|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Strand 1: Inquiry Process****Concept 1:** Observations, Questions, and Hypotheses | **S1C1PO** **1.** Formulate relevant questions about the properties of objects, organisms, and events in the environment **C** | I can createquestions about the properties of objects, organisms, and events in the environment | ComprehensionSynthesis | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16, Chapters 1, 2, 3, & 4<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | organismenvironmentobservationsquestionshypothesis |
| **Strand 1: Inquiry Process****Concept 1:** Observations, Questions, and Hypotheses | **S1C1PO 2**. Predict the results of An investigation (e.g., in Animal life cycles, phases of matter, the water cycle). **C** | I can predict the results of an investigation. | ApplicationComprehensionKnowledgeSynthesis | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | predictresultslife cyclesphaseswater cycle |
| **Strand 1: Inquiry Process****Concept 2:** Scientific Testing (Investigating and Modeling) | **S12PO 1**. Demonstrate safe behavior and appropriate procedures (e.g., use of instruments, materials, organisms) in all science inquiry **C** | I can show safe behavior and procedures. | ApplicationComprehension | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16Classroom Rules <http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | safe behaviorproceduresinstrumentsmaterialsorganisms |
| **Strand 1: Inquiry Process****Concept 2:** Scientific Testing (Investigating and Modeling) | **S1C2PO** **2.** Participate in guided investigations in life, physical, and Earth and space sciences. **C** | I can participate in guided investigations. | ApplicationComprehensionAnalysis | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16, Ch 1 Les 3, Ch 2 Les 3, Ch 4 Les 3<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | investigationslifephysicalEarthspace science |
| **Strand 1: Inquiry Process****Concept 2:** Scientific Testing (Investigating and Modeling) | **S1C2PO** **3.** Use simple tools such as rulers, thermometers, magnifiers, and balances to collect data (U.S. customary units). **C** | I can use simple tools to collect data. | ApplicationAnalysisSynthesis | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | toolsrulersthermometersmagnifiersbalancesdata |
| **Strand 1: Inquiry Process****Concept 2:** Scientific Testing (Investigating and Modeling) | **S1C2PO** **4**. Record data from guided investigations in an organized and appropriate format (e.g., lab book, log, notebook, chart paper). **C** | I can record data from guided investigations inan organized format. | ApplicationSynthesisComprehension | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16, Ch 1 L3, Ch 2 L3, Ch 4 L2, Ch 4 L3<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | record datainvestigationslab book lognotebook |
| **Strand 1: Inquiry Process****Concept 3:** Analysis and Conclusions | **S1C3PO** **1**. Organize data using graphs (i.e., pictograph, tally chart), tables, and journals. **C** | I can organize data using graphs. | ApplicationComprehensionKnowledge | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16, 141Interactive Science Notebook<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | analysisconclusionsgraphs pictographtablesjournals  |
| **Strand 1: Inquiry Process****Concept 3:** Analysis and Conclusions | **S1C3PO** **2.** Construct reasonableexplanations of observations on the basis of data obtained (e.g., Based on the data, does this makes sense? Could this really happen?) **C** | I can explain my observations of data. | ApplicationComprehensionSynthesis | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16, 129, 171<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | reasonable explanationsobservations  |
| **Strand 1: Inquiry Process****Concept 3:** Analysis and Conclusions | **S1C3PO** **3**. Compare the results of the investigation to predictions made prior to the investigation. **C** | I can compare the results of the investigation to my predictions. | ComprehensionAnalysisEvaluation | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16, Ch 1, 2, 3, & 4<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | investigationpredictionsprior |
| **Strand 1: Inquiry Process****Concept 3:** Analysis and Conclusions | **S1C3PO** **4.** Generate questions For possible future Investigations based on the conclusions of the investigation. **C** | I can develop questions for future investigations using what I learned. | SynthesisApplicationKnowledge | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16, 148<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | generatefuture investigationconclusions |
| **Strand 1: Inquiry Process****Concept 4:** Communication | **S1C4PO** **1**. Communicate the results and conclusions of an investigation (e.g., verbal, drawn, or written). **C** | I can share the results and conclusions of an investigation. | KnowledgeComprehensionApplication | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16, 29, Ch 2, Ch 3<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | communicate resultsconclusions verbal drawnwritten |
| **Strand 1: Inquiry Process****Concept 4:** Communication | **S1C4PO** **2.** Communicate with other groups to describe the results of an investigation. **C** | I can share the results of an investigation with others. | KnowledgeComprehensionApplication | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, pages 3-16, 29, Ch 2, Ch 3<http://www.rockingham.k12.va.us/curriculum-resources.html>[www.sciencebuddies.org](http://www.sciencebuddies.org) | communicateresults conclusions |
| **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  **C** | I can identify how diverse people and/or cultures, past and present, have made important contributions to scientific innovations | KnowledgeComprehensionApplication | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, Ch 2 pages 66 – 67, Ch 3 pp. 110 – 111, Ch 4 pp. 126 – 127 StoryTown Lesson 19 | diversescientific innovations |
| **Strand 2: History and Nature of Science** **Concept 1:** History of Science as a Human Endeavor | **S2C1PO** **2**. Identify science-related career opportunities.  **C** | I can identify science-related career opportunities | KnowledgeComprehensionApplication | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Inquiry Process, Ch 2 pages 66 – 67 & 82, Ch 3 pp. 110 – 111, Ch 4 pp. 126 – 127 [www.marinecareers.net](http://www.marinecareers.net)jobs.aol.com/Articles&News | careeropportunities |
| Strand 2: History and Nature of Science**Concept 2: Nature of Scientific Knowledge** | **S2C2PO** **1**. Identify components of familiar systems (e.g.*,* organs of the digestive system, bicycle). **C** | I can identify components of familiar systems. | KnowledgeComprehensionAnalysis | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Systems in the Body, pages R8 – R11Kidshealth.org>Kids>How the Body Works[www.kidskonnect.com/subject...31/...337-human-body.html](http://www.kidskonnect.com/subject...31/...337-human-body.html) | componentssystemsorgansdigestive |
| **Strand 2: History and Nature of Science** **Concept 2:** Nature of Scientific Knowledge | **S2C2PO** **2**. Identify the following characteristics of a system* consists of multiple parts or subsystems
* parts work interdependently

**C** | I can identify the following characteristics of a system: \*consists of multiple parts or subsystems \* parts work interdependently | KnowledgeComprehensionAnalysis | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Systems in the Body, pages R8 – R11Kidshealth.org>Kids>How the Body Workswww.kidskonnect.com/subject...31/...337-human-body.html | systemmultiple partssubsystemsinterdependently |
| **Strand 2: History and Nature of Science****Concept 2:** Nature of Scientific Knowledge | **S2C2PO** **3**. Identify parts of a system too small to be seen (e.g.*,* plant and animal cells). **C** | I can identify parts of a system too small to be seen. | KnowledgeComprehensionAnalysis | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Systems in the Body, Ch 1 Les 1, Ch 12 Les 3 & 4[http://www.rockingham.k12.va.us/resources /elementary/2science](http://www.rockingham.k12.va.us/resources%20/elementary/2science)www.proteacher.org/c/461-Human-Body-Systems.html | systemcells |
| **Strand 3: Science in Personal and Social Perspectives** **Concept 2:** Science and Technology in Society  | **S3C2PO** **1.** Analyze how various technologies impact aspects of people’s lives (e.g.*,* entertainment, medicine,transportation, communication). **C** | I can analyze how various technologies impact aspects of people’s lives. | AnalysisKnowledgeComprehension | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, pp. 3 – 148 www.macmillanmh.com/tlxnews/.../how-does-technology-affect-life-2 | technologiesimpact |
| **Strand 3: Science in Personal and Social Perspectives****Concept 2:** Science and Technology in Society  | **S3C2PO** **2.** Describe important technological contributions made by people, past and present:* automobile – Henry Ford
* airplane – Wilbur and Orville Wright
* telephone – Alexander G. Bell

**I** | I can describe technological contributions made by people, past and present:* automobile- Henry Ford
* airplane- Wilbur and Orville Wright
* telephone- Alexander G. Bell
 | KnowledgeComprehensionApplication | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, pp. 66 – 67, 82, 110 – 111, 126 – 127, 148 StoryTown Lesson12, Lesson 19<https://en.wikipedia.org/wiki/History_of_technology><http://gardenofpraise.com/ibdwrigh.htm><https://en.wikipedia.org/wiki/The_Henry_Ford> | technological contributionspastpresent |
| **Strand 3: Science in Personal and Social Perspectives** **Concept 2:** Science and Technology in Society  | **S3C2PO** **3.** Identify a simple problem that could be solved by using a suitable tool. **C** | I can identify a simple problem that could be solved by using a suitable tool. | KnowledgeAnalysisApplication | MacMillan/McGraw-Hill, Science- A Closer Look, grade 2, pp. 3 – 148 [www.coe.uh.edu/archive/science/science.../finalhome.htm](http://www.coe.uh.edu/archive/science/science.../finalhome.htm)[www.mos.org/sin/Leonardo/inventorsToolbox.html](http://www.mos.org/sin/Leonardo/inventorsToolbox.html)[www.wired.com/wiredscience/2011/04/orangutan-tools-fishing/](http://www.wired.com/wiredscience/2011/04/orangutan-tools-fishing/) | simple problemsolvedsuitable tool |
| **Strand 4: Life Science****Concept 1:** Characteristics of Organisms | **S4C1PO 1**. Identify animal structures that serve different functions (e.g.,sensory,defense, locomotion). **C, M** | I can identify animal structures that serve different functions. | KnowledgeComprehensionAnalysis | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Life Science R8 – R11 [*https://www.middletownschools.org/uploaded/Curriculum/Curriculum\_Office/Gr\_1\_Plants\_and\_Animals.pdf*](https://www.middletownschools.org/uploaded/Curriculum/Curriculum_Office/Gr_1_Plants_and_Animals.pdf)[*https://www.middletownschools.org/uploaded/Curriculum/Curriculum\_Office/Gr\_1\_Life\_Cycles.pdf*](https://www.middletownschools.org/uploaded/Curriculum/Curriculum_Office/Gr_1_Life_Cycles.pdf)[*http://www.exploringnature.org/db/main\_index.php*](http://www.exploringnature.org/db/main_index.php) | animal structuresservefunctions |
| **Strand 4: Life Science****Concept 1:** Characteristics of Organisms | **S4C1PO 2**. Identify the following major parts of:* the digestive system – mouth, esophagus, stomach, small and large intestines
* respiratory system – nose, trachea, lungs, diaphragm

circulatory system – heart, arteries, veins, blood **C, M** | I can identify major parts of the digestive, respiratory, and circulatory systems. | KnowledgeComprehensionAnalysis | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Life Science R8 – R11 [www.sciencenetlinks.com/interactives/systems.html](http://www.sciencenetlinks.com/interactives/systems.html)<http://www.kidsbiology.com/human_biology/><http://www.exploringnature.org/db/main_index.php> | digestive systemesophagus stomach intestinesrespiratory systemtrachea lungs diaphragm circulatory system heart arteries veins blood |
| **Strand 4: Life Science****Concept 1:** Characteristics of Organisms | **S4C1PO 3**. Describe the basic functions of the following systems:* digestive – breakdown and absorption of food, disposal of waste
* respiratory – exchange of oxygen and carbon dioxide
* circulatory – transportation of nutrients and oxygen throughout the body

**C, M** | I can describe the basic functions of the digestive, respiratory and circulatory systems.  | Comprehen-sionAnalysisApplication | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Life Science R8 – R11 [www.sciencenetlinks.com/interactives/systems.html](http://www.sciencenetlinks.com/interactives/systems.html)<http://www.kidsbiology.com/human_biology/><http://www.exploringnature.org/db/main_index.php> | functions systems digestive absorption disposal of waste respiratory exchange oxygen carbon dioxide circulatory transportation nutrients oxygen |
| **Strand 4: Life Science****Concept 2:** Life Cycles | **S4C2PO 1**. Describe the life cycles of various insects **C, M** | I can describe the life cycles of various insects. | Comprehen-sionAnalysisApplication | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Life Science Chapters 1 & 2www.utahbugclub.org/lifec*enchantedlearning.com/subjects/insects/printouts.shtml* - kidzone.ws/animals/<http://www.exploringnature.org/db/main_index.php> | life cycles insects |
| **Strand 4: Life Science****Concept 2:** Life Cycles | **S4C2PO 2**. Describe the life cycles of various mammals.**C, M** | I can describe the life cycles of various mammals. | Comprehen-sionAnalysisEvaluation | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Life Science Chapters 1 & 2kidzone.ws/animals/[www.enotes.com/.../animal-life-cycles-mammals-reptiles-20813](http://www.enotes.com/.../animal-life-cycles-mammals-reptiles-20813)<http://www.exploringnature.org/db/main_index.php> | life cycles mammals |
| **Strand 4: Life Science****Concept 2:** Life Cycles | **S4C2PO 3.** Compare the life cycles of various organisms. **C, M** | I can compare the life cycles of various organisms. | Comprehen-sionAnalysisEvaluation | MacMillan/McGraw-Hill, Science – A Closer Look, grade 2, Life Science Chapters 1 & 2kidzone.ws/animals/[www.enotes.com/.../animal-life-cycles-mammals-reptiles-20813](http://www.enotes.com/.../animal-life-cycles-mammals-reptiles-20813)<http://www.exploringnature.org/db/main_index.php> | life cyclesorganisms |
| **Strand 6: Earth and Space Science****Concept 3:** Changes in the Earth and Sky | **S6C3PO** **1**. Measure weather conditions (e.g.*,* temperature, precipitation). **I** | I can measure weather conditions.  | ApplicationKnowledgeSynthesis | MacMillan/McGraw-Hill, Science- A Closer Look, Grade 2, Solids, Observing Weather, pages 220 - 247Daily classroom calendar timehttp://web.ccsd.k12.wy.us /techcurr/Science /02/science.html | measure temperatureprecipitation |
| **Strand 6: Earth and Space Science****Concept 3:** Changes in the Earth and Sky  | **S6C3PO** **2**. Record Weather conditions (e.g.*,* temperature, precipitation).**I** | I can record weather conditions.  | ApplicationKnowledgeSynthesis | MacMillan/McGraw-Hill, Science- A Closer Look, Grade 2, Solids, Observing Weather, pages 220 – 247Daily classroom calendar timeWeather journalwww.weatherwizkids.com/weather-instruments.htm | record temperatureprecipitation |
| **Strand 6: Earth and Space Science****Concept 3:** Changes in the Earth and Sky  | **S6C3PO** **3**. Identify the followingtypes of clouds:* cumulus
* stratus
* cirrus

**I** | I can identify types of clouds. | KnowledgeApplicationSynthesis | MacMillan/McGraw-Hill, Science- A Closer Look, grade 2, Solids, Changes in Weather, pages 236-241eo.ucar.edu/webweather/cloud3.html[www.weatherwizkids.com/weather-clouds.htm](http://www.weatherwizkids.com/weather-clouds.htm)science.nationalgeographic.com/science/earth/…/clouds-article/<http://www.enchantedlerning.com/subjects/astronomy/planets/earth/clouds/> | cumulus stratus cirrus |
| **Strand 6: Earth and Space Science****Concept 3:** Changes in the Earth and Sky  | **S6C3PO** **4**. Analyze the relationship between clouds, temperature, and weather patterns.**I** | I can analyze the relationship between clouds, temperature, and weather patterns. | KnowledgeApplicationSynthesis | MacMillan/McGraw-Hill, Science- A Closer Look, grade 2, Solids, Changes in Weather, Chapter 7, Lessons 1 – 3eo.ucar.edu/webweather/cloud3.html[www.weatherwizkids.com/weather-clouds.htm](http://www.weatherwizkids.com/weather-clouds.htm)science.nationalgeographic.com/science/earth/…/clouds-article/<http://www.enchantedlerning.com/subjects/astronomy/planets/earth/clouds/> | AnalyzeWeather patterns |