

Correlation of
Seeds of Science/Roots of Reading[®]
Integrated Science and Literacy Units

with the State of Connecticut
Science Standards
for Grade 1

Created October 2011



Seeds of Science/Roots of Reading[®] was created with partial support from the National Science Foundation under grant numbers ESI-0242733 and ESI-0628272.
The program was created by a team at the Lawrence Hall of Science at the University of California, Berkeley.

- ● ● = Addressed completely with explicit instruction and repeated learning opportunities.
- ● = Addressed partially with explicit instruction and some learning opportunities.
- = Touched upon, with a few learning opportunities and/or instruction may be expanded to more fully address this standard.

CT Science Standards – 1 st Grade	2 nd - 3 rd Grade				3 rd - 4 th Grade				4 th - 5 th Grade			
	Soil Habitats	Shoreline Science	Designing Mixtures	Gravity & Magnetism	Light Energy	Weather & Water	Variation and Adaptation	Digestion & Body Systems	Planets & Moons	Aquatic Ecosystems	Models of Matter	Chemical Changes
Forces and Motion – What makes objects move the way they do?												
1.1 The sun appears to move across the sky in the same way every day, but its path changes gradually over the seasons.												
1.1.a. An object’s position can be described by locating it relative to another object or the background.												
1.1.b. An object’s motion can be described by tracing and measuring its position over time.												
Students should be able to:												
1. Compare and contrast the relative positions of objects using words (in front of, behind, next to, inside of, above or below) and numbers (by measuring its distance from another object).												
2. Apply direct and indirect pushes and pulls to cause objects to move (change position) in different ways (e.g., straight line, forward and backward, zigzag, in a circle).				●								
3. Classify objects by the way they move (e.g., spinning, rolling, bouncing).												
4. Conduct simple experiments and evaluate different ways to change the speed and direction of an object’s motion.												

- ● ● = Addressed completely with explicit instruction and repeated learning opportunities.
- ● = Addressed partially with explicit instruction and some learning opportunities.
- = Touched upon, with a few learning opportunities and/or instruction may be expanded to more fully address this standard.

CT Science Standards – 1 st Grade	2 nd - 3 rd Grade				3 rd - 4 th Grade				4 th - 5 th Grade			
	Soil Habitats	Shoreline Science	Designing Mixtures	Gravity & Magnetism	Light Energy	Weather & Water	Variation and Adaptation	Digestion & Body Systems	Planets & Moons	Aquatic Ecosystems	Models of Matter	Chemical Changes
5. Observe, record and predict the sun’s position at different times of day (morning, noon, afternoon or night).												
6. Conduct simple investigations of shadows and analyze how shadows change as the relative position of the sun (or an artificial light source) changes.												
Structure and Function – How are organisms structured to ensure efficiency and survival?												
1.2 Living things have different structures and behaviors that allow them to meet their basic needs.												
1.2.a. Animals need air, water and food to survive.												
1.2.b. Plants need air, water and sunlight to survive.												
Students should be able to:												
1. Infer from direct observation and print or electronic information that most animals and plants need water, food and air to stay alive.	● ● ●	● ●										
2. Identify structures and behaviors used by mammals, birds, amphibians, reptiles, fish and insects to move around, breathe and obtain food												

- ● ● = Addressed completely with explicit instruction and repeated learning opportunities.
- ● = Addressed partially with explicit instruction and some learning opportunities.
- = Touched upon, with a few learning opportunities and/or instruction may be expanded to more fully address this standard.

CT Science Standards – 1 st Grade	2 nd - 3 rd Grade				3 rd - 4 th Grade				4 th - 5 th Grade			
	Soil Habitats	Shoreline Science	Designing Mixtures	Gravity & Magnetism	Light Energy	Weather & Water	Variation and Adaptation	Digestion & Body Systems	Planets & Moons	Aquatic Ecosystems	Models of Matter	Chemical Changes
and water (e.g., legs/wings/fins, gills/lungs, claws/fingers, etc.)												
3. Sort and classify plants (or plant parts) by observable characteristics (e.g., leaf shape/size, stem or trunk covering, flower or fruit).	• •											
4. Use senses and simple measuring tools to measure the effects of water and sunlight on plant growth.	•											
5. Compare and contrast information about animals and plants found in fiction and nonfiction sources.												
1.3 Organisms change in form and behavior as part of their life cycles.												
1.3.a. Some organisms undergo metamorphosis during their life cycles; other organisms grow and change, but their basic form stays essentially the same.												
Students should be able to:												
1. Explain that living things experience a life cycle that includes birth, growth, reproduction and death.												
2. Distinguish between animals that are born alive (e.g., humans, dogs, cows) and those that hatch from eggs (e.g., chickens, sea turtles, crocodiles).	•											

- ● ● = Addressed completely with explicit instruction and repeated learning opportunities.
- ● = Addressed partially with explicit instruction and some learning opportunities.
- = Touched upon, with a few learning opportunities and/or instruction may be expanded to more fully address this standard.

CT Science Standards – 1 st Grade	2 nd - 3 rd Grade				3 rd - 4 th Grade				4 th - 5 th Grade			
	Soil Habitats	Shoreline Science	Designing Mixtures	Gravity & Magnetism	Light Energy	Weather & Water	Variation and Adaptation	Digestion & Body Systems	Planets & Moons	Aquatic Ecosystems	Models of Matter	Chemical Changes
3. Compare and contrast the changes in structure and behavior that occur during the life cycles of animals that undergo metamorphosis with those that do not.												
4. Analyze recorded observations to compare the metamorphosis stages of different animals and make predictions based on observed patterns.												
Science and Technology in Society – How do science and technology affect the quality of our lives?												
1.4 The properties and organisms can be described more accurately through the use of standard measuring units.												
1.4.a. Various tools can be used to measure, describe and compare different objects and organisms.												
1. Use nonstandard and standard measurements to describe and compare the weight, length, and size of objects and organisms.												
2. Show approximate size of a centimeter, meter, inch, foot and yard using referents such as a finger, a hand or a book.												
3. Select appropriate tools for measuring length, height, weight or liquid volume.	●			●								

- ● ● = Addressed completely with explicit instruction and repeated learning opportunities.
- ● = Addressed partially with explicit instruction and some learning opportunities.
- = Touched upon, with a few learning opportunities and/or instruction may be expanded to more fully address this standard.

CT Science Standards – 1 st Grade	2 nd - 3 rd Grade				3 rd - 4 th Grade				4 th - 5 th Grade			
	Soil Habitats	Shoreline Science	Designing Mixtures	Gravity & Magnetism	Light Energy	Weather & Water	Variation and Adaptation	Digestion & Body Systems	Planets & Moons	Aquatic Ecosystems	Models of Matter	Chemical Changes
4. Use metric and customary rulers to measure length, height or distance in centimeters, meters, inches, feet and yards.	• •			•								
5. Use balances and scales to compare and measure the heaviness of objects and organisms in kilograms, grams, pounds and ounces.												
6. Use graduated cylinders, beakers and measuring cups to measure the volume of liquids in milliliters, liters, cups and ounces.			•									
7. Use thermometers to measure air and water temperature in degrees Celsius and degrees Fahrenheit.												
8. Make graphs to identify patterns in recorded measurements such as growth or temperature over time.												

- ● ● = Addressed completely with explicit instruction and repeated learning opportunities.
- ● = Addressed partially with explicit instruction and some learning opportunities.
- = Touched upon, with a few learning opportunities and/or instruction may be expanded to more fully address this standard.