

Seattle Public Schools Science Standards

Microworlds

(Science & Technology for Children)

Grade 5

LIFE
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 and use characteristics to categorize living things.	<p><i>Basis of biological diversity</i></p> <ul style="list-style-type: none"> distinguish living organisms from nonliving objects, and use characteristics to sort common organisms into plant and animal groups (e.g., microscopic plants and animals) know that living organisms have basic needs that distinguish them from non-living objects (e.g., need for nutrients, water, air, and energy) 	12 – 16
1.2 – Recognize the components, structure, and organization of systems and the interconnections within and among them.	<p><i>Structure and organizations of living systems</i></p> <ul style="list-style-type: none"> know that living things are composed of parts made of cells 	11 – 14
1.3 – Understand how interactions within and among systems cause changes in matter and energy.	<p><i>Life processes and the flow of matter and energy</i></p> <ul style="list-style-type: none"> recognize that living things need constant energy supplied from food or light, and that in ecosystems, substances such as air, water, nutrients, and the chemicals in food are continually recycled 	11 – 16
	<p><i>Interdependence of life</i></p> <ul style="list-style-type: none"> describe how an organism’s behavior and ability to survive are influenced by its environment, other life forms, and availability of food and/or other resources 	12 – 16
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
	<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 	2 – 16
	<p><i>Communication</i></p> <ul style="list-style-type: none"> record and report observations, explanations, and 	All lessons

SCIENCE
SKILLS/
PROCESSES

**SCIENTIFIC
THINKING**

	conclusions using oral, written, and mathematical expression	
2.2 – Apply science knowledge and skills to solve problems or meet challenges.	<p><i>Identifying problems</i></p> <ul style="list-style-type: none"> identify problems found in familiar contexts in which science/technology can be or has been used to design solutions 	2 – 9
EARL #3 The student understands the nature and contexts of science and technology.		
3.1 – Understand the nature of scientific inquiry.	<p><i>Intellectual honesty</i></p> <ul style="list-style-type: none"> understand that all scientific observations should be reported accurately even when they contradict expectations 	All lessons
	<p><i>Limitations of science and technology</i></p> <ul style="list-style-type: none"> distinguish between questions that can be answered with science and technology and those that cannot 	All lessons
	<p><i>Dealing with inconsistencies</i></p> <ul style="list-style-type: none"> explain why similar investigations may not produce similar results 	All lessons
	<p><i>Evaluating methods of investigation</i></p> <ul style="list-style-type: none"> recognize that results of scientific investigations can come from expected and unexpected sources 	All lessons
	<p><i>Evolution of scientific ideas</i></p> <ul style="list-style-type: none"> know that ideas in science change as new scientific thinking, theories, and evidence arise 	All lessons
3.2 – Know that science and technology are human endeavors, interrelated to each other, to society and to the workplace.	<p><i>All peoples contribute to science and technology</i></p> <ul style="list-style-type: none"> know that science and technology have been practiced by all peoples throughout history 	5, 8
	<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 	All lessons
	<p><i>Careers and occupations using science, mathematics, and technology</i></p> <ul style="list-style-type: none"> identify the knowledge and skills of science using in common occupations 	All lessons