|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **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 microscopePRENTICE HALL, CELLS AND HEREDITY: Pages 10 – 13)<http://www.flinnsci.com/Documents/miscPDFs/safety_contract_MS.pdf> | OrganismsSafe behaviorAppropriate proceduresScience inquirytechnology |
| Strand 1: Inquiry ProcessConcept 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.Plan and conduct a controlled experiment | VariablesScientific processesInvestigiation |
| Strand 1: Inquiry ProcessConcept 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 LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.Plan and conduct a controlled experiment | Controlled investigationScientific processes |
| Strand 1: Inquiry ProcessConcept 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 microscopePrentice 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.Metric systemPerforming measurements | Scientific toolsBalancesProbesMicrometersMicroscopes |
| Strand 1: Inquiry ProcessConcept 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.Recording dataRecording data (6) (2) | Written recordsComputer log recordsSketches |
| 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.Identifying trendsIdentifying trends (6) (2)[Graphing Worksheets: Line Graphs, Bar Graphs, Circle / Pie Graphs](http://www.superteacherworksheets.com/graphing.html) | InterpretSimple tables vs.Graphs |
| Strand 1: Inquiry ProcessConcept 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) | InvestigationsAnalyzeVerify |
| Strand 1: Inquiry ProcessConcept 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 InvestigationData |
| Strand 1: Inquiry ProcessConcept 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) | CommunicateQualitative informationQuantitative information |
| Strand 1: Inquiry ProcessConcept 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) | ProcedurePersonal pronouns |
| Strand 1: Inquiry ProcessConcept 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) | ResultsConclusionsCommunicate |
| **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 andDiverse 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.People add to Science | DiversePast culturesPresent culturesScientific innovationsContributionsMarine explorerAnthropologist |
| Strand 2: History and Nature of ScienceConcept 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.Milestones in Science | Major MilestoneRevolutionize“thinking of the time”Cell TheorySonarSCUBARobotics |
| Strand 2: History and Nature of ScienceConcept 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) | DecadeAnalyzeImpactMalor scientific development |
| Strand 2: History and Nature of ScienceConcept 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.Technology in Science related careers | CareersScience relatedtechnology |
| 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 processesDecision makingProblem solvingobservingquestioningcommunicatingcomparingmeasuringclassifyingpredictingorganizing datainferringgenerating 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.* Effects of natural hazards (6)
* Effects of natural hazards (6) (2)
 | EvaluateEffectsNatural HazardsUltraviolet 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.* Natural disasters
* Natural disaster (2)
* Plan for and respond to natural disasters
 | DroughtDisasters |
| 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 |  | CompareSolutionsAddress |
| 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 |  | DesignConstruct |
| 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 discoveryInfluence |
| **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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.* Importance of water to living organisms
 | organisms |
| Strand 4: Life ScienceConcept 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 LifeFOSS 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.* Cell structure
* Structure and function of cells
* Structure and function of cells (2)
 | structureCellCell wallCell membraneNucleus |
| Strand 4: Life ScienceConcept 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 LIfeLife FOSS Diversity of Life: Investigation 4, Ribbons of LifePrentice 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.* Structure and function of cells
* Structure and function of cells (2)
* Function of cell parts
 | functionCell wallCell membraneNucleus |
| Strand 4: Life ScienceConcept 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, ANIMALSPrentice 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.* Plant transpiration
* Plant tropism
* Structures of animals
* Structures of plants
 | FunctionRespirationDigestionCirculationLocomotionTranspirationAbsorptionStimulusResponseCapillariesStomataXylemPhloemPhototropismHydrotropismgeotropism |
| **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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.Energy from resourcesRenewable and non renewable sources of energy | Renewable resourceNonrenewable resourceFossils fuelsNuclear reactionsgenerate |
| Strand 5: Physical ScienceConcept 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 TransferPrentice 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.* Potential energy and kinetic energy
* Stored energy
 | Energy |
| Strand 5: Physical ScienceConcept 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.* Potential energy and kinetic energy
* Transforming energy
 | EnergyTransformedMechanicalElectricalThermal |
| Strand 5: Physical ScienceConcept 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, ConvectionPrentice 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 LoginSelect Curriculum at top of page.Select schedule LessonChoose grade and ScienceSelect concept levelBottom of page, select FIND LESSON PLAN.* Thermal energy and methods of energy transfer
* Transferring heat
* Transferring heat (2)
 | Thermal energyHeat energyTransferredConductionConvectionRadiation |