Inquiry Investigations™ Environmental Issues and Solutions MODULE - 1287226

Grades: 7-10

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Hawaii Content and Performance Standards Science Grade 7

| | | Grade / |
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| | HI.SC.7.1. | The Scientific Process: SCIENTIFIC INVESTIGATION: Discover, |
| / COURSE | | invent, and investigate using the skills necessary to engage in |
| | | the scientific process |
| / PERFORMANCE INDICATOR | SC.7.1.1. | Scientific Inquiry: Design and safely conduct a scientific investigation to answer a question or test a hypothesis |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 |

| | | Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web |
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| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on |
| | | Dissolved Oxygen |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.7.1.3. | Scientific Knowledge: Explain the need to revise conclusions and explanations based on new scientific evidence |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes |
| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 |

| | | Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| CONTENT STANDARD / COURSE | HI.SC.7.3. | Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT: Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.7.3.1. | Cycles of Matter and Energy: Explain how energy moves through food webs, including the roles of photosynthesis and cellular respiration • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web • Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization • Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids • Teacher Resource CD: Air, Water, and Soils • Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.7.3.2. | Interdependence: Explain the interaction and dependence of organisms on one another • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey |

| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web |
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| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Teacher Resource CD: Ecosystems, Energy, and |
| | | Biodiversity |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.7.3.3. | Interdependence: Explain how biotic and abiotic factors affect the carrying capacity and sustainability of an ecosystem |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and |
| | | Biodiversity |
| CONTENT STANDARD / COURSE | HI.SC.7.4. | Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS: Understand the structures and functions of living organisms and how organisms can be compared scientifically |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.7.4.2. | Cells, Tissues, Organs, and Organ Systems: Describe the basic structure and function of various types of cells |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.7.4.3. | Cells, Tissues, Organs, and Organ Systems: Describe the levels of organization in organisms |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.7.4.4. | Classification: Classify organisms according to their degree of relatedness |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey |
| CONTENT STANDARD / COURSE | HI.SC.7.5. | Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION: Understand genetics and biological evolution and their impact on the unity and diversity of organisms |
| CONTENT STANDARD / PERFORMANCE | SC.7.5.4. | Unity and Diversity: Analyze how organisms' body structures |

| INDICATOR | contribute to their ability to survive and reproduce Environmental Issues and Solutions: Unit 1 Lab 2 |
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| | Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and |
| | Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet |
| | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey |
| | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web |

Hawaii Content and Performance Standards Science Grade 8

| CONTENT STANDARD / COURSE | HI.SC.8.1. | The Scientific Process: SCIENTIFIC INVESTIGATION: Discover, invent, and investigate using the skills necessary to engage in the scientific process |
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| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.8.1.1. | Scientific Inquiry: Determine the link(s) between evidence and the conclusion(s) of an investigation Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water |

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| CONTENT STANDARD / | SC.8.1.2. | Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| | | Virtual Laboratory: The Effect of Temperature on |
| | | Dissolved Oxygen |
| | SC.8.1.2. | Scientific Inquiry: Communicate the significant components of |
| PERFORMANCE INDICATOR | | the experimental design and results of a scientific investigation |
| | | the experimental design and results of a scientific investigation • Environmental Issues and Solutions: Unit 1 Lab 1 |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global |
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| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens |

| | Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| CONTENT STANDARD / COURSE | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated |
| CONTENT STANDARD / PERFORMANCE INDICATOR | Science, Technology, and Society: Describe significant relationships among society, science, and technology and how one impacts the other • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming • Environmental Issues and Solutions: Unit 1 Lab 5 |

| | | Activity 1: Modeling Salt Runoff Discharge |
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| | | Teacher Resource CD: Environmental Issues |
| | | Teacher Nessuarce CD. Elivironintental issues |
| CONTENT STANDARD / | SC.8.2.2. | Unifying Concepts and Themes: Describe how scale and |
| PERFORMANCE | 30.0.2.2. | mathematical models can be used to support and explain |
| INDICATOR | | scientific data |
| | | |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 |
| | | Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments |
| | | Environmental Issues and Solutions: Unit 1 Lab 4 |
| | | Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 |
| | | Activity 1: Modeling Salt Runoff Discharge |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Ashirity 3. Constructions a Productor Prov. Food Web. |
| | | Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 9 |
| | | Activity 1: Food Web Organization |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 3: A Classe Lack at Engage Direction Activity 3: A Classe Direction Activity 4: A Classe Direction Acti |
| | | Activity 2: A Closer Look at Energy Pyramids |
| CONTENT STANDARD / | HI.SC.8.5. | Life and Environmental Sciences: DIVERSITY, GENETICS, AND |
| COURSE | | EVOLUTION: Understand genetics and biological evolution and their impact on the unity and diversity of organisms |
| CONTENT STANDARD / | SC.8.5.1. | Biological Evolution: Describe how changes in the physical |
| PERFORMANCE INDICATOR | | environment affect the survival of organisms |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 3: Examining Oil-Degrading Microbes |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 |
| | | Activity 1: Modeling Salt Runoff Discharge |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - |
| | | Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 |
| | | Activity 3: Soil Testing For Nitrogen, pH, and |
| | | PhosphatesEnvironmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 3: Determining the LD50 of a Water |
| | | Pollutant |
| | | Teacher Resource CD: Environmental Issues |
| CONTENT CTANDARD | III CC 0 0 | Dhysical Forth and Space Sciences, FADTH AND SDACE |
| COURSE | HI.3C.8.8. | Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE: Understand the Earth and its processes, the solar system, and the universe and its contents |
| CONTENT STANDARD / | SC.8.8.6. | Forces that Shape the Earth: Explain the relationship between |
| PERFORMANCE INDICATOR | | density and convection currents in the ocean and atmosphere |
| | | Teacher Resource CD: Air, Water, and Soils |
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Grade 9

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| CONTENT STANDARD / COURSE | HI.SC.PS. | Physical Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.PS.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PS.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technologies have influenced society |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 4 |
| | | Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| | | Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PS.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments |
| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| | | Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD / COURSE | HI.SC.PS. | Physical Science |
| CONTENT STANDARD / PERFORMANCE | SC.PS.6. | Physical, Earth and Space Science: NATURE OF MATTER AND ENERGY: Understand the nature of matter and energy, forms |
| INDICATOR | | of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe |
| PERFORMANCE INDICATOR / GRADE | SC.PS.6.1. | Energy and its Transformation: Describe endothermic and exothermic chemical reactions |
| LEVEL EXPECTATION | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| PERFORMANCE INDICATOR / GRADE | SC.PS.6.8. | Nature of Matter: Describe interactions among molecules |
| INDICATOR / GRADE | | |

| LEVEL EXPECTATION | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
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| CONTENT STANDARD / COURSE | HI.SC.BS. | Biological Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.BS.1. | The Scientific Process: SCIENTIFIC INVESTIGATION: Discover, invent, and investigate using the skills necessary to engage in the scientific process |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.1.2. | Scientific Inquiry: Design and safely implement an experiment, including the appropriate use of tools and techniques to organize, analyze, and validate data |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 3: Examining Oil-Degrading Microbes • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 |
| | | Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf |

| | | Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.1.4. | Scientific Inquiry: Determine the connection(s) among hypotheses, scientific evidence, and conclusions Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of Activity 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and |

| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.1.5. | Scientific Inquiry: Communicate the components of a scientific investigation, using appropriate techniques Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured |

| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis |
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| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| | | Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.1.7. | Scientific Knowledge: Revise, as needed, conclusions and explanations based on new evidence |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes |
| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 |

| | | Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| CONTENT STANDARD / COURSE | HI.SC.BS. | Biological Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.BS.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technology have influenced society Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments |

| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.2.2. | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
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| CONTENT STANDARD | HI.SC.BS. | Biological Science |
| COURSE CONTENT STANDARD | SC.BS.3. | Life and Environmental Sciences: ORGANISMS AND THE |
| / PERFORMANCE INDICATOR | JC.DJ.J. | ENVIRONMENT: Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment |
| PERFORMANCE | SC.BS.3.1. | Cycles of Matter and Energy: Describe biogeochemical cycles within |
| INDICATOR / GRADE LEVEL EXPECTATION | 30.03.3.1. | ecosystems |
| INDICATOR / GRADE | 36.03.3.1. | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global |
| INDICATOR / GRADE | 30.03.3.1. | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| INDICATOR / GRADE | 30.03.3.1. | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| INDICATOR / GRADE | 30.03.3.1. | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 |
| INDICATOR / GRADE | 30.03.3.1. | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and |
| INDICATOR / GRADE | 30.03.3.1. | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| INDICATOR / GRADE | SC.BS.3.2. | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and |
| INDICATOR / GRADE LEVEL EXPECTATION PERFORMANCE INDICATOR / GRADE | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and Biodiversity Cycles of Matter and Energy: Explain the chemical reactions that occur in photosynthesis and cellular respiration that result in cycling of energy Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| INDICATOR / GRADE LEVEL EXPECTATION PERFORMANCE INDICATOR / GRADE | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and Biodiversity Cycles of Matter and Energy: Explain the chemical reactions that occur in photosynthesis and cellular respiration that result in cycling of energy Environmental Issues and Solutions: Unit 3 Lab 9 |

| | | Biodiversity |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.3.3. | Cycles of Matter and Energy: Explain how matter and energy flow through living systems and the physical environment • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming • Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web • Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization • Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids • Teacher Resource CD: Air, Water, and Soils |
| | | Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.3.4. | Interdependence: Explain dynamic equilibrium in organisms, populations, and ecosystems; explain the effect of equilibrium shifts Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and Biodiversity Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD | | Biological Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.BS.4. | Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS: Understand the structures and functions of living organisms and how organisms can be compared scientifically |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.4.1. | Cells, Tissues, Organs, and Organ Systems: Describe different cell parts and their functions • Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |

| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.4.6. | Classification: Explain the organization of life on Earth using the modern classification system • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| CONTENT STANDARD / COURSE | HI.SC.BS. | Biological Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.PS.5. | Life and Environmental Sciences: DIVERSITY, GENETICS, AND EVOLUTION: Understand genetics and biological evolution and their impact on the unity and diversity of organisms |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.5.3. | Unity and Diversity: Explain the structural properties of DNA and the role of DNA in heredity and protein synthesis |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.5.5. | Unity and Diversity: Explain chromosomal mutations, their possible causes, and their effects on genetic variation |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| CONTENT STANDARD / COURSE | HI.SC.ES. | Earth Space Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ES.2.1. | Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 |
| | | Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 |
| | | Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 |
| | | Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ES.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ES.2.3. | Ecience, Technology, and Society: Explain the impact of humans on the Earth system Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Cal Rain and |

| | | Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Teacher Resource CD: Environmental Issues Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| PERFORMANCE INDICATOR / GRADE | SC.ES.2.4. | Science, Technology, and Society: Describe technologies used to collect information about the universe |
| LEVEL EXPECTATION | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |

| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
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| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 |
| | | Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 |
| | | Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| CONTENT STANDARD / | HI.SC.ES. | Earth Space Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ES.8. | Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE: Understand the Earth and its processes, the solar system, and the universe and its contents |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ES.8.1. | Forces that Shape the Earth: Describe how elements and water move through solid Earth, the oceans, atmosphere, and living things as part of geochemical cycles |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| | | Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| PERFORMANCE INDICATOR / GRADE | SC.ES.8.4. | Forces that Shape the Earth: Describe how heat and energy transfer |

| LEVEL EXPECTATION | | into and out of the atmosphere and their involvement in global climate |
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| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Teacher Resource CD: Air, Water, and Soils |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ES.8.6. | Forces that Shape the Earth: Describe how winds and ocean currents are produced on the Earth's surface Teacher Resource CD: Air, Water, and Soils |
| CONTENT STANDARD / COURSE | HI.SC.PH. | Physics |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.PH.1. | Scientific Investigation - Discover, invent, and investigate using the skills necessary to engage in the scientific process |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.1.10. | Using Mathematics: Use quadratic equations and simple trigonometric, exponential, and logarithmic functions to solve problems |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| CONTENT STANDARD / COURSE | HI.SC.PH. | Physics |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.PH.2. | Nature of Science - Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technologies have influenced society Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE | SC.PH.2.2. | Science, Technology, and Society: Compare the risks and benefits of |

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| LEVEL EXPECTATION | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD / COURSE | HI.SC.PH. | Physics |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.PH.3. | Matter and Energy Conservation - Understand the nature of momentum and energy transformations |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.3.1. | Matter: Measure or determine physical quantities such as density and mass of samples |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| CONTENT STANDARD / COURSE | HI.SC.PH. | Physics |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.PH.5. | Heat and Thermodynamics - Understand the laws of thermodynamics, and their applications |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.5.1. | Heat and Temperature: Explain that heat flow and work are two forms of energy transfer between systems |
| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.5.2. | Heat and Temperature: Differentiate between heat, specific heat, and temperature |
| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| CONTENT STANDARD / COURSE | HI.SC.CH. | Chemistry |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.CH.2. | Nature of Science - Understand that science, technology, and society are interrelated |

| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.CH.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technologies have influenced society |
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| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.CH.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD A | HI.SC.CH. | Chemistry |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.CH.3. | Properties of Matter -Understand different states of matter |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.CH.3.2. | Acids and Bases: Use the pH scale to characterize acid and base solutions Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
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| CONTENT STANDARD A COURSE CONTENT STANDARD | | Chemistry Atomic Structure and Bonding - Understand properties of the |

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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.CH.4.10. | Nature of Matter: Identify and explain physical properties of substances (e.g. melting points, boiling points, and volatility) based on the strength of molecular attractions • Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| CONTENT STANDARD / COURSE | HI.SC.CH. | Chemistry |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.CH.5. | Chemical Reactions - Understand the nature of chemical interactions and solutions |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.CH.5.8. | Solutions: Distinguish between pure substances and mixtures based on physical properties (e.g. boiling point, melting point, and density) Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| CONTENT STANDARD / COURSE | HI.SC.ENV. | Environmental Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ENV.1. | Scientific Investigation - Discover, invent, and investigate using the skills necessary to engage in the scientific process |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.1.2. | Scientific Inquiry: Design and safely implement an experiment, including the appropriate use of tools and techniques to organize, analyze, and validate data Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |

| Environmental Issues and Solutions: Unit 3 Lab 11 | | | |
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| INDICATOR / GRADE LEVEL EXPECTATION • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming | | | Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on |
| Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming | INDICATOR / GRADE | SC.ENV.1.4. | scientific evidence, and conclusions |
| The state of the s | | | Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global |
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| | | Activity 1: Modeling Salt Runoff Discharge |
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| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and |
| | | PhosphatesEnvironmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids |
| | | • Environmental Issues and Solutions: Unit 4 Lab 12 |
| | | Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 |
| | | Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 |
| | | Activity 3: Evaluating the Health of an EcosystemVirtual Laboratory: The Effect of Temperature on |
| | | Dissolved Oxygen |
| PERFORMANCE | SC.ENV.1.5. Scient | entific Inquiry: Communicate the components of a scientific |
| INDICATOR / GRADE LEVEL EXPECTATION | | estigation, using appropriate techniques |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 |
| | | Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 1: Biodegrading a Simulated Oil Spill |

- Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments
- Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes
- Environmental Issues and Solutions: Unit 1 Lab 4
 Activity 1: The Greenhouse Effect and Global Warming
- Environmental Issues and Solutions: Unit 1 Lab 5
 Activity 1: Modeling Salt Runoff Discharge
- Environmental Issues and Solutions: Unit 2 Lab 6
 Activity 1: Identifying Airborne Pollutants
- Environmental Issues and Solutions: Unit 2 Lab 6
 Activity 2: Observing Air Pollution Indicators Lichens
- Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis
- Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability
- Environmental Issues and Solutions: Unit 2 Lab 7
 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates
- Environmental Issues and Solutions: Unit 2 Lab 8
 Activity 1: How Water Pollutants Are Measured
- Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis
- Environmental Issues and Solutions: Unit 2 Lab 8
 Activity 3: Determining the LD50 of a Water
 Pollutant
- Environmental Issues and Solutions: Unit 2 Lab 8
 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants
- Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet
- Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey
- Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web
- Environmental Issues and Solutions: Unit 3 Lab 11
 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems
- Environmental Issues and Solutions: Unit 3 Lab 11
 Activity 2: Determining the Carrying Capacity of a Population
- Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization
- Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids
- Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant
- Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution
- Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem
- Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen

| INDICATOR / GRADE | based on new evidence |
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| INDICATOR / GRADE LEVEL EXPECTATION | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 |
| | Activity 2: Identifying Owl Prey |
| | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web |
| | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems |
| | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | • Environmental Issues and Calutions, Unit 2 Lab 0 |

Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids

Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant

| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| CONTENT STANDARD / COURSE | HI.SC.ENV. | Environmental Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ENV.2. | Nature of Science - Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technology have influenced society Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD / COURSE | HI.SC.ENV. | Environmental Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ENV.3. | Earth Science - Understand the physical systems of the earth. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.3.4. | Forces that shape the earth: Compare different methods of generating electricity (e.g., fossil fuels, nuclear) |

| CONTENT STANDARD / | HLSC, ENV. | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Teacher Resource CD: Environmental Issues |
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| COURSE | | |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ENV.4. | Life Science - Understand the interconnections of living systems. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.4.1. | Systems and Connections: Explain how scientists organize the biosphere |
| | | Teacher Resource CD: Air, Water, and Soils |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.4.2. | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water |
| | | Pollutant Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| | | Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.4.3. | Systems and Connections: Explain how ecosystems respond to human activities |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 |

| | | Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant |
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| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 |
| | | Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Teacher Resource CD: Environmental Issues Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.4.5. | Flow of Matter and Energy: Explain the relationship between the carbon cycle and fossil fuels |
| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Teacher Resource CD: Ecosystems, Energy, and |

| | | Biodiversity |
|---|-------------|---|
| | | Diodivorsity |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.4.6. | Flow of Matter and Energy: Describe how the availability of resources (e.g., energy, water, oxygen, minerals) limits the amount of life an environment can support • Environmental Issues and Solutions: Unit 3 Lab 11 |
| | | Activity 2: Determining the Carrying Capacity of a Population Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| CONTENT STANDARD / COURSE | HI.SC.ENV. | Environmental Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ENV.5. | Interdependence of The Environment and Human Societies - Understand the interdependence between environmental systems and human societies. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.5.1. | Human Impact: Explain how economic and societal decisions affect global and local ecosystems |
| | | Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.5.2. | Human Impact: Assess the effect of human actions on an environmental system |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 |
| | | Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 3: Examining Oil-Degrading Microbes • Environmental Issues and Solutions: Unit 1 Lab 4 |
| | | Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 |

| | | Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf |
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| | | Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 |
| | | Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Environmental Issues |
| | | Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.5.4. | Resource Use: Describe the relationship between the environment and the growth rate of a population |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Fourier montal Issues and Solutions: Unit 4 Lab 13 |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| DEDECOMANCE | CO END E | Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.5.5. | Resource Use: Compare the consumption of natural resources by different nations • Environmental Issues and Solutions: Unit 1 Lab 1 |
| | | Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill |

| | | Environmental Issues and Solutions: Unit 1 Lab 3 |
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| | | Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 |
| | | Activity 1: Identifying Airborne Pollutants • Environmental Issues and Solutions: Unit 2 Lab 6 |
| | | Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.5.6. | Resource Use: Explain why recycling and conservation of resources are important |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 |
| | | Activity 3: Evaluating the Health of an EcosystemTeacher Resource CD: Environmental Issues |
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| CONTENT STANDARD / COURSE | | Marine Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.MS.2. | Nature of Science - Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technology have influenced society |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 |
| | | Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 1: Biodegrading a Simulated Oil Spill |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 |

| | | Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
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| CONTENT STANDARD / COURSE | HI.SC.MS. | Marine Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.MS.3. | Oceanography - Understand the physical features of the ocean and its influences on weather and climate. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.3.3. | Physical Characteristics of the Ocean: Explain how the ocean participates in the geochemical cycling of elements |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| DEDECOMANICE | CO MC 2.7 | Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.3.7. | Teacher Resource CD: Ecosystems, Energy, and |
| INDICATOR / GRADE LEVEL EXPECTATION CONTENT STANDARD / | | Teacher Resource CD: Ecosystems, Energy, and Biodiversity Oceans Influence: Describe the relationship between fresh bodies of water, watersheds, and the ocean |
| INDICATOR / GRADE LEVEL EXPECTATION CONTENT STANDARD / COURSE | HI.SC.MS. | Teacher Resource CD: Ecosystems, Energy, and Biodiversity Oceans Influence: Describe the relationship between fresh bodies of water, watersheds, and the ocean Teacher Resource CD: Air, Water, and Soils Marine Science |
| INDICATOR / GRADE LEVEL EXPECTATION CONTENT STANDARD / | | Teacher Resource CD: Ecosystems, Energy, and Biodiversity Oceans Influence: Describe the relationship between fresh bodies of water, watersheds, and the ocean Teacher Resource CD: Air, Water, and Soils |

| INDICATOR / GRADE | | ecosystems |
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| LEVEL EXPECTATION | | |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| PERFORMANCE | SC.MS.4.2. | Ecosystems: Explain how estuaries provide productive and important |
| INDICATOR / GRADE LEVEL EXPECTATION | | nursery areas for many marine species |
| ELVEL EXI EOTATION | | Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 2: Cleaning Up Shore Environments |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes |
| | | gg g |
| PERFORMANCE | SC.MS.4.5. | Influence of Water: Explain how chemical factors (e.g., pH, salinity, dissolved O2, nutrients) affect the distribution of life in the ocean |
| INDICATOR / GRADE LEVEL EXPECTATION | | uissoived 02, nutrients) arrect the distribution of the in the ocean |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 3 Lab 9 |
| | | Activity 1: Food Web Organization |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.4.6. | Influence of Water: Describe how physical factors (e.g., light, temperature, pressure, current) define the region/zone in the ocean |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| CONTENT STANDARD / COURSE | HI.SC.MS. | Marine Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.MS.5. | Structure, Function, and Interdependence - Understand the structure, function, and interdependence of marine organisms. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.5.2. | Structure And Function: Compare the characteristics of marine organisms (e.g., planktonic, invertebrate, vertebrate) |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant |

| | | Teacher Resource CD: Air, Water, and Soils |
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| CONTENT STANDARD / COURSE | HI.SC.MS. | Marine Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.MS.6. | Interdependence of Humans and the Ocean - Understand the interdependence of humans and the ocean. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.6.2. | Influence of the Ocean on Human Society: Describe the relationship between the ocean and human cultural development Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.6.3. | Human Impact Evaluate mariculture in terms of use of technology and environmental impact Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.6.4. | Human Impact Explain how human activities and development lead to marine pollution (e.g., point sources, non-point sources) Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Environmental Issues Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.6.5. | Human Impact Describe how urbanization has impacted the ocean • Teacher Resource CD: Environmental Issues |

Hawaii Content and Performance Standards Science

Grade 10

| CONTENT STANDARD / COURSE | HI.SC.PS. | Physical Science |
|---------------------------|-----------|--|
| CONTENT STANDARD | | The Scientific Process: NATURE OF SCIENCE: Understand that |
| / PERFORMANCE | | science, technology, and society are interrelated |
| INDICATOR | | |

| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PS.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technologies have influenced society Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PS.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD / COURSE | HI.SC.PS. | Physical Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | | Physical, Earth and Space Science: NATURE OF MATTER AND ENERGY: Understand the nature of matter and energy, forms of energy (including waves) and energy transformations, and their significance in understanding the structure of the universe |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PS.6.1. | Energy and its Transformation: Describe endothermic and exothermic chemical reactions • Environmental Issues and Solutions: Unit 1 Lab 5 |
| | | Activity 1: Modeling Salt Runoff Discharge |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PS.6.8. | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| CONTENT STANDARD / COURSE | HI.SC.BS. | Biological Science |

| Invent, and investigate using the skills necessary to engage in the scientific process SC.BS.1.2. INDICATOR / GRADE LEVEL EXPECTATION SC.BS.1.2. INDICATOR / GRADE LEVEL EXPECTATION • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Deserving Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming • Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge • Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Gentrying Airborne Pollutants • Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens • Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Porosity and Permeability • Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Porosity and Permeability • Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured • Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured • Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting and Solutions: Unit 3 Lab 10 Activity 1: Dissecting and Solutions: Unit 3 Lab 10 Activity 1: Observing and Solutions: Unit 3 Lab 10 Activity 1: Calculating a Biodiversity Index for Lea Litter Ecosystems • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Calculating a Biodiversity Index for Lea | CONTENT STANDARD | SC.BS.1. | The Scientific Process: SCIENTIFIC INVESTIGATION: Discover, |
|--|-------------------|------------|--|
| the scientific process Scientific inquiry: Design and safely implement an experiment, including the appropriate use of tools and techniques to organize, analyze, and validate data Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants 3 Activity 1: Biodegrading a Simulated 0il Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated 0il Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining 0il-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LDSO of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutant Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Determining the LDSO of a Water Pollutant Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Determining the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Well Activity 3: Constructing a Predator-Prey Food Well Activity 3: Constructing a Predator-Prey Food Well Activity 1: Calculating a Biodiversity Index for Leguine Environmental Issues and | | SC.BS. I. | |
| including the appropriate use of tools and techniques to organize, analyze, and validate data • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated 0il Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining 0il-Degrading Microbes • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming • Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge • Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants • Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens • Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Porosity and Permeability • Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Porosity and Permeability • Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis • Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis • Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determinal Issues and Solutions: Unit 2 Lab 8 Activity 3: Determinal Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Determinal Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Cleantifying Owl Prey • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Calculating a Biodiversity Index for Lea Litter Ecosystems • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Calculating a Biodiversity Index for Lea Litter Ecosystems • Environm | | | |
| Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Forvironmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LDSO of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LDSO of a Water Pollutant Environmental Issues and Solutions: Unit 3 Lab 10 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Wel Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Wel | INDICATOR / GRADE | SC.BS.1.2. | including the appropriate use of tools and techniques to organize, |
| Population | | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a < |

| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.1.4. | Scientific Inquiry: Determine the connection(s) among hypotheses, scientific evidence, and conclusions |
| LEVEL EAT LOTATION | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web |

| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems |
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| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 |
| | | Activity 2: A Closer Look at Energy Pyramids |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 |
| | | Activity 2: Biological Treatment of Pollution |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| | | Virtual Laboratory: The Effect of Temperature on |
| | | Dissolved Oxygen |
| PERFORMANCE INDICATOR / GRADE | SC.BS.1.5. | Scientific Inquiry: Communicate the components of a scientific investigation, using appropriate techniques |
| LEVEL EXPECTATION | | For income and allowers and Calabians, Unit 4 Lab 4 |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 2: Cleaning Up Shore Environments |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes |
| | | Environmental Issues and Solutions: Unit 1 Lab 4 |
| | | Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 |
| | | Activity 1: Identifying Airborne Pollutants |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 |
| | | Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 2: Water Analysis • Environmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 |

| | | Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.1.7. | Scientific Knowledge: Revise, as needed, conclusions and explanations based on new evidence |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |

| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 |
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| | | Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| CONTENT STANDARD / | HI.SC.BS. | Biological Science |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR | SC.BS.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 |
| | | Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 |
| | | Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |

| | | Teacher Resource CD: Environmental Issues |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD / | HI.SC.BS. | Biological Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.BS.3. | Life and Environmental Sciences: ORGANISMS AND THE ENVIRONMENT: Understand the unity, diversity, and interrelationships of organisms, including their relationship to cycles of matter and energy in the environment |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.3.1. | Cycles of Matter and Energy: Describe biogeochemical cycles within ecosystems |
| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 |
| | | Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| | | Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.3.2. | Cycles of Matter and Energy: Explain the chemical reactions that occur in photosynthesis and cellular respiration that result in cycling of energy |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | | Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.3.3. | Cycles of Matter and Energy: Explain how matter and energy flow through living systems and the physical environment |

| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.BS.3.4. | Interdependence: Explain dynamic equilibrium in organisms, populations, and ecosystems; explain the effect of equilibrium shifts Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Ecosystems, Energy, and Biodiversity Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD / COURSE | HI.SC.BS. | Biological Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.BS.4. | Life and Environmental Sciences: STRUCTURE AND FUNCTION IN ORGANISMS: Understand the structures and functions of living organisms and how organisms can be compared scientifically |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION PERFORMANCE | SC.BS.4.1. | Cells, Tissues, Organs, and Organ Systems: Describe different cell parts and their functions • Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population • Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Classification: Explain the organization of life on Earth using the |
| INDICATOR / GRADE | 50.03.4.0. | Plassification. Explain the organization of the on Earth using the |

| LEVEL EXPECTATION | | modern classification system |
|--|------------|--|
| LULL EXI LOTATION | | |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 |
| | | Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 3 Lab 10 |
| | | Activity 2: Identifying Owl Prey |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a |
| | | Population |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| | | Activity 5. Evaluating the Health of all Ecosystem |
| CONTENT STANDARD / COURSE | HI.SC.BS. | Biological Science |
| CONTENT STANDARD | SC.PS.5. | Life and Environmental Sciences: DIVERSITY, GENETICS, AND |
| / PERFORMANCE INDICATOR | | EVOLUTION: Understand genetics and biological evolution and their impact on the unity and diversity of organisms |
| PERFORMANCE INDICATOR / GRADE | SC.BS.5.3. | Unity and Diversity: Explain the structural properties of DNA and the role of DNA in heredity and protein synthesis |
| LEVEL EXPECTATION | | and a state in not outly und proton of manage |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1. Observing Padiation Effects on Plants |
| | | Activity 1: Observing Radiation Effects on Plants |
| PERFORMANCE | SC.BS.5.5. | Unity and Diversity: Explain chromosomal mutations, their possible |
| INDICATOR / GRADE LEVEL EXPECTATION | | causes, and their effects on genetic variation |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 |
| | | Activity 1: Observing Radiation Effects on Plants |
| | | |
| CONTENT STANDARD / | HI.SC.ES. | Earth Space Science |
| COURSE | | |
| | HI.SC.ES. | Earth Space Science The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE | | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 4 |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming • Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming • Environmental Issues and Solutions: Unit 1 Lab 5 |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION PERFORMANCE | SC.ES.2. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming • Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge • Teacher Resource CD: Environmental Issues |
| COURSE CONTENT STANDARD / PERFORMANCE INDICATOR PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ES.2.1. | The Scientific Process: NATURE OF SCIENCE: Understand that science, technology, and society are interrelated Science, Technology, and Society Explain how scientific advancements and emerging technology have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill • Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming • Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge • Teacher Resource CD: Environmental Issues |

| PERFORMANCE | SC. ES. 2.3. | Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
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| INDICATOR / GRADE LEVEL EXPECTATION | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 |
| | | Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global |
| | | Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 |
| | | Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants • Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 |

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| | | Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Teacher Resource CD: Environmental Issues Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ES.2.4. | Science, Technology, and Society: Describe technologies used to collect information about the universe Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis |

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| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 |
| | | Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 |
| | | Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 |
| | | Activity 2: A Closer Look at Energy Pyramids • Environmental Issues and Solutions: Unit 4 Lab 12 |
| | | Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 |
| | | Activity 2: Biological Treatment of Pollution |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| | | Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| CONTENT STANDARD / COURSE | HI.SC.ES. | Earth Space Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ES.8. | Physical, Earth, and Space Sciences: EARTH AND SPACE SCIENCE: Understand the Earth and its processes, the solar system, and the universe and its contents |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ES.8.1. | Forces that Shape the Earth: Describe how elements and water move through solid Earth, the oceans, atmosphere, and living things as part of geochemical cycles |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 |
| | | Activity 1: Soil AnalysisEnvironmental Issues and Solutions: Unit 2 Lab 7 |
| | | Activity 2: Soil Porosity and Permeability • Environmental Issues and Solutions: Unit 2 Lab 7 |
| | | Activity 3: Soil Testing For Nitrogen, pH, and |
| | | PhosphatesTeacher Resource CD: Air, Water, and Soils |
| | | Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ES.8.4. | Forces that Shape the Earth: Describe how heat and energy transfer into and out of the atmosphere and their involvement in global climate |
| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |

| | | Teacher Resource CD: Air, Water, and Soils |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ES.8.6. | Forces that Shape the Earth: Describe how winds and ocean currents are produced on the Earth's surface • Teacher Resource CD: Air, Water, and Soils |
| CONTENT STANDARD / COURSE | HI.SC.PH. | Physics |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.PH.1. | Scientific Investigation - Discover, invent, and investigate using the skills necessary to engage in the scientific process |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.1.10. | Using Mathematics: Use quadratic equations and simple trigonometric, exponential, and logarithmic functions to solve problems Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| CONTENT STANDARD / | HI.SC.PH. | Physics |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.PH.2. | Nature of Science - Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technologies have influenced society Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |

| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
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| CONTENT STANDARD / COURSE | HI.SC.PH. | Physics |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.PH.3. | Matter and Energy Conservation - Understand the nature of momentum and energy transformations |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.3.1. | Matter: Measure or determine physical quantities such as density and mass of samples Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| CONTENT STANDARD / COURSE | HI.SC.PH. | Physics |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.PH.5. | Heat and Thermodynamics - Understand the laws of thermodynamics, and their applications |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.5.1. | Heat and Temperature: Explain that heat flow and work are two forms of energy transfer between systems • Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.PH.5.2. | Heat and Temperature: Differentiate between heat, specific heat, and temperature Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| CONTENT STANDARD / COURSE | HI.SC.CH. | Chemistry |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.CH.2. | Nature of Science - Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.CH.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technologies have influenced society • Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |

| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.CH.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD / COURSE | HI.SC.CH. | Chemistry |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.CH.3. | Properties of Matter -Understand different states of matter |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.CH.3.2. | Acids and Bases: Use the pH scale to characterize acid and base solutions Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
| CONTENT STANDARD / COURSE | HI.SC.CH. | Chemistry |
| CONTENT STANDARD / PERFORMANCE | SC.CH.4. | Atomic Structure and Bonding - Understand properties of the periodic table, atoms, and bond formation |
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| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
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| CONTENT STANDARD / COURSE | HI.SC.CH. | Chemistry |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.CH.5. | Chemical Reactions - Understand the nature of chemical interactions and solutions |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.CH.5.8. | Solutions: Distinguish between pure substances and mixtures based on physical properties (e.g. boiling point, melting point, and density) |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| CONTENT STANDARD / COURSE | HI.SC.ENV. | Environmental Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ENV.1. | Scientific Investigation - Discover, invent, and investigate using the skills necessary to engage in the scientific process |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.1.2. | Scientific Inquiry: Design and safely implement an experiment, including the appropriate use of tools and techniques to organize, analyze, and validate data |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 |
| | | Activity 1: The Greenhouse Effect and Global Warming • Environmental Issues and Solutions: Unit 1 Lab 5 |
| | | Activity 1: Modeling Salt Runoff Discharge • Environmental Issues and Solutions: Unit 2 Lab 6 |
| | | Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |

| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.1.4. | Scientific Inquiry: Determine the connection(s) among hypotheses, scientific evidence, and conclusions Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - |

| | | Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.1.5. | Scientific Inquiry: Communicate the components of a scientific investigation, using appropriate techniques |
| ESTE EXITETITION | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 |

Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators -Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water **Pollutant** Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen Scientific Knowledge: Revise, as needed, conclusions and explanations PERFORMANCE SC.ENV.1.7. based on new evidence **INDICATOR / GRADE** LEVEL EXPECTATION Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2

- Activity 1: Observing Radiation Effects on Plants
- Environmental Issues and Solutions: Unit 1 Lab 3
 Activity 1: Biodegrading a Simulated Oil Spill
- Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments
- Environmental Issues and Solutions: Unit 1 Lab 3 Activity 3: Examining Oil-Degrading Microbes
- Environmental Issues and Solutions: Unit 1 Lab 4
 Activity 1: The Greenhouse Effect and Global
 Warming
- Environmental Issues and Solutions: Unit 1 Lab 5
 Activity 1: Modeling Salt Runoff Discharge
- Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants
- Environmental Issues and Solutions: Unit 2 Lab 6
 Activity 2: Observing Air Pollution Indicators Lichens
- Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis
- Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability
- Environmental Issues and Solutions: Unit 2 Lab 7
 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates
- Environmental Issues and Solutions: Unit 2 Lab 8
 Activity 1: How Water Pollutants Are Measured
- Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis
- Environmental Issues and Solutions: Unit 2 Lab 8
 Activity 3: Determining the LD50 of a Water
 Pollutant
- Environmental Issues and Solutions: Unit 2 Lab 8
 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants
- Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet
- Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey
- Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web
- Environmental Issues and Solutions: Unit 3 Lab 11
 Activity 1: Calculating a Biodiversity Index for Leaf
 Litter Ecosystems
- Environmental Issues and Solutions: Unit 3 Lab 11
 Activity 2: Determining the Carrying Capacity of a
 Population
- Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization
- Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids
- Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant
- Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution
- Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem
- Virtual Laboratory: The Effect of Temperature on

| | | Dissolved Oxygen |
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| CONTENT STANDARD / | HI.SC.ENV. | Environmental Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ENV.2. | Nature of Science - Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technology have influenced society Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD / | HI.SC.ENV. | Environmental Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ENV.3. | Earth Science - Understand the physical systems of the earth. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.3.4. | Forces that shape the earth: Compare different methods of generating electricity (e.g., fossil fuels, nuclear) • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 3 |

| | | Activity 3: Examining Oil-Degrading Microbes |
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| | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming |
| | | Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD / COURSE | HI.SC.ENV. | Environmental Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ENV.4. | Life Science - Understand the interconnections of living systems. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.4.1. | Systems and Connections: Explain how scientists organize the biosphere |
| | | Teacher Resource CD: Air, Water, and Soils |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.4.2. | Systems and Connections: Explain why populations undergo cyclic fluctuations |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Teacher Resource CD: Ecosystems, Energy, and |
| | | Biodiversity Teacher Resource CD: Environmental Issues |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.4.3. | Systems and Connections: Explain how ecosystems respond to human activities |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global |
| | | WarmingEnvironmental Issues and Solutions: Unit 1 Lab 5 |
| | | Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - |

| | | Lichens |
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| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and |
| | | PhosphatesEnvironmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 2: Water Analysis • Environmental Issues and Solutions: Unit 2 Lab 8 |
| | | Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 1: Dissecting an Owl Pellet |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems |
| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| | | Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem |
| | | Teacher Resource CD: Environmental Issues Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| PERFORMANCE INDICATOR / GRADE | SC.ENV.4.5. | Flow of Matter and Energy: Explain the relationship between the carbon cycle and fossil fuels |
| LEVEL EXPECTATION | | Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Manual Control Manual |
| | | Warming Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.4.6. | Flow of Matter and Energy: Describe how the availability of resources (e.g., energy, water, oxygen, minerals) limits the amount of life an environment can support |

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| | | Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| CONTENT STANDARD / COURSE | HI.SC.ENV. | Environmental Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.ENV.5. | Interdependence of The Environment and Human Societies - Understand the interdependence between environmental systems and human societies. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.5.1. | Human Impact: Explain how economic and societal decisions affect global and local ecosystems |
| | | Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.5.2. | Human Impact: Assess the effect of human actions on an environmental system |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 2: Cleaning Up Shore Environments • Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 3: Examining Oil-Degrading Microbes • Environmental Issues and Solutions: Unit 1 Lab 4 |
| | | Activity 1: The Greenhouse Effect and Global Warming |
| | | Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| | | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 |
| | | Activity 2: Observing Air Pollution Indicators - Lichens |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
| | | Environmental Issues and Solutions: Unit 3 Lab 10 |

| PERFORMANCE INDICATOR / GRADE | SC.ENV.5.4. | Activity 1: Dissecting an Owl Pellet Environmental Issues and Solutions: Unit 3 Lab 10 Activity 2: Identifying Owl Prey Environmental Issues and Solutions: Unit 3 Lab 10 Activity 3: Constructing a Predator-Prey Food Web Environmental Issues and Solutions: Unit 3 Lab 11 Activity 1: Calculating a Biodiversity Index for Leaf Litter Ecosystems Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Teacher Resource CD: Air, Water, and Soils Teacher Resource CD: Environmental Issues Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen Resource Use: Describe the relationship between the environment and the growth rate of a population |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.ENV.5.5. | Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 3 Lab 11 Activity 2: Determining the Carrying Capacity of a Population Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Teacher Resource CD: Ecosystems, Energy, and Biodiversity Teacher Resource CD: Environmental Issues Resource Use: Compare the consumption of natural resources by different nations Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 6 |

| PERFORMANCE INDICATOR / GRADE | SC.ENV.5.6. | Activity 1: Identifying Airborne Pollutants Environmental Issues and Solutions: Unit 2 Lab 6 Activity 2: Observing Air Pollution Indicators - Lichens Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 3 Lab 9 Activity 2: A Closer Look at Energy Pyramids |
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| LEVEL EXPECTATION | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Teacher Resource CD: Environmental Issues |
| CONTENT CTANDARD | LIL CO MC | Maning Colonia |
| CONTENT STANDARD / COURSE | П.SC.WS. | Marine Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.MS.2. | Nature of Science - Understand that science, technology, and society are interrelated |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.2.1. | Science, Technology, and Society: Explain how scientific advancements and emerging technology have influenced society Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 Activity 1: Biodegrading a Simulated Oil Spill Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global Warming Environmental Issues and Solutions: Unit 1 Lab 5 |

| | | Activity 1: Modeling Salt Runoff Discharge |
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| | | Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.2.2. | Science, Technology, and Society: Compare the risks and benefits of potential solutions to technological issues |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 1 Lab 2 Activity 1: Observing Radiation Effects on Plants Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 1: Biodegrading a Simulated Oil Spill • Environmental Issues and Solutions: Unit 1 Lab 3 |
| | | Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 4 Activity 1: The Greenhouse Effect and Global |
| | | Warming Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge |
| | | Teacher Resource CD: Environmental Issues |
| CONTENT STANDARD / COURSE | HI.SC.MS. | Marine Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.MS.3. | Oceanography - Understand the physical features of the ocean and its influences on weather and climate. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.3.3. | Physical Characteristics of the Ocean: Explain how the ocean participates in the geochemical cycling of elements |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 1: Soil Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 2: Soil Porosity and Permeability |
| | | Environmental Issues and Solutions: Unit 2 Lab 7 Activity 3: Soil Testing For Nitrogen, pH, and Phosphates |
| | | Teacher Resource CD: Air, Water, and Soils |
| | | Teacher Resource CD: Ecosystems, Energy, and Biodiversity |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.3.7. | Oceans Influence: Describe the relationship between fresh bodies of water, watersheds, and the ocean |
| | | Teacher Resource CD: Air, Water, and Soils |
| CONTENT STANDARD / COURSE | HI.SC.MS. | Marine Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.MS.4. | Ecological Systems - Understand the locations and characteristics of marine ecosystems. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.4.1. | Ecosystems: Differentiate freshwater, brackish, and saltwater ecosystems |
| | | Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 |

| | | Activity 3: Examining Oil-Degrading Microbes Environmental Issues and Solutions: Unit 1 Lab 5 Activity 1: Modeling Salt Runoff Discharge Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.4.2. | Ecosystems: Explain how estuaries provide productive and important nursery areas for many marine species Environmental Issues and Solutions: Unit 1 Lab 3 Activity 2: Cleaning Up Shore Environments Environmental Issues and Solutions: Unit 1 Lab 3 |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.4.5. | Activity 3: Examining Oil-Degrading Microbes Influence of Water: Explain how chemical factors (e.g., pH, salinity, dissolved O2, nutrients) affect the distribution of life in the ocean |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.4.6. | Influence of Water: Describe how physical factors (e.g., light, temperature, pressure, current) define the region/zone in the ocean Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant Environmental Issues and Solutions: Unit 3 Lab 9 Activity 1: Food Web Organization |
| CONTENT STANDARD / COURSE | HI.SC.MS. | Marine Science |
| CONTENT STANDARD / PERFORMANCE INDICATOR | SC.MS.5. | Structure, Function, and Interdependence - Understand the structure, function, and interdependence of marine organisms. |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.5.2. | Structure And Function: Compare the characteristics of marine organisms (e.g., planktonic, invertebrate, vertebrate) • Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant • Teacher Resource CD: Air, Water, and Soils |
| CONTENT STANDARD / COURSE | HI.SC.MS. | Marine Science |
| CONTENT STANDARD / PERFORMANCE | SC.MS.6. | Interdependence of Humans and the Ocean - Understand the interdependence of humans and the ocean. |

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| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.6.2. | Influence of the Ocean on Human Society: Describe the relationship between the ocean and human cultural development |
| | | Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.6.3. | Human Impact Evaluate mariculture in terms of use of technology and environmental impact |
| | | Teacher Resource CD: Environmental Issues |
| PERFORMANCE INDICATOR / GRADE LEVEL EXPECTATION | SC.MS.6.4. | Human Impact Explain how human activities and development lead to marine pollution (e.g., point sources, non-point sources) |
| | | Environmental Issues and Solutions: Unit 1 Lab 1 Activity 1: Biodegradation in a Landfill |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 1: How Water Pollutants Are Measured |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 2: Water Analysis |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 3: Determining the LD50 of a Water Pollutant |
| | | Environmental Issues and Solutions: Unit 2 Lab 8 Activity 4: Observing the Effects of Acid Rain and Other Pollutants on Plants |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 1: Modeling a Water Treatment Plant |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 2: Biological Treatment of Pollution Training and Solutions Unit 4 Lab 12 |
| | | Environmental Issues and Solutions: Unit 4 Lab 12 Activity 3: Evaluating the Health of an Ecosystem Teacher Resource CD: Air, Water, and Soils |
| | | Teacher Resource CD: Environmental Issues |
| | | Virtual Laboratory: The Effect of Temperature on Dissolved Oxygen |
| PERFORMANCE INDICATOR / GRADE | SC.MS.6.5. | Human Impact Describe how urbanization has impacted the ocean |
| LEVEL EXPECTATION | | Teacher Resource CD: Environmental Issues |

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