

## Activities and Curriculum-based Outcomes for School Group Visits

### Activity: Beach Tour

*The following are curriculum-based learning outcomes which may be applied to a beach tour:*

- Primary, 1, 2 and 3: identify and describe parts of plants and their general function; show interest in and curiosity about objects and events within the immediate environment; willingly observe, question and explore; consider their observations and their own ideas when drawing a conclusion; work with others in exploring and investigating; be sensitive to the needs of other people, other living things, and the local environment; show concern for their safety and that of others in carrying out activities & using materials.
- Grades 4 and 5: identify questions to investigate the types of plants and/or animals at a local habitat using the terms habitat, population, and community; examine and investigate, using various methods and questions, local habitats and their associated populations of plants and animals; identify their own and their families' impact on habitats and describe how personal actions help conserve habitats; demonstrate respect for the local environment; investigate rocks and minerals and record questions and observations; relate characteristics of rocks and minerals to their uses; demonstrate and record a variety of methods of weathering and erosion, including human impact on the landscape; identify and describe rocks that contain records of Earth's history; describe natural phenomenon that cause rapid and significant changes to the landscape; be sensitive to and develop a sense of responsibility for the welfare of other people, other living things, and the environment; show concern for their safety and that of others in planning and carrying out activities and in choosing using and materials; become aware of potential dangers.
- Grade 6: classify animals as vertebrates or invertebrates and compare the characteristics of mammals, birds, reptiles, amphibians and fishes; classify common arthropods using a variety of sources; propose questions and gather information about the relationship among the structural features of plants and animals in their environments and identify the positive and negative impacts of humans on these resources; classify and compare the adaptations of closely related animals living in their local habitat and in different parts of the world and discuss reasons for any differences; identify changes in animals over time and research and model the work of scientists.
- Grade 7: classify rocks on the basis of their characteristics and method of formation; explain various ways in which rocks can be weathered; identify, delimit, and investigate questions related to a local ecosystem; organize and record data collected in an investigation of an ecosystem; describe interactions between biotic and abiotic factors in an ecosystem; appreciate the role and contribution of science and technology in our understanding of the world; work collaboratively in carrying out investigations as well as in generating and evaluating ideas; be sensitive and responsible in maintaining a balance between the needs of humans and a sustainable environment; project, beyond the personal, consequences of proposed actions; show concern for safety in planning, carrying out, and reviewing activities; become aware of the consequences of their actions.
- Grade 8: explain how waves and tides are generated and how they interact with shorelines; describe processes of erosion and deposition that result from wave action and water flow; describe factors that affect glaciers and polar icecaps, and describe their consequent effects on the environment; appreciate the role and contribution of science and technology in our understanding of the world; work collaboratively in carrying out investigations as well as in generating and evaluating ideas; be sensitive and responsible in maintaining a balance between the needs of humans and a sustainable environment; project, beyond the personal,

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- consequences of proposed actions; show concern for safety in planning, carrying out, and reviewing activities; become aware of the consequences of their actions.
- Grade 9: investigate materials and describe them in terms of their physical properties; give and explain examples illustrating how limited resources have forced scientists and technologists to develop more efficient ways to extract elements and compounds from nature, or to find or develop appropriate substitutes; give examples of the development of alternative sources of energy (such as wind generators and solar energy) that are a result of cost and the availability and properties of materials.
  - Grade 10 Science and Grades 11 and 12 Biology: value the role and contribution of science and technology in our understanding of phenomena that are directly observable and those that are not; have a sense of personal and shared responsibility for maintaining a sustainable environment; project the personal, social and environmental consequences of proposed action; want to take action for maintaining a sustainable environment; show concern for safety and accept the need for rules and regulations; be aware of the direct and indirect consequences of their actions.
  - Grade 12 Geology: provide examples of the relevance of mining to everyday materials used in our lives; demonstrate an understanding of the nature of geology and what makes it unique as a science; give examples of how geology is interconnected and integrated with other sciences; demonstrate an understanding of how geological processes and resources impact our daily lives; illustrate how science attempts to explain natural phenomena; describe examples of Canadian contributions to science and technology; describe and explain the processes by which running water, glaciers, wind and waves cause erosion; identify stratigraphy as a key element of environmental geology and describe some technologies used to acquire stratigraphic data; identify examples of geological hazards that impact on human settlement and ways in which humans have attempted to minimize the impact of these hazards; identify factors which influence people to live in geologically hazardous areas; apply geological knowledge to the analysis of a local environmental issue or problem.

*The information above was taken from the Atlantic Canada Science Curriculum.*