



Cocalico School District
Course Curriculum Details
Course: Science - 02

Area: Physical Science

Big Idea: S4.C.1 Structure, Properties, and Interaction of Matter and Energy

(Reference: 3.2.4.B, 3.4.4.A)

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: S4.C.1.1 Describe observable physical properties of matter.					
<ul style="list-style-type: none"> S4.C.1.1.1 S4.C.1.1.2 	<ul style="list-style-type: none"> Use physical properties [(e. g., mass, shape, size, volume, color, texture, magnetism, state (i.e., solid, liquid, or gas), conductivity (i.e., electrical or heat))] to describe matter. Categorize/group objects using physical characteristics. 	<ul style="list-style-type: none"> matter property mass solid texture centimeter liquid volume milliliter mixture evaporation water vapor condensation burning 	<ul style="list-style-type: none"> Measure a Solid p. 370-371 (E.9.2) Measure a Liquid p. 380-381 (E.9.3) Measure a Gas p. 388-389 (E.9.4) Observe Air p. 391 (E.9.4) Mix It Up p. 405 (E.10.1) What Freezing Does p. 412-413 (E.10.2) Which Melts Faster p. 416 (E.10.2) 	<ul style="list-style-type: none"> 4 objects, balance colored water, measuring cup, 3 different size containers, black marker balance, balloon filled with air, balloon not filled with air bowl of water, paper towel, clear plastic cup cornstarch, water, pie tin, spoon, paper towels plastic tub with lid, water, marker ice cubes, plastic plates, lamp, clock 	<ul style="list-style-type: none"> HSP Assessments



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Area: Earth Science

Big Idea: S4.D.1 Earth Features and Processes that Change Earth and Its Resource (Reference: 3.5.4.A-B, 3.5.4.D, 4.1.4.A, 4.1.4.D-E, 4.2.4.B, 4.8.4.D)

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: S4.D.1.1 Describe basic landforms in Pennsylvania.					
<ul style="list-style-type: none"> S4.D.1.1.1 S4.D.1.1.2 S4.D.1.1.3 	<ul style="list-style-type: none"> Describe how prominent Earth features in Pennsylvania (e.g., mountains, valleys, caves, sinkholes, lakes, rivers) were formed. Identify various Earth structures (e.g., mountains, watersheds, peninsulas, lakes, rivers, valleys) through the use of models. Describe the composition of soil as weathered rock and decomposed organic remains. 	<ul style="list-style-type: none"> weathering erosion earthquake volcano boulder mineral soil 	<ul style="list-style-type: none"> How Land Shapes Change p. 198-199 (C.5.1) Make A Model p. 203 (C.5.1) Hardness of Minerals p. 208-209 (C.5.2) 	<ul style="list-style-type: none"> rock salt, hand lens, forceps, spoon, jar of sand, water clay of different colors, cardboard minerals, penny, paperclip 	<ul style="list-style-type: none"> HSP Assessments
Objective: 2: S4.D.1.2 Identify the types and uses of Earth's resources.					
<ul style="list-style-type: none"> S4.D.1.2.1 S4.D.1.2.3 	<ul style="list-style-type: none"> Identify products and by-products of plants and animals for human use (e.g., food, clothing, building materials, paper products). Recognize ways that humans benefit from the use of water resources (e.g., agriculture, energy, recreation). 	<ul style="list-style-type: none"> resource natural resource 	<ul style="list-style-type: none"> Ways We Use Water p. 234-235 (C.6.1) Make A List p. 241 (C.6.1) 	<ul style="list-style-type: none"> paper, pencil 	<ul style="list-style-type: none"> HSP Assessments



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Area: Earth Science

Big Idea: S4.D.1 Earth Features and Processes that Change Earth and Its Resource (Reference: 3.5.4.A-B, 3.5.4.D, 4.1.4.A, 4.1.4.D-E, 4.2.4.B, 4.8.4.D)

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 3: S4.D.1.3 Describe Earth's different sources of water or describe changes in the form of water.					
<ul style="list-style-type: none">S4.D.1.3.2	<ul style="list-style-type: none">Explain how water goes through phase changes (i.e., evaporation, condensation, freezing, and melting).	<ul style="list-style-type: none">evaporationwater vaporcondensation	<ul style="list-style-type: none">What Freezing Does p. 412 -413 (E.10.2)Which Melts Faster p. 416 (E.10.2)	<ul style="list-style-type: none">plastic tub with lid, water, markerice cubes, plastic plates, lamp, clock	<ul style="list-style-type: none">HSP Assessments



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Course: Science - 02

Area: Life Science

Big Idea: S4.B.1 Structure and Function of Organisms (Reference: 3.3.4.A-B, 4.3.4.A, 4.3.4.C, 4.6.4.A)

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: S4.B.1.1 Identify and describe similarities and differences between living things and their life processes.					
<ul style="list-style-type: none"> • S4.B.1.1.1 • S4.B.1.1.2 • S4.B.1.1.3 • S4.B.1.1.4 • S4.B.1.1.5 	<ul style="list-style-type: none"> • Identify life processes of living things (e.g., growth, digestion, respiration). • Compare similar functions of external characteristics of organisms (e.g., anatomical characteristics: appendages, type of covering, body segments). • Describe basic needs of plants and animals (e.g., air, water, food). • Describe how different parts of a living thing work together to provide what the organism needs (e.g., parts of plants: roots, stems, leaves). • Describe the life cycles of different organisms (e.g., moth, grasshopper, frog, seed-producing plant). 	<ul style="list-style-type: none"> • living • oxygen • nonliving • survive • shelter • nutrients 	<ul style="list-style-type: none"> • Living or Nonliving p. 52-53 (A.1.1) • Clay Nest p. 63 (A.1.2) • What Plants Need to Grow p. 68-69 (A.1.3) • Compare Hair and Feathers p. 82-83 (A.2.1) • Classify Animals p. 92-93 (A.2.2) • Sequence Animal Lives p. 102-103 (A.2.3) • A Dragonfly's Life Cycle p. 107 (A.2.3) 	<ul style="list-style-type: none"> • paper, pencil • clay • 2 plants, cup of water • feathers, hand lens • animal picture sorting cards, index cards • picture sorting cards • 3 dragonfly picture cards 	<ul style="list-style-type: none"> • HSP Assessments



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Area: Life Science

Big Idea: S4.B.3. Ecological Behavior and Systems (Reference: 3.1.4.E, 3.8.4.C, 4.2.4.C, 4.3.4.B-C, 4.4.4.B, 4.5.4.C, 4.6.4.C, 4.6.4.A)

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: S4.B.3.1 Identify and describe living and nonliving things in the environment and their interaction.					
<ul style="list-style-type: none"> S4.B.3.2.1 	<ul style="list-style-type: none"> Describe what happens to a living thing when its habitat is changed. 	<ul style="list-style-type: none"> dinosaur extinct fossil 	<ul style="list-style-type: none"> Uncovering Fossils p. 218 -219 (C.5.3) Make a Print in Clay p. 223 (C.5.3) 	<ul style="list-style-type: none"> small objects, clay, tools clay, small objects (shells, stones, coins) 	<ul style="list-style-type: none"> HSP Assessments
Objective: 2: S4.B.3.3 Identify or describe human reliance on the environment at the individual or the community level.					
<ul style="list-style-type: none"> S4.B.3.3.4 S4.B.3.3.5 	<ul style="list-style-type: none"> Identify major land uses in the urban, suburban and rural communities (e.g., housing, commercial, recreation). Describe the effects of pollution (e.g., litter) in the community. 	<ul style="list-style-type: none"> resource natural resource pollution 	<ul style="list-style-type: none"> Ways We Use Water p. 234 -235 (C.6.1) What Happens to Pollution p. 246-247 (C.6.2) Model an Oil Spill p. 249 (C.6.2) 	<ul style="list-style-type: none"> paper, pencil shoebox filled with soil, trash, shovel, water jar, water, oil, feathers 	<ul style="list-style-type: none"> HSP Assessments



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Area: Science Readiness

Big Idea: S4.A.1 Reasoning and Analysis (Reference: 3.1.4.C, 3.1.4.E, 3.2.4.A, 3.2.4.C, 3.8.4.C, 4.7.4.B, 4.8.4.A, 4.8.4.C)

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
<p>Objective: 1: <i>S4.A.1.1.2 Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment.</i></p>					
<ul style="list-style-type: none"> S4.A.1.1.2 	<ul style="list-style-type: none"> Identify and describe examples of common technological changes past to present in the community (e.g., energy production, transportation, communications, agriculture, packaging materials) that have either positive or negative impacts on society or the environment. 	<ul style="list-style-type: none"> inquiry skills science tools investigate 	<ul style="list-style-type: none"> Scientist Biographies 	<ul style="list-style-type: none"> End of each chapter 	



Cocalico School District
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Course: Science - 02

Area: Science Readiness

Big Idea: S4.A.2 Processes, Procedures, and Tools of Scientific Investigations (Reference: 3.2.4.C-D, 3.7.4.A-B)

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: S4.A.2.1 Apply skills necessary to conduct an experiment or design a solution to solve a problem.					
<ul style="list-style-type: none"> S4.A.2.1.1 S4.A.2.1.2 S4.A.2.1.4 	<ul style="list-style-type: none"> Generate questions about objects, organisms, or events that can be answered through scientific investigations. Design and describe an investigation (a fair test) to test one variable. State a conclusion that is consistent with the information/data. 	<ul style="list-style-type: none"> inquiry skills science tools investigate 	<ul style="list-style-type: none"> How Many Pennies p. 4-5 (RSS.1) Stacking Pennies p. 11 (RSS.1) Equal Coins p. 28-29 (RSS.3) 	<ul style="list-style-type: none"> pennies, plastic jar pennies, tray quarter, 5 nickels, balance 	
Objective: 2: S4.A.2.2 Identify appropriate instruments for a specific task and describe the information the instrument can provide.					
<ul style="list-style-type: none"> S4.A.2.2.1 	<ul style="list-style-type: none"> Identify appropriate tools or instruments for specific tasks and describe the information they can provide (e.g., measuring: length-ruler, mass-balance scale, volume-beaker, temperature-thermometer; making observations: hand lens, binoculars, telescope). 	<ul style="list-style-type: none"> inquiry skills scientific tools investigation 	<ul style="list-style-type: none"> Drops of Water on a Penny p. 16-17 (RSS.2) 	<ul style="list-style-type: none"> dropper, cup of water, coin 	



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Area: Science Readiness

Big Idea: S4.A.3 Systems, Models, and Patterns (Reference: 3.1.4.A-C, 3.2.4.B, 3.6.4.A-C, 4.3.4.C, 4.4.4.C, 4.6.4.A-B)

PA/Common Core Standards	Assessment Anchors/ Eligible Content	Key Vocabulary	Learning Activities	Materials/ Resources/ Technology Tools	Common Summative Assessments/ Targeted Outcomes
Objective: 1: S4.A.3.1 Identify systems and describe relationships among parts of a familiar system (e.g., digestive system, simple machines, water cycle).					
<ul style="list-style-type: none">S4.A.3.1.2	<ul style="list-style-type: none">Explain a relationship between the living and nonliving components in a system (e.g., food web, terrarium).	<ul style="list-style-type: none">livingnonlivingoxygen	<ul style="list-style-type: none">Living or Nonliving p. 52-53 (A.1.1)	<ul style="list-style-type: none">paper, pencil	