

FAME Public Charter School

Scope and Sequence: 2nd Grade-Science

Subject/Unit Title: Science				
Estimated Time Frame (#of Days): 40 days				
Unit 1: Living Things Grow and Change				
Chapter Title	Lesson Title	Objectives	CA State Standards	Assessments
Chapter 1: Plants Grow and Change	Lesson 1: What are Living and Nonliving Things?	<ul style="list-style-type: none"> Distinguish between living organisms and nonliving objects. Compare living organisms and nonliving objects 	<ul style="list-style-type: none"> Life science 2a: Students know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another. Life Science 2c: Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment. Life Science 2e: Students know light, gravity, touch, or environmental stress can affect the germination, growth, and development of plants. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 2: How Do Plants Grow and Change?	<ul style="list-style-type: none"> Identify sunlight, air nutrients, and water as things plants need to grow Observe and describe ways a plant may be 	<ul style="list-style-type: none"> Life Science 2c: Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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		<p>affected by its environment</p>	<ul style="list-style-type: none"> • Life Science 2e: Students know light, gravity, touch, or environmental stress can affect the germination, growth, and development of plants. • Life Science 2f: Students know flowers and fruits are associated with reproduction in plants. • Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. • Investigation and Experimentation 4c: Compare and sort common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight). • Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. • Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	<p>Lesson 3: How Are Plants Alike and Different?</p>	<ul style="list-style-type: none"> • Observe plants to determine how they are alike and different • Identify plants that can be alike and different in different places 	<ul style="list-style-type: none"> • Life science 2a: Students know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another. • Life Science 2c: Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment. 	<ul style="list-style-type: none"> • Lesson Review • Questions • Observation checklist • Portfolio

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			<ul style="list-style-type: none"> • Life Science 2f: Students know flowers and fruits are associated with reproduction in plants. • Investigation and Experimentation 4c: Compare and sort common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight). • Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	End of Chapter Review	<ul style="list-style-type: none"> • Use subtraction sentence to determine how many seeds did not grow • Recognize that science skills are used in many careers • Review of chapter concepts 	<ul style="list-style-type: none"> • Life Science 2c: Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment. • Life Science 2e: Students know light, gravity, touch, or environmental stress can affect the germination, growth, and development of plants. • Life Science 2f: Students know flowers and fruits are associated with reproduction in plants. • Investigation and Experimentation 4c: Compare and sort common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight). • Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. • Investigation and Experimentation 4g: Follow oral instructions for a scientific 	Chapter Test

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			investigation.	
Chapter 2: Animals Grow and Change	Lesson 1: How are Animals Alike and Different?	<ul style="list-style-type: none"> Describe how animals are alike and different Identify characteristics for classifying animals 	<ul style="list-style-type: none"> Life Science 2a: Students know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another. 4c: Compare and sort common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight). Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 2: What Are Some Animal Life Cycles?	<ul style="list-style-type: none"> Analyze and describe the sequence of events of the life cycles of a bird and a mammal Recognize that animals grow to resemble their parents 	<ul style="list-style-type: none"> Life Science 2a: Students know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another. Life Science 2b: Students know the sequential stages of life cycles are different for different animals, such as butterflies, frogs, and mice. Life Science 2c: Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment. Life Science 2d: Students know there is variation among individuals of one kind within a population. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			<p>metric system units.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4f: Use magnifiers or microscopes to observe and draw descriptions of small objects or small features of objects. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	End of Chapter Review	<ul style="list-style-type: none"> Measure and compare sizes of the eggs Determine what animal group each pet belongs to Review chapter concepts 	<ul style="list-style-type: none"> Life Science 2a: Students know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another. Life Science 2b: Students know the sequential stages of life cycles are different for different animals, such as butterflies, frogs, and mice. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. 	<ul style="list-style-type: none"> Chapter Test
Chapter 3 People Grow and Change	Lesson 1: How Will I Grow?	<ul style="list-style-type: none"> Describe the many ways people grow and change during their lives Compare how many 	<ul style="list-style-type: none"> Life Science 2a: Students know that organisms reproduce offspring of their own kind and that the offspring resemble their parents and one another. Life Science 2b: Students know 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist

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		<p>people are alike and different at different stages of life</p>	<p>the sequential stages of life cycles are different for different animals, such as butterflies, frogs, and mice.</p> <ul style="list-style-type: none"> • Life Science 2c: Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment. • Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. • Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. • Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. • Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> • Portfolio
	<p>Lesson 2: What Do My Bones and Muscles Do?</p>	<ul style="list-style-type: none"> • Understand the ways bones and muscles work together to move the body • Explain the importance of exercise and healthful foods to keep bones and muscles healthy 	<ul style="list-style-type: none"> • Life Science 2c: Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment. • Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> • Lesson Review • Questions • Observation checklist • Portfolio

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	<p>Lesson 3: How Do My Heart and Lungs Work?</p>	<ul style="list-style-type: none"> Describe how the heart and lungs work together to carry oxygen to all the body parts Understand that exercise makes the heart and lungs stronger and healthier 	<ul style="list-style-type: none"> Life Science 2c: Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	<p>Lesson 4: How do I Digest Food?</p>	<ul style="list-style-type: none"> Describe the process of digestion Understand the importance of eating a balanced, healthful diet 	<ul style="list-style-type: none"> Life Science 2c: Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the environment. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	<p>End of Chapter</p>	<ul style="list-style-type: none"> Write an addition problem to show the number of bones in a hand Recognize that science skills are used in many careers Review chapter concepts 	<ul style="list-style-type: none"> Life Science 2b: Students know the sequential stages of life cycles are different for different animals, such as butterflies, frogs, and mice. Life Science 2c: Students know many characteristics of an organism are inherited from the parents. Some characteristics are caused or influenced by the 	<ul style="list-style-type: none"> Chapter Test Unit Test

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			<p>environment.</p> <ul style="list-style-type: none">• Life Science 2d: Students know there is variation among individuals of one kind within a population.• Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing.• Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units.• Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations.• Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation.	
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Subject/Unit Title: Science				
Estimated Time Frame (#of Days): 30 days				
Unit 2: Exploring Earth’s Surface				
Chapter Title	Lesson Title	Objectives	CA State Standards	Assessments
Chapter 1: Earth’s Resources	Lesson 1: How Do People Use Rocks and Soil?	<ul style="list-style-type: none"> Recognize and describe different kinds of rocks and soil Identify ways people use rocks and soil 	<ul style="list-style-type: none"> Earth Science 3a: Students know how to compare the physical properties of different kinds of rocks and know that rock is composed of different combinations of minerals. Earth Science 3b: Students know smaller rocks come from the breakage and weathering of larger rocks. Earth Science 3c: Students know that soil is made partly from weathered rock and partly from organic materials and that soils differ in their color, texture, capacity to retain water, and ability to support the growth of many kinds of plants. Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4c: Compare and sort common objects according to two or more 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			<p>physical attributes (e. g., color, shape, texture, size, weight).</p> <ul style="list-style-type: none"> Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	Lesson 2: How Do People Use Water?	<ul style="list-style-type: none"> Recognize that living things need water to live and grow Give examples of ways people use water 	<ul style="list-style-type: none"> Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use. Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 3: What Other Natural Resources Do People Use?	<ul style="list-style-type: none"> Identify natural resources that people use Describe ways in which people use plants, minerals, and air 	<ul style="list-style-type: none"> Earth Science 3a: Students know how to compare the physical properties of different kinds of rocks and know that rock is composed of different combinations of minerals. Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			<p>measurements in standard metric system units.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	End of Chapter	<ul style="list-style-type: none"> Write an additional problem to show water use Recognize that artists use natural materials Review chapter concepts 	<ul style="list-style-type: none"> Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4e: Construct bar graphs to record data, using appropriately labeled axes. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	Chapter Test
Chapter 2: Earth Long Ago	Lesson 1: What is a Fossil	<ul style="list-style-type: none"> Explain how some kinds of fossils are made Describe what fossils are and where they are found 	<ul style="list-style-type: none"> Earth Science 3d: Students know that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying fossils. Investigation and Experimentation 4a: Make 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			<p>predictions based on observed patterns and not random guessing.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	Lesson 2: How Do Scientists Get Fossils?	<ul style="list-style-type: none"> Describe how scientists collect and reconstruct fossils Explain what scientists learn from fossils 	<ul style="list-style-type: none"> Earth Science 3d: Students know that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying fossils. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 3: What Have Scientists Learned About Dinosaurs?	<ul style="list-style-type: none"> Give examples of different kinds of dinosaurs Describe what scientist have learned about 	<ul style="list-style-type: none"> Earth Science 3d: Students know that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist

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		<p>dinosaurs</p>	<p>fossils.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Portfolio
	<p>End of Chapter</p>	<ul style="list-style-type: none"> Recognize that all dinosaurs were not the same size Recognize that scientists continue to find new information about dinosaurs Review chapter concepts 	<ul style="list-style-type: none"> Earth Science 3a: Students know how to compare the physical properties of different kinds of rocks and know that rock is composed of different combinations of minerals. Earth Science 3b: Students know smaller rocks come from the breakage and weathering of larger rocks. Earth Science 3c: Students know that soil is made partly from weathered rock and partly from organic materials and that soils differ in their color, texture, capacity to retain water, and ability to support the growth of many kinds of plants. Earth Science 3d: Students know that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying fossils. Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building 	<ul style="list-style-type: none"> Chapter Test

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			<p>materials, that humans use.</p> <ul style="list-style-type: none">• Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing.• Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units.• Investigation and Experimentation 4c: Compare and sort common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight).• Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations.• Investigation and Experimentation 4e: Construct bar graphs to record data, using appropriately labeled axes.• Investigation and Experimentation 4f: Use magnifiers or microscopes to observe and draw descriptions of small objects or small features of objects.• Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation.	
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Subject/Unit Title: Science				
Estimated Time Frame (#of Days): 30 days				
Unit 2: Exploring Earth’s Surface				
Chapter Title	Lesson Title	Objectives	CA State Standards	Assessments
Chapter 1: Earth’s Resources	Lesson 1: How Do People Use Rocks and Soil?	<ul style="list-style-type: none"> Recognize and describe different kinds of rocks and soil Identify ways people use rocks and soil 	<ul style="list-style-type: none"> Earth Science 3a: Students know how to compare the physical properties of different kinds of rocks and know that rock is composed of different combinations of minerals. Earth Science 3b: Students know smaller rocks come from the breakage and weathering of larger rocks. Earth Science 3c: Students know that soil is made partly from weathered rock and partly from organic materials and that soils differ in their color, texture, capacity to retain water, and ability to support the growth of many kinds of plants. Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4c: Compare and sort common objects according to two or more 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			<p>physical attributes (e. g., color, shape, texture, size, weight).</p> <ul style="list-style-type: none"> Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	Lesson 2: How Do People Use Water?	<ul style="list-style-type: none"> Recognize that living things need water to live and grow Give examples of ways people use water 	<ul style="list-style-type: none"> Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use. Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 3: What Other Natural Resources Do People Use?	<ul style="list-style-type: none"> Identify natural resources that people use Describe ways in which people use plants, minerals, and air 	<ul style="list-style-type: none"> Earth Science 3a: Students know how to compare the physical properties of different kinds of rocks and know that rock is composed of different combinations of minerals. Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			<p>measurements in standard metric system units.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	End of Chapter	<ul style="list-style-type: none"> Write an additional problem to show water use Recognize that artists use natural materials Review chapter concepts 	<ul style="list-style-type: none"> Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4e: Construct bar graphs to record data, using appropriately labeled axes. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	Chapter Test
Chapter 2: Earth Long Ago	Lesson 1: What is a Fossil	<ul style="list-style-type: none"> Explain how some kinds of fossils are made Describe what fossils are and where they are found 	<ul style="list-style-type: none"> Earth Science 3d: Students know that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying fossils. Investigation and Experimentation 4a: Make 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			<p>predictions based on observed patterns and not random guessing.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	Lesson 2: How Do Scientists Get Fossils?	<ul style="list-style-type: none"> Describe how scientists collect and reconstruct fossils Explain what scientists learn from fossils 	<ul style="list-style-type: none"> Earth Science 3d: Students know that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying fossils. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 3: What Have Scientists Learned About Dinosaurs?	<ul style="list-style-type: none"> Give examples of different kinds of dinosaurs Describe what scientist have learned about 	<ul style="list-style-type: none"> Earth Science 3d: Students know that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist

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		dinosaurs	<p>fossils.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Portfolio
	End of Chapter	<ul style="list-style-type: none"> Recognize that all dinosaurs were not the same size Recognize that scientists continue to find new information about dinosaurs Review chapter concepts 	<ul style="list-style-type: none"> Earth Science 3a: Students know how to compare the physical properties of different kinds of rocks and know that rock is composed of different combinations of minerals. Earth Science 3b: Students know smaller rocks come from the breakage and weathering of larger rocks. Earth Science 3c: Students know that soil is made partly from weathered rock and partly from organic materials and that soils differ in their color, texture, capacity to retain water, and ability to support the growth of many kinds of plants. Earth Science 3d: Students know that fossils provide evidence about the plants and animals that lived long ago and that scientists learn about the past history of Earth by studying fossils. Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building 	<ul style="list-style-type: none"> Chapter Test Unit Project

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			<p>materials, that humans use.</p> <ul style="list-style-type: none">• Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing.• Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units.• Investigation and Experimentation 4c: Compare and sort common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight).• Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations.• Investigation and Experimentation 4e: Construct bar graphs to record data, using appropriately labeled axes.• Investigation and Experimentation 4f: Use magnifiers or microscopes to observe and draw descriptions of small objects or small features of objects.• Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation.	
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Subject/Unit Title: Science				
Estimated Time Frame (#of Days): 45 days				
Unit 3: Matter and Motion				
Chapter Title	Lesson Title	Objectives	CA State Standards	Assessments
Chapter 1: Observing and Measuring Matter	Lesson 1: What is Matter?	<ul style="list-style-type: none"> Identify and describe properties of matter Identify three forms or matter-solids, liquids, and gasses 	<ul style="list-style-type: none"> Investigation and Experimentation 4c: Compare and sort common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight). Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 2: What Can We Find Out About Solids?	<ul style="list-style-type: none"> Compare solids and describe how they are alike and different Identify two ways to measure solids 	<ul style="list-style-type: none"> Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4c: Compare and sort common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight). Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			<p>Experimentation 4e: Construct bar graphs to record data, using appropriately labeled axes.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	Lesson 3: What Can We Find Out About Liquids?	<ul style="list-style-type: none"> Identify the two properties all liquids have Identify the ways to measure liquids 	<ul style="list-style-type: none"> Physical Science 1e: Students know objects fall to the ground unless something holds them up. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 4: What Can We Find Out About Cases?	<ul style="list-style-type: none"> Recognize the properties of a gas Identify ways to measure a gas 	<ul style="list-style-type: none"> Physical Science 1a: Students know the position of an object can be described by locating it in relation to another object or to the background. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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	End of Chapter	<ul style="list-style-type: none"> Find and classify classroom objects by shape Recognize why dried fruit has less mass Review chapter concepts 	<p>investigation.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Chapter Test
Chapter 2: Changes in Matter	Lesson 1: What Happens When You Mix Matter?	<ul style="list-style-type: none"> Observe how cutting, shaping, and mixing change matter Describe what happens when matter is cut or mixed 	<ul style="list-style-type: none"> Physical Science 1a: Students know the position of an object can be described by locating it in relation to another object or to the background. Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4g: Follow oral 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			instructions for a scientific investigation.	
	Lesson 2: How Can Water Change?	<ul style="list-style-type: none"> Recognize that water can be a solid, liquid, or gas Describe how water can be made to change from one state to another 	<ul style="list-style-type: none"> Earth Science 3e: Students know rock, water, plants, and soil provide many resources, including food, fuel, and building materials, that humans use. Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 3: What Other Ways Does Matter Change?	<ul style="list-style-type: none"> Identify some changes in matter that are reversible Identify some changes in matter that are irreversible 	<ul style="list-style-type: none"> Physical Science 1f: Students know magnets can be used to make some objects move without being touched. Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			<p>tools and express those measurements in standard metric system units.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4c: Compare and sort common objects according to two or more physical attributes (e. g., color, shape, texture, size, weight). Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4e: Construct bar graphs to record data, using appropriately labeled axes. Investigation and Experimentation 4f: Use magnifiers or microscopes to observe and draw descriptions of small objects or small features of objects. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	End of Chapter	<ul style="list-style-type: none"> Use numbers to determine how much liquid water evaporates Recognize that science is used in a variety of other curriculum areas Review chapter concepts 	<ul style="list-style-type: none"> Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and 	<ul style="list-style-type: none"> Chapter Test

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			<p>Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations.</p> <ul style="list-style-type: none"> Investigation and Experimentation 4e: Construct bar graphs to record data, using appropriately labeled axes. 	
<p>Chapter 3: Forces and Motion</p>	<p>Lesson 1: What Are Forces?</p>	<ul style="list-style-type: none"> Recognize a force as something that pushes or pulls on an object to make it move Identify that a force is used to change the location of an object and the direction it is moving in 	<ul style="list-style-type: none"> Physical Science 1a: Students know the position of an object can be described by locating it in relation to another object or to the background. Physical Science 1c: Students know the way to change how something is moving is by giving it a push or a pull. The size of the change is related to the strength, or the amount of force, of the push or pull. Physical Science 1d: Students know tools and machines are used to apply pushes and pulls (forces) to make things move. Physical Science 1e: Students know objects fall to the ground unless something holds them up. Physical Science 1f: Students know magnets can be used to make some objects move without being touched. Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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	<p>Lesson 2: How Can We Measure Motion?</p>	<ul style="list-style-type: none"> Recognize that weight, friction, and distance affect the force needed to move objects Explain how to measure motion 	<ul style="list-style-type: none"> Physical Science 1b: Students know an object's motion can be described by recording the change in position of the object over time. Physical Science 1c: Students know the way to change how something is moving is by giving it a push or a pull. The size of the change is related to the strength, or the amount of force, of the push or pull. Physical Science 1d: Students know tools and machines are used to apply pushes and pulls (forces) to make things move. Physical Science 1e: Students know objects fall to the ground unless something holds them up. Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	<p>End of Chapter</p>	<ul style="list-style-type: none"> Determine how much force is needed to move an object Recognize that knowledge 	<ul style="list-style-type: none"> Physical Science 1c: Students know the way to change how something is moving is by giving it a push or a pull. The size of the change is related to the strength, or the amount of force, of the 	<ul style="list-style-type: none"> Chapter Test

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		<p>of health is used in a variety of careers</p> <ul style="list-style-type: none"> Review chapter concepts 	<p>push or pull.</p> <ul style="list-style-type: none"> Physical Science 1d: Students know tools and machines are used to apply pushes and pulls (forces) to make things move. Physical Science 1e: Students know objects fall to the ground unless something holds them up. Physical Science 1f: Students know magnets can be used to make some objects move without being touched. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4e: Construct bar graphs to record data, using appropriately labeled axes. 	
Chapter 4: Sound	Lesson 1: What is Sound?	<ul style="list-style-type: none"> Explain what makes sound Identify the body parts people use to make and hear sound 	<ul style="list-style-type: none"> Physical Science 1g: Students know sound is made by vibrating objects and can be described by its pitch and volume. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 2: How Do Sounds Vary?	<ul style="list-style-type: none"> Identify sounds as being either loud or soft Identify sounds as being either high or low 	<ul style="list-style-type: none"> Physical Science 1g: Students know sound is made by vibrating objects and can be described by its pitch and volume. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio

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			<ul style="list-style-type: none"> Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	
	Lesson 3: How Does Sound Travel?	<ul style="list-style-type: none"> Recognize that sound travels through the three forms of matter: gases, liquids, and solids Identify animals that use sound to locate objects and to communicate with one another under water 	<ul style="list-style-type: none"> Physical Science 1a: Students know the position of an object can be described by locating it in relation to another object or to the background. Physical Science 1b: Students know an object's motion can be described by recording the change in position of the object over time. Physical Science 1g: Students know sound is made by vibrating objects and can be described by its pitch and volume. Investigation and Experimentation 4a: Make predictions based on observed patterns and not random guessing. Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. Investigation and Experimentation 4d: Write or draw descriptions of a sequence of steps, events, and observations. Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 4: How Can	<ul style="list-style-type: none"> Describe ways to change 	<ul style="list-style-type: none"> Physical Science 1g: Students know sound is made by vibrating 	<ul style="list-style-type: none"> Lesson Review

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	We Make Different Sounds?	<p>the pitch of sound</p> <ul style="list-style-type: none"> • Explain what causes the loudness of a sound to change 	<p>objects and can be described by its pitch and volume.</p> <ul style="list-style-type: none"> • Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> • Questions • Observation checklist • Portfolio
	End of Chapter	<ul style="list-style-type: none"> • Determine how the force with which a musical triangle is struck affects the duration of its tone • Classify musical instruments as either stringed, percussion, or wind instruments • Review chapter concepts 	<ul style="list-style-type: none"> • Physical Science 1a: Students know the position of an object can be described by locating it in relation to another object or to the background. • Physical Science 1c: Students know the way to change how something is moving is by giving it a push or a pull. The size of the change is related to the strength, or the amount of force, of the push or pull. • Physical Science 1d: Students know tools and machines are used to apply pushes and pulls (forces) to make things move. • Physical Science 1f: Students know magnets can be used to make some objects move without being touched. • Physical Science 1g: Students know sound is made by vibrating objects and can be described by its pitch and volume. • Investigation and Experimentation 4b: Measure length, weight, temperature, and liquid volume with appropriate tools and express those measurements in standard metric system units. • Investigation and Experimentation 4g: Follow oral instructions for a scientific investigation. 	<ul style="list-style-type: none"> • Chapter Test • Unit Project

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Subject/Unit Title: Science				
Estimated Time Frame (#of Days): 30 days				
Extension Chapters				
Chapter Title	Lesson Title	Objectives	CA State Standards (based on 3rd Grade Standards)	Assessments
Chapter 1: The Sun, the Moon, and Stars	Lesson 1: What Causes Day and Night	<ul style="list-style-type: none"> Identify characteristics of the sun Compare day and night. Describe how they occur 	<ul style="list-style-type: none"> Physical Sciences 1a: Students know energy comes from the Sun to Earth in the form of light. Physical Sciences 2a: Students know sunlight can be blocked to create shadows. Physical Sciences 2d: Students know an object is seen when light traveling from the object enters the eye. Earth Science 4a: Students know the patterns of stars stay the same, although they appear to move across the sky nightly, and different stars can be seen in different seasons. Earth Science 4b: Students know the way in which the Moon's appearance changes during the four-week lunar cycle. Earth Science 4c: Students know telescopes magnify the appearance of some distant objects in the sky, including the Moon and the planets. The number of stars that can be seen through telescopes is dramatically greater than the number that can be seen by the unaided eye. Earth Science 4d: Students know that Earth is one of several 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 2: What Causes the Seasons?	<ul style="list-style-type: none"> Describe how Earth orbits the sun Identify the causes of seasons on Earth 		<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 3: How Does the Moon Move and Change?	<ul style="list-style-type: none"> Demonstrate how the reflection of the sun's light enables us to see the moon Explain how sunlight and the moon's orbit around the Earth make the moon appear to change shape 		<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 4: What Can We See in the Night Sky?	<ul style="list-style-type: none"> Identify and compare stars and planets Identify a group of stars as a constellation 		<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	End of Chapter	<ul style="list-style-type: none"> Use a calendar to find the date on which each season begins and to draw a picture that shows the position of the sun and 		<ul style="list-style-type: none"> Chapter Test

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		<p>Earth on that date</p> <ul style="list-style-type: none"> Find north by using the North Star in the same way sailors did long ago Review chapter concepts 	<p>planets that orbit the Sun and that the Moon orbits Earth.</p> <ul style="list-style-type: none"> Earth Science 4e: Students know the position of the Sun in the sky changes during the course of the day and from season to season. 	
Chapter 2: Changes in Habitat	Lesson 1: How Does Weather Change Habitats?	<ul style="list-style-type: none"> Explain how too little rain or too much can change habitats Identify how a fire can change a habitat 	<ul style="list-style-type: none"> Life Science 3c: Students know living things cause changes in the environment in which they live: some of these changes are detrimental to the organism or other organisms, and some are beneficial. Life Science 3d: Students know when the environment changes, some plants and animals survive and reproduce; others die or move to new locations. 	<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 2: How Does Pollution Change Environments?	<ul style="list-style-type: none"> Identify the three main types of pollution Describe ways pollution can harm plants and animals 		<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	Lesson 3: How Do People Help the Environment?	<ul style="list-style-type: none"> Identify ways to keep the environment clean Give examples of ways people can make less pollution 		<ul style="list-style-type: none"> Lesson Review Questions Observation checklist Portfolio
	End of Chapter	<ul style="list-style-type: none"> Use math skills to determine how much paper could be reused Understand how knowledge of social studies helps a scientist Review chapter concepts 		<ul style="list-style-type: none"> Chapter Test Unit Review