

## Activity: Beach Tour

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

### **Atlantic Canada Science Curriculum: Grade Primary (2004)**

*Students will be expected to:*

- “detect consistency and pattern in objects and events and use language to describe these patterns” (100-3)
- “recognize the role and contribution of science in their understanding of the world” (400)

### **Atlantic Canada Science Curriculum: Grade 1 (2005)**

*Students will be expected to:*

- “recognize the role and contribution of science in their understanding of the world” (400)

### **Atlantic Canada Science Curriculum: Grade 2 (2005)**

*Students will be expected to:*

- “recognize the role and contribution of science in their understanding of the world” (400)

### **Atlantic Canada Science Curriculum: Grade 3 (2005)**

*Students will be expected to:*

- “recognize the role and contribution of science in their understanding of the world” (400)

### **Atlantic Canada Science Curriculum: Grade 4 (2006) and 5 (2008)**

*Students will be expected to:*

- “demonstrate respect for the local environment” (108-3)
- “relate characteristics of rocks and minerals to their uses” (300-8)
- “demonstrate and record a variety of methods of weathering and erosion, including human impact on the landscape” (301-6, 108-6)
- “identify and describe rocks that contain records of Earth's history” (300-7)
- “describe natural phenomenon that cause rapid and significant changes to the landscape” (301-7)
- “appreciate the role and contribution of science and technology in their understanding of the world” (409)

### **Atlantic Canada Science Curriculum: Grade 6 (2008)**

*Students will be expected to:*

- “identify changes in animals over time and research and model the work of scientists” (107-11, 207-4, 301-16)
- “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” (204-1, 108-8)
- “classify common arthropods using a variety of sources” (205-8, 300-18)
- “classify animals as vertebrates or invertebrates and compare the characteristics of mammals, birds, reptiles, amphibians and fishes” (300-16, 300-17)
- “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” (301-15, 104-5, 204-6)

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

- “appreciate the role and contribution of science and technology in their understanding of the world” (409)

### Atlantic Canada Science Curriculum: Grade 7 (2001)

*Students will be expected to:*

- “identify, delimit, and investigate questions related to a local ecosystem” (208-2, 208-3)
- “classify rocks on the basis of their characteristics and method of formation” (310-2b)
- “describe interactions between biotic and abiotic factors in an ecosystem” (306-3)
- “explain various ways in which rocks can be weathered” (311-2)
- “appreciate the role and contribution of science and technology in their understanding of the world” (422)

### Atlantic Canada Science Curriculum: Grade 8 (2001)

*Students will be expected to:*

- “explain how waves and tides interact with shorelines” (311-10b)
- “describe processes of erosion and deposition that result from wave action and water flow” (311-11)
- “appreciate the role and contribution of science and technology in our understanding of the world” (422)

### Atlantic Canada Science Curriculum: Grade 9 (2001)

*Students will be expected to:*

- “investigate materials and describe them in terms of their physical properties” (307-12)
- “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” (112-3)
- “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” (109-6)
- “appreciate the role and contribution of science and technology in our understanding of the world” (422)

### Atlantic Canada Science Curriculum: Grade 10 (2000)

*Students will be expected to:*

- “explain biotic and abiotic factors which keep natural populations in equilibrium and relate this equilibrium to the resource limits of an ecosystem” (318-5)
- “explain how biodiversity of an ecosystem contributes to its sustainability” (318-6)
- “explain the impact of external factors on the ecosystem” (331-6)
- “value the role and contribution of science and technology in our understanding of phenomena that are directly observable and those that are not” (436)

### Atlantic Canada Science Curriculum: Grade 11 Biology (2000)

*Students will be expected to:*

- “analyse the patterns and products of evolution” (316)
- “evaluate relationships that affect the biodiversity and sustainability of life within the biosphere” (318)
- “value the role and contribution of science and technology in our understanding of phenomena that are directly observable and those that are not” (436)

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

### Atlantic Canada Science Curriculum: Grade 12 Biology (2001)

*Students will be expected to:*

- “analyse the patterns and products of evolution” (316)
- “evaluate relationships that affect the biodiversity and sustainability of life within the biosphere” (318)
- “describe historical and cultural contexts that have changed evolutionary concepts” (316-1)
- “evaluate current evidence that supports the theory of evolution and that feed the debate on gradualism and punctuated equilibrium” (316-2)
- “analyse evolutionary mechanisms such as natural selection, genetic variation, genetic drift, artificial selection, and biotechnology, and their effects on biodiversity and extinction” (316-3)
- “outline evidence and arguments pertaining to the origin, development, and diversity of living organisms on Earth” (316-4)
- “value the role and contribution of science and technology in our understanding of phenomena that are directly observable and those that are not” (436)

### Atlantic Canada Science Curriculum: Grade 12 Geology (2003)

*Students will be expected to:*

- “describe and give examples of how the geologists study the Earth” (360-9)
- “demonstrate an understanding of the nature of geology and what makes it unique as a science” (360-2)
- “give examples of how geology is interconnected and integrated with other sciences” (360-3)
- “describe and explain the processes by which running water, glaciers, wind and waves cause erosion” (363-6)
- “identify stratigraphy as a key element of environmental geology and describe some technologies used to acquire stratigraphic data” (365-6)
- “identify and describe the process of fossil formation” (364-5)
- “value the role and contribution of science and technology in our understanding of phenomena that are directly observable and those that are not” (436)