





Topic: Forestry

Title: Reach for the Canopy

Level: 2

New Hampshire Science Curriculum Framework

Grade level: K - 6

	Science																								Career Development							
	Science as Inquiry	Science, Technology, and Society						Life Science				Earth/Space Science			Physical Science						Unifying Themes and Concepts				Core Educational Learning			Individual & social learning		Career Learning		
	1a	2a	2b	2c	2d	2e	2f	3a	3b	3c	3d	4a	4b	4c	5a	5b	5c	5d	5e	5f	5g	6a	6b	6c	6d	1	2	3	4	5	6	7
Activity 1	▲								▲		▲																					
Activity 2	▲								▲		▲																					
Activity 3	▲								▲																							
Activity 4	▲																															
Activity 5	▲																															
Activity 6	▲																															
Activity 7	▲								▲					▲																		
Activity 8	▲								▲																							
Activity 9	▲								▲																							
Activity 10	▲																															
Activity 11	▲																															
Activity 12	▲																															
Activity 13	▲	▲		▲																												
Activity 14	▲													▲																		
Activity 15	▲																															

<b>Forestry – Reach for the Canopy</b>	
Level 2 – Grades 6 - 8	
Project 2061 Benchmarks (Grade 6 – 8)	
<b>The Nature of Science</b>	
Activity	<b>Scientific Inquiry</b>
1 - 15	Scientists differ in what phenomena they study and how they go about their work. Although there is no fixed set of steps that all scientists follow, scientific investigations usually involve the collection of relevant evidence, the use of logical reasoning, and the application of imagination in devising hypotheses and explanations to make sense of the collected evidence.
	<b>Scientific Enterprise</b>
5	Computers have become invaluable in science because they speed up and extend people’s ability to collect, store, compile, and analyze data, prepare research reports, and share data and ideas with investigators all over the world.
<b>The Physical Setting</b>	
	<b>Earth</b>
14	The benefits of the earth’s resources- such as fresh water, air, soil, and trees- can be reduced by using them wastefully or by deliberately or inadvertently destroying them. The atmosphere and the oceans have a limited capacity to absorb wastes and recycle materials naturally. Cleaning up polluted air, water, or soil or restoring depleted soil, forests, or fishing grounds can be very difficult and costly.
	<b>Processes that Shape the Earth</b>
7, 14	Human activities, such as reducing the amount of forest cover, increasing the amount and variety of chemicals released into the atmosphere, and intensive farming, have changed the earth’s land, oceans, and atmosphere. Some of these changes have decreased the capacity of the environment to support some life forms.

<b>The Living Environment</b>	
	<b>Diversity of Life</b>
2	One of the most general distinctions among organisms is between plants, which use sunlight to make their own food, and animals, which consume energy-rich foods. Some kinds of organisms, many of them microscopic, cannot be neatly classified as either plants or animals.
	<b>Cells</b>
2	All living things are composed of cells, from just one to many millions, whose details usually are visible only through a microscope. Different body tissues and organs are made up of different kinds of cells. The cells in similar tissues and organs in other animals are similar to those in human beings but differ somewhat from cells found in plants.
	<b>Interdependence of Life</b>
7	Two types of organisms may interact with one another in several ways: They may be in a producer/consumer, predator/prey, or parasite/host relationship. Or one organism may scavenge or decompose another. Relationships may be competitive or mutually beneficial. Some species have become so adapted to each other that neither could survive without the other
12	In all environments- freshwater, marine, forest, desert, grassland, mountain, and others- organisms with similar needs may compete with one another for resources, including food, space, water, air, and shelter. In any particular environment, the growth and survival of organisms depend on the physical conditions.
	<b>Flow of Matter and Energy</b>
2	Food provides molecules that serve as fuel and building material for all organisms. Plants use the energy in the light to make sugars out of carbon dioxide and water. This food can be used immediately for fuel or materials or it may be stored for later use. Organisms that eat plants break down the plant structures to produce the materials and energy they need to survive. Then they are consumed by other organisms.

<b>Forestry – Reach for the Canopy</b>	
Level 2 – Grades 6 - 8	
NH Science Frameworks (Grade K – 6)	
<b>Science as Inquiry</b>	
Activity	<b>1a. Students will demonstrate an increasing understanding of how the scientific enterprise operates</b>
1 – 15	Solve problems using a variety of strategies
1 – 15	Pose questions for scientific investigations and make predictions about the outcomes
1 – 15	Use appropriate tools and techniques to gather, organize, and interpret data
1 – 15	Construct explanations, including the development of simple models, for observations made
<b>Science, Technology, and Society</b>	
	<b>2a. Students will demonstrate an increasing ability to use measuring instruments to gather accurate and/or precise information.</b>
13	Use an assortment of measuring instruments, with a variety of scales, such as rulers, thermometers, graduated cylinders, balances, and timers
13	Describe and practice appropriate techniques for using simple measuring devices
	<b>2c. Students will demonstrate an increasing ability to analyze, synthesize, and communicate scientific information using technology.</b>
13	Record data using appropriate units
13	Use a calculator to determine other important quantitative values from data, using proper units, e.g. speed, density, area, volume, etc
<b>Life Science</b>	
	<b>3b. Students will demonstrate an increasing ability to understand how environmental factors affect all living systems (i.e. individuals, community, biome, the biosphere) as well as species to species interactions.</b>
2	Demonstrate a basic knowledge of the process of photosynthesis and its importance for all life forms
1, 2, 3, 7, 8, 9	Identify and describe the basic requirements for sustaining life, e.g. plants and animals need food for energy and growth
	<b>3d. Students will demonstrate an increasing ability to understand fundamental structures, functions, and mechanisms of inheritance found in microorganisms, fungi, protists, plants, and animals.</b>
1, 2	Identify the major anatomical features of plants and animals, and the major function of each
<b>Earth and Space Science</b>	
	<b>4c. Students will demonstrate an increasing ability to understand that the Earth contains a variety of renewable and non-renewable resources.</b>
6, 7, 14	Identify/explain some effects human activities have on the atmosphere, e.g. smog, industrial wastes