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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Strand 1: Inquiry Process**  **Concept 2: Scientific Testing (Investigating and Modeling)** | **S1C2PO 1**. Demonstrate safe behavior and appropriate procedures (e.g., use and care of technology, materials, organisms) in all science inquiry.  **C** | I will demonstrate safe behavior in all science inquiry activities.  I will demonstrate appropriate procedures in all science inquiry activities. | Knowledge | | Prentice Hall Science Explorer Lab Safety Skills (See skills handbook pages in back of each TG text book.)  FOSS Investigation 2, Introduction to microscope  PRENTICE HALL, CELLS AND HEREDITY: Pages 10 – 13)  <http://www.flinnsci.com/Documents/miscPDFs/safety_contract_MS.pdf> | Organisms  Safe behavior  Appropriate procedures  Science inquiry  technology | |
| Strand 1: Inquiry Process  Concept 2: Scientific Testing (Investigating and Modeling) | **S1C2PO 2.** Design an investigation to test individual variables using scientific processes.  **C** | I will design an investigation to test individual variables using scientific processes. | Application | | Prentice Hall Science Explorer Inquiry Skills (See skills handbook pages in back of each TG book)  [What Are Independent & Dependent Variables in Science for Kids? | eHow.com](http://www.ehow.com/info_8026692_independent-dependent-variables-science-kids.html)  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.  Plan and conduct a controlled experiment | Variables  Scientific processes  Investigiation | |
| Strand 1: Inquiry Process  Concept 2: Scientific Testing (Investigating and Modeling) | **S1C2PO 3.** Conduct a controlled investigation using scientific processes.  **C** | I will conduct a controlled investigation using scientific processes. | Application | | Prentice Hall Science Explorer Inquiry Skills (See skills handbook pages in back of each TG book)  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.  Plan and conduct a controlled experiment | Controlled investigation  Scientific processes | |
| Strand 1: Inquiry Process  Concept 2: Scientific Testing (Investigating and Modeling) | **S1C2PO 4.** Perform measurements using appropriate scientific tools (e.g., balances, microscopes, probes, micrometers).  **C** | I will perform measurements using appropriate scientific tools. | Application | | FOSS Investigation 2, Introduction to microscope  Prentice Hall Science Explorer:  Math Skills (See skills handbook pages in back of each TG text book)  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.  Metric system  Performing measurements | Scientific tools  Balances  Probes  Micrometers  Microscopes | |
| Strand 1: Inquiry Process  Concept 2: Scientific Testing (Investigating and Modeling) | **S1C2PO 5**. Keep a record of observations, notes, sketches, questions, and ideas using tools such as written and/or computer logs.  **C** | I will keep a record of my observations, notes, sketches, questions and ideas.  I will keep a record of my observations in written or computer log form. | Knowledge | | Prentice Hall Science Explorer Inquiry Skills (See skills handbook pages in back of each TG book)  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.  Recording data  Recording data (6) (2) | Written records  Computer log records  Sketches | |
| Strand 1: Inquiry Process  **Concept 3: Analysis and Conclusions** | **S1C3PO 4**. Interpret simple tables and graphs produced by others.  **C** | I will interpret simple tables and graphs produced by other students. | Comprehension | | Prentice Hall Science Explorer MATH Skills (See inquiry skills in back of each TG book)  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.  Identifying trends  Identifying trends (6) (2)  [Graphing Worksheets: Line Graphs, Bar Graphs, Circle / Pie Graphs](http://www.superteacherworksheets.com/graphing.html) | Interpret  Simple tables vs.  Graphs | |
| Strand 1: Inquiry Process  Concept 3: Analysis and Conclusions | **S1C3PO 5.** Analyze the results from previous and/or similar investigations to verify the results of the current investigation.  **C** | I will analyze the results from previous and/or similar investigations to verify the results of the current investigations. | Analysis | | Prentice Hall Science Explorer  Inquiry Skills (See skills handbook pages in back of each TG book) | Investigations  Analyze  Verify | |
| Strand 1: Inquiry Process  Concept 3: Analysis and Conclusions | **S1C3PO 6**. Formulate new questions based on the results of a completed investigation.  **I** | I will formulate new questions based on the results of a completed investigation. | Synthesis | | Prentice Hall Science Explorer  Inquiry Skills (See skills handbook pages in back of each TG book) | Formulate new questions | |
| Strand 1: Inquiry Process  **Concept 4: Communication** | **S1C4PO 2.** Display data collected from a controlled investigation.  **I** | I will display data collected from my controlled investigation. | Knowledge | | Prentice Hall Science Explorer Inquiry Skills (See skills handbook pages in back of each TG book) | Controlled Investigation  Data |
| Strand 1: Inquiry Process  Concept 4: Communication | **S1C4PO 3**. Communicate the results of an investigation with appropriate use of qualitative and quantitative information.  **I** | I will communicate the results of my investigation with appropriate use of qualitative and quantitative information. | Application | | Prentice Hall Science Explorer Inquiry Skills (See skills handbook pages in back of each TG book) | Communicate  Qualitative information  Quantitative information |
| Strand 1: Inquiry Process  Concept 4: Communication | **S1C4PO 4**. Create a list of instructions that others can follow in carrying out a procedure (without the use of personal pronouns).  **I** | I will create a list of instructions that others can follow in carrying out a procedure (without the use of personal pronouns). | Synthesis | | Prentice Hall Science Explorer Reading Skills (See skills handbook pages in back of each TG book) | Procedure  Personal pronouns |
| Strand 1: Inquiry Process  Concept 4: Communication | **S1C4PO 5**. Communicate the results and conclusion of the investigation.  **I** | I will communicate the results and conclusion of the investigation. | Application | | Prentice Hall Science Explorer Inquiry Skills (See skills handbook pages in back of each TG book) | Results  Conclusions  Communicate |
| **Strand 2: History and Nature of Science**  **Concept 1: History of Science as a Human Endeavor** | **S2C1PO 1.**  *Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., Jacques Cousteau [inventor, marine explorer], supports Strand 4; William Beebe [scientist], supports Strand 4; Thor Heyerdahl [anthropologist], supports Strand 6).*  ***C*** | I will identify how diverse people and  Diverse cultures (past and present) have made important contributions to scientific innovations.. | Knowledge | | Prentice Hall Science Explorer, WEATHER AND CLIMATE: (Pages 18. 19).  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.  People add to Science | Diverse  Past cultures  Present cultures  Scientific innovations  Contributions  Marine explorer  Anthropologist | |
| Strand 2: History and Nature of Science  Concept 1: History of Science as a Human Endeavor | **S2C1PO 2**. Describe how a major milestone in science or technology has revolutionized the thinking of the time (e.g.*,* Cell Theory*,* sonar, SCUBA, underwater robotics).  **C** | I will describe how a major milestone in science or technology has revolutionized (completely changed) the thinking of the time. | Knowledge | | Prentice Hall Science Explorer, EARTH’S WATERS: Pages 132, 133)  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.  Milestones in Science | Major Milestone  Revolutionize  “thinking of the time”  Cell Theory  Sonar  SCUBA  Robotics | |
| Strand 2: History and Nature of Science  Concept 1: History of Science as a Human Endeavor | **S2C1PO 3**. Analyze the impact of a major scientific development occurring within the past decade**.**  **C** | I will analyze the impact of a major scientific development occurring within the past decade (ten years). | Analysis | | Prentice Hall Science Explorer, EARTH’S WATERS: (Pages 50, 51) | Decade  Analyze  Impact  Malor scientific development | |
| Strand 2: History and Nature of Science  Concept 1: History of Science as a Human Endeavor | **S2C1PO 4.** Describe the use of technology in science-related careers**.**  **C** | I will describe the use of technology in science-related careers. | Knowledge | | PRENTICE HALL SCIENCE EXPLORER, EARTH’S WATERS: Pages 132, 133, 112  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.  Technology in Science related careers | Careers  Science related  technology | |
| Strand 2: History and Nature of Science  **Concept 2: Nature of Scientific Knowledge** | **S2C2PO 3**. Apply the following scientific processes to other problem solving or decision making situations:   * observing * questioning * communicating * comparing * measuring * classifying * predicting * organizing data * inferring * generating hypothesis * identifying variables   **C** | I will apply the following scientific processes to other problem solving or decision making situations:   * observing * questioning * communicating * comparing * measuring * classifying * predicting * organizing data * inferring * generating hypothesis * identifying variables | | Application | Prentice Hall Science Explorer Inquiry Skills and Reading Skills (See back of each TG text book) | Scientific processes  Decision making  Problem solving  observing  questioning  communicating  comparing  measuring  classifying  predicting  organizing data  inferring  generating hypothesis |
| **Strand 3: Science in Personal and Social Perspectives**  **Concept 1: Changes in Environments** | **S3C1PO 1**. Evaluate the effects of the following natural hazards:   * sandstorm * hurricane * tornado * ultraviolet light * lightning-caused fire   **I** | I will evaluate the effects of the following natural hazards:   * sandstorms * hurricanes * tornado * ultraviolet light * lightning- caused fire | Evaluation | | WEATHER AND WATER, INVESTIGATION 1: VIDEO, Things That Fall From the Sky.  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.   * Effects of natural hazards (6) * Effects of natural hazards (6) (2) | Evaluate  Effects  Natural Hazards  Ultraviolet light | |
| Strand 3: Science in Personal and Social Perspectives  Concept 1: Changes in Environments | **S3C1PO 2**. Describe how people plan for, and respond to, the following natural disasters:   * drought * flooding * tornadoes   **I** | I will describe how people plan for, and respond to, the following natural disasters:   * drought * flooding * tornadoes | Knowledge | | WEATHER AND WATER, INVESTIGATION 1: VIDEO, Things That Fall From the Sky.    [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.   * Natural disasters * Natural disaster (2) * Plan for and respond to natural disasters | Drought  Disasters | |
| Strand 3: Science in Personal and Social Perspectives  **Concept 2: Science and Technology in Society** | **S3.C2.PO 1.** Propose viable methods of responding to an identified need or problem.  **I**. |  |  | |  |  | |
| Strand 3: Science in Personal and Social Perspectives  Concept 2: Science and Technology in Society | **S3C1PO 2**. Compare possible solutions to best address an identified need or problem.  **I** | I will compare possible solutions to best address an identified need or problem. | Evaluation | |  | Compare  Solutions  Address | |
| Strand 3: Science in Personal and Social Perspectives  Concept 2: Science and Technology in Society | **S3C1PO 3**. Design and construct a solution to an identified need or problem using simple classroom materials.  **I** | I will design and construct a solution to a problem using simple classroom materials. | Synthesis | |  | Design  Construct | |
| Strand 3: Science in Personal and Social Perspectives  Concept 2: Science and Technology in Society | **S3C1PO 4**. Describe a technological discovery that influences science.  **I** | I will describe a technological discovery that influences science. | Knowledge | | Prentice Hall Science Explorer CELLS AND HEREDITY: Pages 8 and 9.  Prentice Hall Science Explorer EARTH’S WATERS: Pages 132 and 133. | Technological discovery  Influence | |
| **Strand 4: Life Science**  **Concept 1: Structure and Function in Living Systems** | **S4.C1.PO 1.** Explain the importance of water to organisms.  **I** | I will explain the importance of water to organisms. | Knowledge | | FOSS DIVERSITY OF LIFE: Investigation 1, What is Life?  Prentice Hall Science Explorer, CELLS AND HEREDITY: Chapter 1, Cell Structure and Function  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.   * Importance of water to living organisms | organisms |
| Strand 4: Life Science  Concept 1: Structure and Function in Living Systems | **S4.C1.PO 2**. Describe the basic structure of a cell, including:   * cell wall * cell membrane * nucleus   **I** | I will describe the basic structure of a cell:   * cell wall * cell membrane * nucleus | Knowledge | | FOSS DIVERSITY OF LIFE: Investigation 2, Introduction to Microscopes; Investigation 3, Microscopic Life  FOSS Diversity of Life: Investigation 4,  Prentice Hall Science Explorer, CELLS AND HEREDITY: Chapter 1, Cell Structure and Function  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.   * Cell structure * Structure and function of cells * Structure and function of cells (2) | structure  Cell  Cell wall  Cell membrane  Nucleus |
| Strand 4: Life Science  Concept 1: Structure and Function in Living Systems | **S4.C1.PO 3.** Describe the function of each of the following cell parts:   * cell wall * cell membrane * nucleus   **I** | I will describe the function of each of the following cell parts:   * cell wall * cell membrane * nucleus | Knowledge | | FOSS DIVERSITY OF LIFE: Investigation 2, Introduction to Microscopes; Investigation 3, Microscopic LIfe  Life FOSS Diversity of Life: Investigation 4, Ribbons of Life  Prentice Hall Science Explorer, CELLS AND HEREDITY: Chapter 1, Cell Structure and Function  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.   * Structure and function of cells * Structure and function of cells (2) * Function of cell parts | function  Cell wall  Cell membrane  Nucleus |
| Strand 4: Life Science  Concept 1: Structure and Function in Living Systems | **S4.C1.PO 6**. Relate the following structures of living organisms to their functions:  Animals   * respiration – gills, lungs * digestion – stomach, intestines * circulation – heart, veins, arteries, capillaries * locomotion – muscles, skeleton   Plants   * transpiration – stomata, roots, xylem, phloem * absorption – roots, xylem, phloem * response to stimulus (phototropism, hydrotropism, geotropism) – roots, xylem, phloem   **I** | I will relate the following structures of living organisms to their functions:  Animals   * respiration – gills, lungs * digestion – stomach, intestines * circulation – heart, veins, arteries, capillaries * locomotion – muscles, skeleton   Plant   * transpiration – stomata, roots, sylem, phloem * absorption – roots, xylem, phloem * response to stimulus (phototropism, hydrotropism, geotropism) – roots, xylem, phloem | Comprehension | | Prentice Hall Science Explorer, CELLS AND HEREDITY: Chapter 1, Cell Structure and Function (Pages 6 and 7)  FOSS Diversity of Life: Investigation 4, (Focus on Plant and Animal Cell)  FOSS Diversity of Life: Investigation 4, Ribbons of Life  (CD ROM: Cells and the Ribbons of Life)  FOSS Diversity of Life: Investigation 4, Ribbons of Life  (CD ROM: Cells and the Ribbons of Life) with Lab Note book pages 28 and 29.  Prentice Hall Science Explorer, ANIMALS  Prentice Hall Science Explorer, PLANTS  <http://www.bing.com/images/results.aspx?q=HYDROTROPISM%2C+PHOTOTROPISM+GEOTROPISM++for+kids&form=MSNH14&qs=n&sk=&sc=1-22#x0y0>  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.   * Plant transpiration * Plant tropism * Structures of animals * Structures of plants | Function  Respiration  Digestion  Circulation  Locomotion  Transpiration  Absorption  Stimulus  Response  Capillaries  Stomata  Xylem  Phloem  Phototropism  Hydrotropism  geotropism |
| **Strand 5: Physical Science**  **Concept 3: Transfer of Energy** | **S5.C3.PO 1.** Identify various ways in which electrical energy is generated using renewable and non-renewable resources (e.g., wind, dams, fossil fuels, nuclear reactions).  **I** | I will identify ways in which electrical energy is generated using renewable and nonrenewable resources.   * Wind * Dams * Fossil fuels * Nuclear reactors | Knowledge | | Conoco Phillips Program (NEED: National Energy Education Development Project) renewable and nonrenewable energy resources:  Intermediate Energy Infobook (Pages 10 – 32)  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.  Energy from resources  Renewable and non renewable sources of energy | Renewable resource  Nonrenewable resource  Fossils fuels  Nuclear reactions  generate |
| Strand 5: Physical Science  Concept 3: Transfer of Energy | **S5C3PO 2**. Identify several ways in which energy may be stored.  **I** | I will identify several ways in which energy may be stored. | Knowledge | | FOSS WEATHER AND WATER, Investigation 4: Heat Transfer  Prentice Hall Science Explorer WEATHER AND CLIMATE, Chapter 2, Section 2, Heat Transfer  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.   * Potential energy and kinetic energy * Stored energy | Energy |
| Strand 5: Physical Science  Concept 3: Transfer of Energy | **S5C3PO 3.** Compare the following ways in which energy may be transformed:   * mechanical to electrical * electrical to thermal   **I** | I will compare the following ways in which energy may be transformed:   * Mechanical to electrical * Electrical to thermal | Comprehension | | Prentice Hall Science Explorer EARTH’S WATERS: Chapter 3, Section 2, Tides (page 106-107).  Prentice Hall Science Explorer WEATHER AND CLIMATE, Chapter 2, Section 1  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.   * Potential energy and kinetic energy * Transforming energy | Energy  Transformed  Mechanical  Electrical  Thermal |
| Strand 5: Physical Science  Concept 3: Transfer of Energy | **S5C3PO 4.** Explain how thermal energy (heat energy) can be transferred by:   * conduction * convection * radiation   **I** | I will explain how thermal energy (heat energy) can be transferred by:   * conduction * convection * radiation | Knowledge | | FOSS WEATHER AND WATER, Investigation 5, Convection  Prentice Hall Science Explorer WEATHER AND CLIMATE, Chapter 2, Section 2 (page 45)  [Assessment Technology, Incorporated: Home of Galileo Technology for Instructional Improvement](http://ati-online.com/)  Select Galileo K-12 Login  Select Curriculum at top of page.  Select schedule Lesson  Choose grade and Science  Select concept level  Bottom of page, select FIND LESSON PLAN.   * Thermal energy and methods of energy transfer * Transferring heat * Transferring heat (2) | Thermal energy  Heat energy  Transferred  Conduction  Convection  Radiation |