

**First Grade
Elementary Science Academic Plan
2008-2009**

QUARTER 1	QUARTER 2
<p>Strand H:</p> <ul style="list-style-type: none">• The Nature of Science<ul style="list-style-type: none">· Introduction Chapter <p>Strand D:</p> <ul style="list-style-type: none">• Processes that Shape the Earth<ul style="list-style-type: none">· Chapters 5 & 6 <p>Strand E:</p> <ul style="list-style-type: none">• Earth and Space<ul style="list-style-type: none">· Chapter 7	<p>Strand A:</p> <ul style="list-style-type: none">• The Nature of Matter<ul style="list-style-type: none">· Chapter 1 <p>Strand B:</p> <ul style="list-style-type: none">• Energy<ul style="list-style-type: none">· Chapter 2 & 3
QUARTER 3	QUARTER 4
<p>Strand C:</p> <ul style="list-style-type: none">• Force and Motion<ul style="list-style-type: none">· Chapter 4 <p>Strand F:</p> <ul style="list-style-type: none">• Processes of Life<ul style="list-style-type: none">· Chapter 8	<p>Strand F:</p> <ul style="list-style-type: none">• Processes of Life<ul style="list-style-type: none">· Chapter 9 <p>Strand G:</p> <ul style="list-style-type: none">• How Living Things Interact with Their Environment<ul style="list-style-type: none">· Chapters 10 & 11

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Grade 01 - QUARTER 1: Chapters		TEXTBOOK SEQUENCE			
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CONTENT: STRAND H: THE NATURE OF SCIENCE					
Standard1: The student uses the scientific processes and habits of mind to solve problems					
*Benchmark SC.H.1.1: the student knows that in order to learn, it is important to observe the same thing often and compare them.					
1	SC.H.1.1.1.1 knows that scientific investigations generally work the same way in different places.	R.S.S Lesson 1			
*Benchmark SC.H.1.1.2 the student knows when tests are repeated under the same or similar condition ,similar results are usually obtained.					
1	SC.H.1.1.2.1 understands the importance of accuracy and repetition in conducting scientific inquiries.	R.S.S Lesson 2 & 3			
*Benchmark SC.H.1.1.3 the student knows that when doing science, it is often helpful to work with a team and to share finding with others.					
1	SC.H.1.1.3.1 works with others to complete an experiment or to solve a problem.	R.S.S Lesson 2			
1	SC.H.1.1.3.2 listens, records, and compares the ideas and observations of others.	R.S.S Lesson 2			
*Benchmark SC.H.1.1.4: the student knows that people use the scientific process including hypothesis, making inferences, and recording and communicating data when exploring the natural world.					
1	SC.H.1.1.4.1 uses simple graphs, pictures, written statements, and numbers to observe, describe, record, and compare data.	R.S.S Lesson 2			
*Benchmark SC.H.1.1.5: the student uses the senses, tools and instruments to obtain information from his or her surroundings.					
1	SC.H.1.1.5.1 uses a variety of tools (for example, thermometers, magnifiers, rulers, scales, computers) to identify characteristics of objects.	R.S.S Lesson 3			

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1	SC.H.1.1.5.2 uses standard (for example, centimeters) and nonstandard units (for example, paper clips, hands, pencils) to measure organisms and objects and parts of organisms and objects.	R.S.S Lesson 3			
Standard 2. The student understands that most natural events occur in comprehensible, consistent patterns.					
*Benchmark SC.H.2.1.1: the student knows that most natural events occur in patterns.					
1	SC.H.2.1.1.1 uses information gathered to identify patterns in nature to make predictions (for example, shapes of leaves, petals on flowers, rings on seashells).	R.S.S Lesson 2			
Standard 3. The student understands that science, technology, and society are interwoven and interdependent.					
*Benchmark SC.H.3.1.1 :the student knows that scientists and technologists use a variety of tools (e.g., thermometers, magnifiers, rulers, and scales) to obtain information in more detail and to make work easier					
1	SC.H.3.1.1.1: uses a variety of tools (e.g., thermometers, magnifiers, rulers, and scales) to obtain information in more detail and to make work easier.	R.S.S Lesson 3			
CONTENT: STRAND D: PROCESSES THAT SHAPE THE EARTH					
Standard1: The student recognizes that processes in the lithosphere, atmosphere, hydrosphere, and biosphere interact to shape the earth.					
*Benchmark SC.D.1.1.1:The student recognizes that the solid materials making up the Earth come in all sizes from boulders to grains of sand.					
1	SC.D.1.1.1.1 extends and refines knowledge that the surface of the Earth is composed of different types of solid materials.	Chapter 5 Lesson 1 & 2			

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Benchmark SC.D.1.1.2: The student knows that life occurs on or near the surface of the Earth in land, sea, water, and air.					
1	SC.D.1.1.2.1 knows some kinds of organisms that live on or near the surface of the Earth in land, water, and air.	Chapter 5 Lesson 1			
*Benchmark SC.D.1.1.3: The student recognizes patterns in weather.					
1	SC.D.1.1.3.1 uses graphic organizers to display weather data and show weather patterns. (SC.H.1.1.3.2)	Chapter 6 Lesson 1			
Standard 2. The student understands the need for protection of the natural systems on Earth.					
Benchmark SC.D.2.1.1 the student understands that people influence the quality of life of those around them.					
1	SC.D.2.1.1.1 extends and refines knowledge of ways to care for the Earth at home and in school. (SC.H.3.1.1.1)	Chapter 5 Lesson 3			
CONTENT: STRAND E: EARTH AND SPACE					
Standard 1. The student understands the interaction and organization in the Solar System and the universe and how this affects life on Earth.					
Benchmark SC.E.1.1.1: the student knows that the light reflected by the Moon looks a little different every day but looks the same again about every 28 days.					
1	SC.E.1.1.1.1 knows that the amount of light reflected by the Moon is a little different every day but the Moon appears the same again about every 28 days. (SC.H.1.1.4.1)	Chapter 7 Lesson 1, 2, 3			
*Benchmark SC.E.1.1.2: the student knows that the appearance of sunrise and sunset is due to the rotation of Earth every 24 hours.					
1	SC.E.1.1.2.1 knows that night and day are caused by the rotation of the Earth.	Chapter 7 Lesson 2			

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Standard 2. The student recognizes the vastness of the universe and the Earth's place in it.					
Benchmark SC.E.2.1.1 The student knows that there are many objects in the sky that are only visible at night.					
1	SC.E.2.1.1.1 knows and differentiates objects seen in the day and night sky (for example, clouds, Sun, stars, Moon, planets). (SC.H.1.1.1.1)	Chapter 7 Lesson 1 & 2			
End of Quarter 1					

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CONTENT: STRAND A: THE NATURE OF MATTER					
Standard 1. The student understands that all matter has observable, measurable properties.					
*Benchmark SC.A.1.1.1: the student knows that objects can be described, classified, and compared by their composition (e.g., wood or metal) and their physical properties (e.g., color, size and shape).					
2	SC.A.1.1.1.1 knows that objects can be grouped according to their physical characteristics (for example, shape, color, texture, form, size). (SC.H.1.1.1.1)	Chapter 1 Lesson 1,2,3,4			
Benchmark SC.A.1.1.2: The student recognizes that the same material can exist in different states.					
2	SC.A.1.1.2.1 knows the effects of heating and cooling on solids, liquids and gases. (SC.H.1.1.5.1)	Chapter 1 Lesson 4			
*Benchmark SC.A.1.1.3: The student verifies that things can be done to materials to change some of their physical properties (e.g., cutting, heating, and freezing), but not all materials respond the same way (e.g., heating causes water to boil and sugar to melt).					
2	SC.A.1.1.3.1 knows that not all objects or materials respond to change in the same way (for example, a plastic object in the freezer compared with water in a freezer).	Chapter 1 Lesson 3 &4			
Standard 2. The student understands the basic principal of atomic theory.					
2	SC.A.2.1.1.1 knows that objects are composed of parts that are too small to be seen without magnification (for example, rocks, cookies, string, paper). (SC.H.3.1.1.1)	Chapter 1 Lesson 1			

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CONTENT: STRAND B. ENERGY					
Standard 1. The student recognizes that energy may be changed in form with varying efficiency.					
*Benchmark SC.B.1.1.1 student knows that the Sun supplies heat and light energy to Earth.					
2	SC.B.1.1.1.1 knows that heat from the Sun has varying effects depending on the surface it strikes. (SC.H.1.1.2.1)	Chapter 3 Lesson 1			
Benchmark SC.B.1.1.2 the students know that light can pass through some objects and not others.					
2	SC.B.1.1.2.1 predicts which materials will allow light to pass through and which ones will not.	Chapter 3 Lesson 2			
*Benchmark SC.B.1.1.3 the students describes a model energy system (e.g. an aquarium or terrarium)					
2	SC.B.1.1.3.1 understands that models (for example, terrarium or aquarium) can be used to observe processes and changes over time. (SC.H.1.1.4.1)	Chapter 2 Lesson 1			
Benchmark SC.B.1.1.4 The student knows that heat can be produced in many ways (e.g., by burning and rubbing)					
2	SC.B.1.1.4.1 knows ways that human activities require and release energy.	Chapter 2 Lesson 2			
Benchmark SC.B.1.1.5 The student knows that every human action requires energy that comes from food.					
2	SC.B.1.1.5.1 understands that people need food for energy.	Chapter 2 Lesson 2			
2	SC.B.1.1.5.2 knows nutritional value of various foods (for example, fruit, cereals, dairy, meat).	Chapter 2 Lesson 2			
End of Quarter 2					

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CONTENT: STRAND C: FORCE AND MOTION					
Standard 1: The student understands that types of motion may be described, measured and predicted.					
Benchmark SC.C.1.1.1 The student understands that different things move at different speeds.					
3	SC.C.1.1.1.1 knows the relative order of speeds of various objects (for example, snails, turtles tricycles, bicycles, cars, jets, rockets).(SC.H.1.1.3.2)	Chapter 4 Lesson 1			
Benchmark SC.C.1.1.2 The student knows there is a relationship between force and motion					
3	SC.C.1.1.2.1 knows that various things move at different speeds when different forces are applied.	Chapter 4 Lesson 2			
Standard 2: The student understands that types of force that act on an object and the effect of that force can be described, measured, and predicted					
*Benchmark SC.C 2.1.1: the student knows that one way to change how something is moving is to give it a push or a pull					
3&4	SC.C.2.1.1.1 understands various ways gravity affects the motion of objects (for example, an object on a ramp, an object that is dropped).(SC.H.2.1.1.1)	Chapter 4 Lesson 3			
Benchmark SC.C 2.1.2: The student knows that sound is caused by vibrations (pushing and pulling) to cause waves.					
3&4	SC.C.2.1.2.1 knows that vibrations of objects (for example, strings, drumheads, rubber bands) cause sounds.	Chapter 3 Lesson 3			

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CONTENT: STRAND F: PROCESSES OF LIFE					
Standard1. The student describes patterns of structure and function in living things.					
Benchmark SC.F.1.1.1 The student knows the basic needs of all living things.					
3&4	SC.F.1.1.1.1 understands that living things need food, water, space, and shelter to survive.				
Benchmark SC.F.1.1.2 The student knows how to apply knowledge about life processes to distinguish between living and nonliving things					
3&4	SC.F.1.1.2.1 knows how to classify things as living and nonliving.	Chapter 8 Lesson 1			
Benchmark SC.F.1.1.3: The student describes how things change as they grow and mature					
3&4	SC.F.1.1.3.1 knows ways organisms change as they grow and mature (for example, as people grow up their size changes).	Chapter 8 Lesson 4 Chapter 9 Lesson 3			
3&4	SC.F.1.1.3.2 knows that living things grow and change in different ways and in different lengths of time (for example, butterfly, frog, daisy, pine tree). (SC.H.2.1.1.1)	Chapter 8 Lesson 4 Chapter 9 Lesson 3			
Benchmark SC.F.1.1.4: The student understands that structures of living things are adapted to their function in specific environments.					
3&4	SC.F.1.1.4.1 knows that plants and animals have adaptations that help them survive in their environment (camouflage, teeth, spines).	Chapter 10 Lesson 2			

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*Benchmark SC.F.1.1.5: The student compares and describes the structural characteristics of plants and animals.					
3&4	SC.F.1.1.5.1 understands different ways in which living things can be grouped (for example, plant/animals, edible plants/non-edible plants). (SC.H.1.1.4.1)	Chapter 8 Lesson 1 & 3 Chapter 9 Lesson 4			
Standard 2. the student understands the importance of genetic diversity.					
Benchmark SC.F 2.1.1: The student knows that living things have offspring that resemble their parents.					
3&4	SC.F.2.1.1.1: knows that plants and animals are similar but not identical to their parents.	Chapter 8 Lesson 4 Chapter 9 Lesson 3			
End of Quarter 3					

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Benchmark SC.F.2.1.2: The student knows that there are many different kinds of living things that live in a variety of environments.					
4	SC.F.2.1.2.1 knows plants and animals that live in a particular habitat (for example, black bears in the forest, whales in the ocean, camels in the desert, ducks in the wetlands).	Chapter 11 Lesson 1, 2, 3			
4	SC.F.2.1.2.2 knows the characteristics of the climate in different habitats (for example, sunlight, moisture, temperature) (SC.H.1.1.5.1)	Chapter 11 Lesson 1, 2, 3			
4	SC.F.2.1.2.3 knows some ways in which animals and plants are adapted to living in different environments.	Chapter 11 Lesson 1, 2, 3 Chapter 10 Lesson 2			
Strand G: How Living Things Interact with Their Environments.					
Standard 1: The student understands the competitive, interdependent, cyclic nature of living things in their environment.					
Benchmark SC.G.1.1.1: The student knows that environments have living and nonliving parts.					
4	SC.G.1.1.1.1 knows that environments have living and nonliving parts.	Chapter 10 Lesson 1			
*Benchmark SC.G.1.1.2: The student knows that plants and animals are dependent upon each other for survival.					
4	SC.G.1.1.2.1 knows that plants produce oxygen and food for animals.	Chapter 10 Lesson 3			
4	SC.G.1.1.2.2 understands that animals can be grouped according to what they eat.	Chapter 10 Lesson 3			
4	SC.G.1.1.2.3 understands that living things are part of a food chain. (SC.H.1.1.3.1)	Chapter 10 Lesson 3			

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Benchmark SC.G.1.1.3.:The student knows that there are many different plants and animals living in many different kinds of environments (e.g., hot, cold, wet, dry, sunny and dark)					
4	SC.G.1.1.3.1 knows some characteristics of different environments and some plants and animals found there.	Chapter 11 Lesson 1,2,3			
Standard 2 The student understands the consequences of using limited natural resources.					
*Benchmark SC.G.2.1.1:The student knows that if living things do not get food, water, shelter and space they will die.					
4	SC.G.2.1.1.1 understands why living things must have food, water, shelter, and space to survive.	Chapter 8 Lesson 2 Chapter 9 Lesson 1			
*Benchmark SC.G.2.1.2:The student knows that the activities of humans affect plants and animals in many ways.					
4	SC.G.2.1.2.1 understands that there are limited resources available for all living things to use.(SC.H.1.1.3.1)	Chapter 5 Lesson 3			
End of Quarter 4					