

Seattle Public Schools Science Standards

Weather

(Science and Technology for Children)

Grade 1

**EARTH
SCIENCE**

EARL #1 The student understands and uses scientific concepts and principles.		
Component	Benchmarks	Lesson #s
1.1 – Use properties to identify, describe, and categorize substances, materials, and objects.	<p><i>Nature and properties of earth materials</i></p> <ul style="list-style-type: none"> understand that clouds and fog are usually made of tiny droplets of water describe air as a substance that surrounds us and moves (e.g., wind) understand that water can take the form of solid, liquid, or gas 	11 - 14
1.2 – Recognize the components, structure, and organization of systems and the interconnections within and among them.	<p><i>Components and patterns of the earth system</i></p> <ul style="list-style-type: none"> recognize that earth has bodies of water and an atmosphere 	13 - 14
1.3 – Understand how interactions within and among systems cause changes in matter and energy.	<p><i>Hydrosphere/atmosphere</i></p> <ul style="list-style-type: none"> observe and measure weather indicators (e.g., temperature and precipitation) observe and record weather changes from day to day and through the seasons 	2 - 15

**PHYSICAL
SCIENCE**

EARL #1 The student understands and uses scientific concepts and principles.		
1.1 – Use properties to identify, describe, and categorize substances, materials, and objects.	<p><i>Properties of substances</i></p> <ul style="list-style-type: none"> use tools such as rulers and thermometers 	5 - 9
1.2 – Recognize the components, structure, and organization of systems and the interconnections within and among them.	<p><i>System</i></p> <ul style="list-style-type: none"> identify how parts are put together to make a whole (e.g., weather systems) 	11 - 14
	<p><i>Physical and chemical change</i></p> <ul style="list-style-type: none"> conduct experiments that show the evaporation of water 	11

**SCIENCE
SKILLS/
PROCESSES**

EARL #2 The student understands the skills and processes of science and technology.		
2.1 – Develop the abilities necessary to do scientific inquiry.	<p><i>Questioning</i></p> <ul style="list-style-type: none"> ask questions about objects, organisms, and events in the environment 	All lessons

SCIENTIFIC
THINKING

	<p><i>Designing and conducting investigations</i></p> <ul style="list-style-type: none"> plan and conduct simple investigations, using appropriate tools, measures, and safety rules <p><i>Evidence and explanation</i></p> <ul style="list-style-type: none"> use data (observations) to construct explanations <p><i>Communication</i></p> <ul style="list-style-type: none"> record and report observations through oral language, numbers, pictures, and sentences 	<p>4, 7 – 10, 12</p> <p>7 – 9, 11, 12, 14, 15</p> <p>All lessons</p>
<p>2.2 – Apply science knowledge and skills to solve problems or meet challenges.</p>	<p><i>Identifying problems</i></p> <ul style="list-style-type: none"> begin to identify problems found in familiar contexts in which science and technology can be or have been used to design solutions <p><i>Designing and testing solutions</i></p> <ul style="list-style-type: none"> propose, design, and test a solution to a problem (e.g., What would you wear on a rainy day?) <p><i>Evaluating potential solutions</i></p> <ul style="list-style-type: none"> evaluate how well a design or a product solves a problem 	<p>12</p> <p>9, 12</p> <p>9, 12</p>
<p>EARL #3 The student understands the nature and contexts of science and technology.</p>		
<p>3.1 – Understand the nature of scientific inquiry</p>	<p><i>Intellectual honesty</i></p> <ul style="list-style-type: none"> begin to understand that all scientific observations should be reported accurately even when they contradict expectations <p><i>Dealing with inconsistencies</i></p> <ul style="list-style-type: none"> begin to observe and discuss why similar investigations may not produce similar results 	<p>All lessons</p> <p>2, 7 – 12</p>
<p>3.2 – Know that science and technology are human endeavors, interrelated to each other, to society and to the workplace.</p>	<p><i>Relationship of science and technology</i></p> <ul style="list-style-type: none"> recognize that people have invented tools for everyday life and for scientific investigations <p><i>Careers and occupations using science, mathematics, and technology</i></p> <ul style="list-style-type: none"> understand how science, mathematics, and technology are used in the workplace 	<p>2, 10, 11</p> <p>2, 10, 11</p>