

Curriculum Connections Overview: Air Quality



Metro Vancouver's K-12 School and Youth Leadership Programs align strongly with the BC curriculum and provide support and resources for teachers, students, and youth leaders to explore sustainability concepts and topics. Find out more at metrovancouver.org/school-programs.

Science

Big Ideas

Content

GRADE 1	Observable patterns and cycles occur in the local sky and landscape	<ul style="list-style-type: none"> The knowledge of First Peoples: Shared First Peoples knowledge of the sky, Local First Peoples knowledge of the local landscape, animals and plants, Local First Peoples understanding and use of seasonal rounds Local patterns that occur on Earth and in the sky
GRADE 4	All living things sense and respond to their environment Energy can be transformed	<ul style="list-style-type: none"> Biomes as large regions with similar environmental features Phases of matter The effect of temperature on particle movement Energy has: various forms, is conserved
GRADE 5	Earth materials change as they move through the rock cycle and can be used as natural resources	<ul style="list-style-type: none"> First Peoples concepts of interconnectedness in the environment The nature of sustainable practices around BC's resources First Peoples knowledge of sustainable practices
SCIENCE 9	The biosphere, geosphere, hydrosphere, and atmosphere are interconnected, as matter cycles and energy flows through them	<ul style="list-style-type: none"> The effects of solar radiation on the cycling of matter and energy Matter cycles within biotic and abiotic components of ecosystems Sustainability of systems First Peoples knowledge of interconnectedness and sustainability
SCIENCE 10	Energy is conserved, and its transformation can affect living things and the environment	<ul style="list-style-type: none"> Transformation of energy Local and global impacts of energy transformations from technologies
EARTH SCIENCE 11	The transfer of energy through the atmosphere creates weather, and this transfer is affected by climate change The distribution of water has a major influence on weather and climate	<ul style="list-style-type: none"> Changes in the composition of the atmosphere due to natural and human causes Weather as the interaction of water, air, and energy transfer Solar radiation interactions and impacts on the energy budget Evidence of climate change First Peoples knowledge of climate change and interconnectedness as related to environmental systems
ENVIRONMENTAL SCIENCE 11	Changing ecosystems are maintained by natural processes	<ul style="list-style-type: none"> Abiotic characteristics: aquatic, atmospheric, edaphic Human actions and their impact on ecosystem integrity First Peoples ways of knowing and doing Resource stewardship
ENVIRONMENTAL SCIENCE 12	Human activities cause changes in the global climate system	<ul style="list-style-type: none"> Changes to climate systems Impacts of global warming Mitigation and adaptations

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Social Studies

Big Ideas

Content

GRADE 1	We shape the local environment, and the local environment shapes who we are and how we live Healthy communities recognize and respect the diversity of individuals and care for the local environment	<ul style="list-style-type: none"> Relationships between a community and its environment Roles, rights, and responsibilities in the local community Natural and human-made features of the local environment
GRADE 2	Local actions have global consequences, and global actions have local consequences	<ul style="list-style-type: none"> Relationships between people and the environment in different communities Rights and responsibilities of individuals regionally and globally Roles and responsibilities of regional governments
GRADE 6	Complex global problems require international cooperation to make difficult choices for the future	<ul style="list-style-type: none"> The urbanization and migration of people
SOCIAL STUDIES 8	Human and environmental factors shape changes in population and living standards	<ul style="list-style-type: none"> Changes in population and living standards
SOCIAL STUDIES 10	The development of political institutions is influenced by economic, social, ideological, and geographic factors	<ul style="list-style-type: none"> Government, First Peoples governance, political institutions, and ideologies Environmental, political, and economic policies Domestic conflicts and cooperation International conflicts and cooperation
HUMAN GEOGRAPHY 12	Demographic patterns and population distribution are influenced by physical features and natural resources Human activities change landscapes in a variety of ways A geographic region can encompass a variety of physical features and human interactions	<ul style="list-style-type: none"> Relationships between cultural traits, use of physical space, and impacts on the environment Relationship between First Peoples and the environment Global agricultural practices Industrialization, trade and natural resource demands Factors behind increased urbanization and its influence on societies and the environment
PHYSICAL GEOGRAPHY 12	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	<ul style="list-style-type: none"> Structure of, feedback within, and equilibrium of natural systems Distinguishing features (and interactions between) the atmosphere, hydrosphere, cryosphere, lithosphere, biosphere, and anthroposphere Features and processes of gradation and their effects on human and natural systems Features and Sun-Earth interactions and resulting patterns of climate, landscapes, and ecosystems Climate, weather, and interactions between humans and the atmosphere
URBAN STUDIES 12	Decision making in urban and regional planning requires balancing political, economic, social, and environmental factors Urban planning decisions and other government policies can dramatically affect the overall quality of life in cities	<ul style="list-style-type: none"> Functions of local and regional government Urban planning and urban design Decision making in the planning of cities and regions Contemporary issues in urban studies