, water quality, food security, conservation
  - stakeholders (e.g., First Peoples; industry and corporate leaders; local citizens; grassroots movements; special interest groups, including environmental organizations)
  - other considerations in policy development, including cultural, societal, spiritual, land use, environmental social welfare programs (e.g., health care, education, basic income)

- national programs and projects (e.g. national climate strategy, including carbon pricing and ending of coal-fired electricity generation)

#### Competencies:

- Use Social Studies inquiry processes and skills to ask questions; gather, interpret, and analyze ideas and data; and communicate findings and decisions
- Assess the justification for competing accounts after investigating points of contention, reliability of sources, and adequacy of evidence, including data (evidence)

### Entrepreneurship and marketing 10

Big idea: Social, ethical, and sustainability considerations impact design and decision making.

#### Content:

- ethical marketing strategies

#### Competencies:

- Critically analyze and prioritize competing factors (social, ethical, and sustainable) to meet community needs for preferred futures.
- Evaluate a variety of materials for effective use and potential for reuse, recycling, and biodegradability
- Critically evaluate the success of the product, and explain how it makes a contribution to people and/or the environment
- Evaluate impacts (personal, social, and environmental) including unintended negative consequences, of choices made about technology use
- Evaluate the influences of land, natural resources, and culture on the development and use of tools and technologies

### Culinary arts & Food studies 10

Big idea: Social, ethical, and sustainability considerations impact the culinary arts

#### Content:

- First Peoples food protocols, including land stewardship, harvesting/gathering, food preparation and/or preservation, ways of celebrating, and cultural ownership
- food products available locally via agriculture, fishing, and foraging, and their culinary properties

#### Competencies:

- Explore the impacts of culinary decisions on social, ethical, and sustainability considerations
- Evaluate the influences of land, natural resources, and culture on the development and use of culinary ingredients, tools, and technologies

### Family and Society 10

Big idea: Social, ethical, and sustainability considerations impact service design for individuals, families, and groups.

#### Competencies:

- Analyze competing factors (social, ethical, and sustainable) to meet individual, family, and community needs for preferred futures.
- Evaluate the influences of social, cultural, and environmental (for example: land, natural resources) conditions on the development and use of tools and technologies

## Chemistry 11

### Content:

- green chemistry
  - development of sustainable processes and technologies that reduce negative impacts on the environment (e.g., reducing toxicity, designing benign solvents, increasing energy efficiency)

### Competencies:

- Exercise a healthy, informed skepticism and use scientific knowledge and findings to form their own investigations to evaluate claims in primary and secondary sources
- Consider social, ethical, and environmental implications of the findings from their own and others' investigations
- Critically analyze the validity of information in primary and secondary sources and evaluate the approaches used to solve problems
- Assess risks in the context of personal safety and social responsibility
- Contribute to care for self, others, community, and world through individual or collaborative approaches
- Co-operatively design projects with local and/or global connections and applications
- Contribute to finding solutions to problems at a local and/or global level through inquiry
- Implement multiple strategies to solve problems in real-life, applied, and conceptual situations
- Communicate scientific ideas and information, and perhaps a suggested course of action, for a specific purpose and audience, constructing evidence-based arguments and using appropriate scientific language, conventions, and representations

## Earth Sciences 11

Big idea: Earth materials are changed as they cycle through the geosphere and are used as resources, with economic and environmental implications.

### Content:

- economic and environmental implications of geologic resources within B.C. and globally
  - economic feasibility (e.g., price, concentration, accessibility, environmental concerns)
  - exploration methods (e.g., use of geochemical and geophysical data, field work, remote sensing, mapping, drilling)
  - extraction methods (e.g., open-pit versus underground mining, fracking of oil and gas reservoirs, methods of concentrating and refining ore minerals and fossil fuels)
  - site remediation (e.g., government regulations, failed tailings ponds, acid rock drainage, land reclamation)
- evidence of climate change
  - both historical and recent (i.e., the last 100 years) climate change (e.g., ice core data, deep sea sediments, First Peoples knowledge)
- First Peoples knowledge of climate change and interconnectedness as related to environmental systems