|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Strand 1: Inquiry Process****Concept 1: Observations, Questions, and Hypotheses** | **PO 1.** Formulate relevant questions about the properties of objects, organisms, and events of the environment using observations and prior knowledge. (See M03-S2C1-01) **C** | I can formulate questions aboutobjects, organisms and events of the environment. | Synthesis | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | formulaterelevantorganisms environment |
| Strand 1: Inquiry ProcessConcept 1: Observations, Questions, and Hypotheses | **PO 2**. Predict the results of an investigation based on observed patterns, not random guessing.**C** | I can predict the results of aninvestigation based on my observations. | Synthesis | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | PredictResultsInvestigationpatterns |
| Strand 1: Inquiry Process**Concept 2: Scientific Testing (Investigating and Modeling)** | **PO 1**. Demonstrate safe behavior and appropriate procedures (e.g., use of instruments, materials, organisms) in all science inquiry.**C** | I can model safe behavior in all science inquiry. | Comprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | DemonstrateBehaviorinstruments |
| Strand 1: Inquiry ProcessConcept 2: Scientific Testing (Investigating and Modeling) | **PO 2.** Plan a simple investigation (e.g., one plant receives adequate water, one receives too much water, and one receives too little water) based on the formulated questions.**C** | I can plan simple investigations based on questions. | Application | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | InvestigationAdequateformulated |
| Strand 1: Inquiry ProcessConcept 2: Scientific Testing (Investigating and Modeling) | **PO 3**. Conduct simple investigations (e.g., related to plant life cycles, changing the pitch of a sound, properties of rocks) in life, physical, and Earth and space sciences.**C** | I can conduct simple investigations related to plant life cycles. | Synthesis | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | Conductplant life cyclespitch of a  soundproperties |
| Strand 1: Inquiry ProcessConcept 2: Scientific Testing (Investigating and Modeling) | **PO 4.** Use metric and U.S. customary units to measure objects. (See M03-S4C4-04)**C** | I can use metric and U.S customary units to measure objects. | Application | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | metric U.S. customary  units |
| Strand 1: Inquiry ProcessConcept 2: Scientific Testing (Investigating and Modeling) | **PO 5**. Record data in an organized and appropriate format (e.g., t-chart, table, list, written log).(See W03-S3C2-01 and W03-S3C3-01)**C** |  I can record data on a t-chart. | Application | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | Record dataorganized t-chart tablelistwritten log |
| Strand 1: Inquiry Process**Concept 3: Analysis and Conclusions** | **PO 1**. Organize data using the following methods with appropriate labels:* bar graphs
* pictographs
* tally charts

 (See M03-S2C1-02)**C** | I can categorize information on to bar graphs. | Application | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | Organize databar graphspictographs tally charts |
| Strand 1: Inquiry ProcessConcept 3: Analysis and Conclusions | **PO 2**. Construct reasonable interpretations of the collected data based on formulated questions. (See M03-S2C1-03) **C** | I can formulate interpretationof data based on questions | ApplicationComprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | Constructinterpretationsdata basedformulated |
| Strand 1: Inquiry ProcessConcept 3: Analysis and Conclusions | **PO 3.** Compare the results of the investigation to predictions made prior to the investigation. **C** | I can compare the results of myinvestigations with my predications | ComprehensionApplication | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | Compare results investigation predictions |
| Strand 1: Inquiry ProcessConcept 3: Analysis and Conclusions | **PO 4**. Generate questions for possible future investigations based on the conclusions of the investigation. **C** | I can develop questions to help with future investigations. | Synthesis | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | Generate investigations conclusions investigation |
| Strand 1: Inquiry ProcessConcept 3: Analysis and Conclusions | **PO 5.** Record questions for further inquiry based on the conclusions of the investigation.**C** |  I can record the conclusions of my investigation. | Application | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | Recordinquiry conclusions investigation |
| Strand 1: Inquiry Process**Concept 4: Communication** | **PO 1.** Communicate investigations and explanations using evidence and appropriate terminology.(See W03-S3C2-01) **C** | I can explain investigations by using appropriate terminology. | Comprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | Communicate investigations explanations terminology |
| Strand 1: Inquiry ProcessConcept 4: Communication | **PO 2**. Describe an investigation in ways that enable others to repeat it. (See W03-S3C2-01 and LS-F1) **C** | I can summarize an investigation that enables others to repeat it. | KnowledgeSynthesis | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations | investigation  |
| Strand 1: Inquiry ProcessConcept 4: Communication | **PO 3.** Communicate with other groups to describe the results of an investigation. (See LS-E1) **C** | I can explain the results of my investigation to other students. | ComprehensionKnowledge | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Chapters 1-4,Explore Activities, Quick Lab, & Inquiry Skills and Investigations  | Communicate results investigation |
| **Strand 2: History and Nature of Science****Concept 1: History of Science as a Human Endeavor** | **PO 1.** Identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations (e.g., John Muir [naturalist], supports Strand 4; Thomas Edison [inventor], supports Strand 5; Mae Jemison [engineer, physician, astronaut], supports Strand 6, Edmund Halley [scientist], supports Strand 6). **C** | I can identify how different people have made important contributions to science. | Knowledge | <http://www.learningscience.org/his1sciencehumanendeavor.htm>[www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/) | Identify DiverseJohn Muir naturalistInventorEngineerphysician astronautscientist |
| Strand 2: History and Nature of ScienceConcept 1: History of Science as a Human Endeavor | **PO 2.** Describe science-related career opportunities. **C** | I can describe science-related career opportunities. | Knowledge | <http://www.learningscience.org/his1sciencehumanendeavor.htm>[www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/) | career opportunities |
| Strand 2: History and Nature of Science**Concept 2: Nature of Scientific Knowledge** | **PO 1.** Describe how, in a system (e.g., terrarium, house) with many components, the components usually influence one another. **C** | I can describe how one system can influence another system. | Knowledge | <http://www.learningscience.org/his1sciencehumanendeavor.htm>[www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/) | system terrarium components  |
| Strand 2: History and Nature of ScienceConcept 2: Nature of Scientific Knowledge | **PO 2.** Explain why a system may not work if a component is defective or missing. **C** | I can explain why a system may not work if a component is defective or missing. | Comprehension | <http://www.learningscience.org/his1sciencehumanendeavor.htm>[www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/) | Systemdefective |
| **Strand 3: Science in Personal and Social Perspectives****Concept 1: Changes in Environments**  | **PO 1.** Describe the major factors that could impact a human population (e.g.*,* famine, drought, disease, improved transportation, medical breakthroughs).  **I M** | I can describe the majorfactors that impact the human population. | Comprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Unit B Chapter 4, lesson 1-4 | human population faminedrought disease transportation medical breakthroughs  |
| Strand 3: Science in Personal and Social PerspectivesConcept 1: Changes in Environments  | **PO 2.** Describe the beneficial and harmful impacts of natural events and human activities on the environment (e.g.*,* forest fires, flooding, pesticides). **I M** | I can describe how events can impact the environment. | Comprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Unit C Chapter 5, lesson 1-3 | beneficial harmful impacts natural events human activities environment forest fires flooding, pesticides  |
| Strand 3: Science in Personal and Social Perspectives**Concept 2: Science and Technology in Society**  | **PO 1.** Identify ways that people use tools and technology to solve problems. **I M** | I can identify ways that people use tools and technology to solve problems. | Comprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Chapter 5 |  |
| Strand 3: Science in Personal and Social PerspectivesConcept 2: Science and Technology in Society  | **PO 2**. Describe the development of different technologies (e.g. communication, entertainment, transportation, medicine) in response to resources, needs and values. **I M** | I can describe the development of different technologies.. | Comprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Chapter 5 |  |
| Strand 3: Science in Personal and Social PerspectivesConcept 2: Science and Technology in Society  | PO 3. Design and construct at a technological solution to a common problem or need using common materials. **I M** | I can construct a project using common materials. | Analysis | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Chapter 5Solar panelsWind energy productsbatteries |  |
| **Strand 4: Life Science****Concept 3: Organisms and Environments** | **PO 1**. Identify the living and nonliving components of an ecosystem. **I M** | I can identify the living and nonliving parts of an ecosystem. | Knowledge | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Unit A Chapter 1, lesson 1 | IdentifyLivingNonlivingComponentsecosystems |
| Strand 4: Life ScienceConcept 3: Organisms and Environments | **PO 2**. Examine an ecosystem to identify microscopic and macroscopic organisms. **I M** | I can examine an ecosystem and its organisms. | AnalysisKnowledge | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Unit B Chapter 3, lesson 2 | ecosystem microscopic macroscopic organisms |
| Strand 4: Life ScienceConcept 3: Organisms and Environments | **PO 3**. Explain the interrelationships among plants and animals in different environments:producers – plantsconsumers – animals decomposers – fungi, insects, bacteria **I M** | I can explain how plants relate to their environment. | Comprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Unit A Chapter 1, lesson 2 | interrelationships environmentsproducers consumers decomposers fungibacteria  |
| Strand 4: Life ScienceConcept 3: Organisms and Environments | **PO 4.** Describe how plants and animals cause change in their environment. **I M** | I can describe how plants and animals cause change in their environment. | Knowledge | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Unit A Chapter 1, lesson 3 | change environment |
| Strand 4: Life ScienceConcept 3: Organisms and Environments | **PO 5.** Describe how environmental factors (e.g., soil composition, range of temperature, quantity and quality of light or water) in the ecosystem may affect a member organism’s ability to grow, reproduce, and thrive.**I M** | I can explain how environmental factors in the ecosystem affect organisms. | Comprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Unit B Chapter 4, lesson 1-4 | environmental factors soil composition range of  temperature quantity quality ecosystem organism reproduce thrive |
| Strand 4: Life Science**Concept 4: Diversity, Adaptation, and Behavior** | **PO 1**. Identify adaptations of plants and animals that allow them to live in specific environments. **I M** | I can identify how plants and animals adapt to their environments. | Knowledge | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Unit B Chapter 3, lesson 1-3 | Identify adaptations environments |
| Strand 4: Life ScienceConcept 4: Diversity, Adaptation, and Behavior | **PO 2.** Describe ways that species adapt when introduced into new environments.  **I M** | I can describe ways species adapt to new environments. | Comprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Unit B Chapter 3, lesson 1-3 | Describe species adapt  environments |
| Strand 4: Life ScienceConcept 4: Diversity, Adaptation, and Behavior | **PO 3**. Cite examples of how a species’ inability to adapt to changing conditions in the ecosystem led to the extinction of that species.**I M** | I can explain how a speciescan become extinct due to their inability to adapt to a changing environment. | Comprehension | [www.macmillanmh.com](http://www.macmillanmh.com)[www.macmillanmh.com/nsdl/](http://www.macmillanmh.com/nsdl/)Science A Closer Look: Unit B Chapter 3, lesson 1-3 | species’ inability changing conditions ecosystem extinction species |