



Unit of Study	The sequence of Units of Study provides a coherent flow to science instruction throughout the year.
Interconnections Lessons	Specific lessons, listed in order of which Essential Question they correspond to, are listed in the map to help plan your pacing of material.
Science Content/Language Objectives	The Science Content and Language Objectives are to be posted for each lesson, restated to students during the lesson, and revisited at the end of each lesson. These are written as “I Can” statements.
Key Concepts for Differentiation 	<p>In an effort to assist teachers in the process of differentiation in Tier I teaching, Key Concepts have been identified in the curriculum maps as those specific objectives a teacher would focus on during small group instruction with struggling students.</p> <p>Key concepts cover minimum, basic skills and knowledge every student must master. Key Concepts are <u>not</u> an alternative to teaching the entire Utah Core Standards, rather they emphasize which concepts to prioritize for differentiation.</p>
Vocabulary	Use in word walls, or in science notebooks and graphic organizers.
Additional Resources/Notes	Teachers are encouraged to make notes or jot down resources they find useful for each unit.
Assessment	Each Interconnection lesson has an assessment, but you may also look at more general options such as Exit slips, graphic organizers, class discussion, homework

Unit of Study 1	4 th Grade	Quarter 1 & 2		Science Mar 2013 ed.	
Concepts:		Skills:			
cause-effect, interrelationships, relationships, patterns, cycles		observation, classification, inquiry, prediction, inference, investigation, communication			
Standards:					
<p>Standard I: Students will understand that water changes state as it moves through the water cycle Objective 1: Describe the relationship between heat energy, evaporation and condensation of water on Earth. Objective 2: Describe the water cycle.</p> <p>Standard III: Students will understand the basic properties of rocks, the processes involved in the formation of soils, & the needs of plants provided by the soil. Objective 1: Identify basic properties of minerals and rocks.</p>					
Science Content Objectives	Vocabulary students should use		Lessons		
<ul style="list-style-type: none"> I can describe the relationship between heat energy, evaporation and condensation of water on Earth. I can describe the water cycle.  I can identify basic properties of minerals and rocks. 	<ul style="list-style-type: none"> vapor precipitation evaporation clouds dew 	<ul style="list-style-type: none"> igneous metamorphic topsoil subsoil bedrock 	<u>Essential Question #1</u> <ul style="list-style-type: none"> Water Cycle Utah’s Water Supply Water Cycle Terrarium 		
Science Language Objectives	<ul style="list-style-type: none"> condensation temperature water cycle mineral weathering erosion sedimentary 		<ul style="list-style-type: none"> organism freeze thaw profile nonliving structural support nutrients 	<u>Essential Question #2</u>	
<ul style="list-style-type: none"> Refer to details and examples in science text when explaining what the text says. Explain procedures in a scientific text. Determine the meaning of science specific words in a text. Interpret information presented visually, orally or quantitatively. Read and comprehend science texts. Write informative texts to examine a topic. Write narratives about experiences. Use technology to produce writing. Conduct short research projects. Draw evidence from texts to support analysis. Engage in collaborative discussions. Report on a topic 			<ul style="list-style-type: none"> The Rock Cycle* Igneous Rocks* Sedimentary Rocks* Metamorphic Rocks* <u>Essential Question #3</u> <ul style="list-style-type: none"> What Kind of Rock Am I?* <p>Quarter 2:</p> <u>Essential Question #4</u> <ul style="list-style-type: none"> Classifying Rocks & Minerals* Mineral Mining* <p><i>*Key Concepts covered in these lessons.</i></p> <p>Additional Resources:</p>		
<p>Assessment Options: Interconnections lessons-each lesson contains an assessment General: Homework, lab notebooks, quiz, class discussion, projects, graphic organizers</p>					

Unit of Study 2	4 th Grade	Quarter 2	Science Mar 2013 ed.		
Concepts:		Skills:			
cause-effect, interrelationships, relationships, patterns, cycles		observation, classification, inquiry, prediction, inference, investigation, communication			
Standards:					
<p>Standard III: Students will understand the basic properties of rocks, the processes involved in the formation of soils, & the needs of plants provided by soil.</p> <p>Objective1: Identify basic properties of minerals and rocks</p> <p>Objective 2: Explain how the process of weathering and erosion change and move materials that become soil.</p> <p>Objective 3: Observe the basic components of soil and relate to plant growth.</p> <p>Standard IV: Students will understand how fossils are formed, where they may be found in Utah and how they can be used to make inferences.</p> <p>Objective 1: Describe Utah fossils and explain how they were formed.</p> <p>Objective 2: Explain how fossils can be used to make inferences about past life, climate, geology, and environment.</p>					
Science Content Objectives		Vocabulary students should use		Lessons	
<ul style="list-style-type: none"> 🔑 I can identify basic properties of minerals and rocks 🔑 I can explain how the process of weathering and erosion change and move materials that become soil. • I can observe the basic components of soil and relate to plant growth. 🔑 I can describe Utah fossils and explain how they were formed. • I can explain how fossils can be used to make inferences about past life, climate, geology, and environment. 		<ul style="list-style-type: none"> • mineral • weathering • erosion • sedimentary • igneous • metamorphic • topsoil 		<ul style="list-style-type: none"> • subsoil • bedrock • organism • freeze • thaw • profile • nonliving 	<p><u>Essential Question #1</u> Rocks and Minerals of Utah*</p> <p>What is Soil? Fossils*</p> <p><u>Essential Question #3</u> Weathering* Erosion*</p> <p><i>* Key Concepts covered in these lessons.</i></p> <p>Additional Resources:</p>
Science Language Objectives					
<ul style="list-style-type: none"> • Refer to details and examples in science text. • Explain procedures in a scientific text. • Determine the meaning of science specific words in a text. • Interpret information presented visually, orally or quantitatively. • Read and comprehend science texts. • Write informative texts to examine a topic. • Write narratives about experiences. • Use technology to produce writing. • Conduct short research projects. • Draw evidence from texts to support analysis. • Engage in collaborative discussions. • Report on a topic 					
<p>Assessment Options: Interconnections lessons-each lesson contains an assessment</p> <p>General: Homework, lab notebooks, quiz, class discussion, projects, graphic organizers</p>					
Unit of Study 3	4 th Grade	Quarter 3	Science Mar 2013 ed.		



Concepts:	Skills:
cause-effect, interrelationships, relationships, patterns, cycles	observation, classification, inquiry, prediction, inference, investigation, communication

Standards:

Standard II: Students will understand that the elements of weather can be observed, measured, and recorded to make predictions and determine simple weather patterns.
 Objective 1: Observe, measure, and record the basic elements of weather.
 Objective 2: Interpret recorded weather data for simple patterns.
 Objective 3: Evaluate weather predictions based upon observational data.
Standard V: Students will understand the physical characteristics of Utah’s wetlands, forests, & deserts and identify common organisms for each environment.
 Objective 2: Describe the common plants & animals found in Utah environments and how these organisms have adapted to the environment in which they live.

Science Content Objectives	Vocabulary students should use		Lessons
<ul style="list-style-type: none"> 🔑 I can observe, measure, and record the basic elements of weather. 🔑 I can interpret recorded weather data for simple patterns. • I can evaluate weather predictions based upon observational data. 🔑 I can describe the common plants and animals found in Utah environments and how these organisms have adapted to the environment in which they live. 	<ul style="list-style-type: none"> • atmosphere • meteorologist • freezing • cumulus • stratus • cirrus • air pressure • thermometer • air temperature • wind speed 	<ul style="list-style-type: none"> • forecast • severe • phenomena • precipitation • seasonal • accuracy • barometer • rain gauge • components 	<p><u>Essential Question #2</u></p> <ul style="list-style-type: none"> • Endangered Species* <p><u>Essential Question #3</u></p> <ul style="list-style-type: none"> • Basic Cloud Types* • Weather Instruments* • Weather Lab* • Severe Weather* <p><u>Essential Question #4</u></p> <ul style="list-style-type: none"> • Weather Forecasting • Utah’s Seasonal Weather Patterns <p><i>*Key Concepts covered in these lessons.</i></p> <p>Additional Resources:</p>
Science Language Objectives			
<ul style="list-style-type: none"> • Refer to details and examples in science text. • Explain procedures in a scientific text. • Determine the meaning of science specific words in a text. • Interpret information presented visually, orally or quantitatively. • Read and comprehend science texts. • Write informative texts to examine a topic. • Write narratives about experiences. • Use technology to produce writing. • Conduct short research projects. • Draw evidence from texts to support analysis. • Engage in collaborative discussions. • Report on a topic 			

Assessment Options: Interconnections lessons-each lesson contains an assessment
General: Homework, lab notebooks, quiz, class discussion, projects, graphic organizers

Unit of Study 4	4 th Grade	Quarter 4		Science Mar 2013 ed.
Concepts:		Skills:		
cause-effect, interrelationships, relationships, patterns, cycles		observation, classification, inquiry, prediction, inference, investigation, communication		
Standards:				
<p>Standard V: Students will understand the physical characteristics of Utah’s wetlands, forests, and deserts and identify common organisms for each environment.</p> <p>Objective 1: Describe the physical characteristics of Utah’s wetlands, forests, and deserts.</p> <p>Objective 3: Use a simple scheme to classify Utah plants and animals.</p>				
Science Content Objectives		Vocabulary students should use		Lessons
 I can describe the physical characteristics of Utah’s wetlands, forests, and deserts.  I can use a simple scheme to classify Utah plants and animals.	<ul style="list-style-type: none"> • wetland • forest • desert • adaptation • deciduous • coniferous • invertebrate • vertebrate 	<ul style="list-style-type: none"> • bird • amphibian • reptile • fish • mammal • insect • hibernation • migration 	<p><u>Essential Question #1</u></p> <ul style="list-style-type: none"> • Plant & Animal Classification* • Spiders & Insects* <p><u>Essential Question #2</u></p> <ul style="list-style-type: none"> • Utah’s Environments* • Wetland Adaptation & Migration* • Bird Adaptations and Behavior* <p><i>*Key Concepts covered in these lessons.</i></p> <p>Additional Resources:</p>	
<p>Science Language Objectives</p> <ul style="list-style-type: none"> • Refer to details and examples in science text when explaining what the text says. • Explain procedures in a scientific text. • Determine the meaning of science specific words in a text. • Interpret information presented visually, orally or quantitatively. • Read and comprehend science texts. • Write informative texts to examine a topic. • Write narratives about experiences. • Use technology to produce writing. • Conduct short research projects. • Draw evidence from texts to support analysis. • Engage in collaborative discussions. • Report on a topic 				
<p>Assessment Options: Interconnections lessons-each lesson contains an assessment</p> <p>General: Homework, lab notebooks, quiz, class discussion, projects, graphic organizers</p>				