Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Know that natural and human made objects are made up of parts**.

State Curriculum Standard: **3.1 Unifying Themes: Integrate the fundamental concepts of science and technology; motion in force, energy, structure of matter, change over time, and simple machines.**

Communication Arts Cross Curricular Connection: **1.2.3A Read and understand essential content of informational text and documents in all academic areas by differentiating fact from fiction, distinguishing between essential and nonessential information within a text, making inferences, drawing conclusions, and analyzing text organization and content to derive meaning.**

Course Content	Student Performance	Resources	Assessments
A. Identify and Describe What Parts Make Up a System. • Identify four main parts of a plant.	• Read and discuss "What are the Main Parts of a Plant" and "Why Do Plants need Roots and Stems?" • Complete anticipation guide before and after reading • Complete "Home Activity" for homework • Complete fill-in graphic organizer: "Parts of a Plant"	• Scott Foresman Science (Pearson Education, 2006) p. 6 – 13 • Workbook - Scott Foresman Science (Pearson Education, 2006) p. 4 - 5 • "Parts of a Plant", Worksheet Appendix, p. 1	• " Functions of Plant Parts", Assessment Appendix, p. 1 • Student discussion • Create a poster of an imaginary plant, label all main parts, and describe their functions. Assessment Appendix, p. 2
• *Communication Arts Curricular Connection.*	• Use a variety of print/online reference materials to learn about plant parts • Examine plants, using a magnifying glass. Make posters of plants, labeling the plant parts • Read "Flowering Plants" and create a graphic source that reflects information about the parts of a plant	• Plants and Their Parts, Imagine That! TE (Pearson Education, 2002) p. 144g • Imagine That (Pearson Education, 2002) p. 144 – 145, paper, crayons	• Labeled plant posters • Student-created graphic source

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Know that natural and human made objects are made up of parts**.

State Curriculum Standard: **3.1 Unifying Themes: Integrate the fundamental concepts of science and technology; motion in force, energy, structure of matter, change over time, and simple machines.**

Communication Arts Cross Curricular Connection: **1.2.3A Read and understand essential content of informational text and documents in all academic areas by differentiating fact from fiction, distinguishing between essential and nonessential information within a text, making inferences, drawing conclusions, and analyzing text organization and content to derive meaning.**

Course Content	Student Performance	Resources	Assessments
B. Illustrate Patterns That Regularly Occur and Reoccur in Nature. • Identify types of seed dispersal.	• Read and discuss "How Do New Plants Grow?" • Complete anticipation guide before and after reading. Explain how text supports the choice that was made	• Scott Foresman Science (Pearson Education, 2006) p.18-21	• Teacher observation • Student discussion
• *Communication Arts Curricular Connection.*	• Read "Seed Surprises" and list ways plants spread their seeds	• Seed Surprises Leveled Reader, 66B, (Pearson Education, 2002)	
• Observe and document plant growth. (See related content 4.6A).	• Complete guided inquiry experiment to compare what happens when different seeds germinate • Observe and record changes for one week. Interpret data about how the seeds changed	• Workbook - Scott Foresman Science (Pearson Education, 2006) p. 7 • Scott Foresman Science (Pearson Education, 2006) p. 26-27 • Activity Book - Scott Foresman Science (Pearson Ed., 2006) p. 31	• Record sheet for experiment, (use rubric to assess), Activity Book, Teachers Guide, p. 31
	• Complete plant log	• Assessment Appendix, pp. 3 – 7	• "Plant Log"

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Know the similarities and differences of living things**.

State Curriculum Standard: **3.3 Biological Sciences: Describe living things, their appearance, different types of life, the scope of their similarities and differences, where and how they live, and how life has changed over time.**

Course Content	Student Performance	Resources	Assessments
A. Identify Life Processes of Living Things. • Describe plant functions (growth, reproduction, photosynthesis, response). (See related content, 4.6 B). • *Math Cross Curricular Connection.*	• Read "Making Seeds", and write a narrative about a flower that invited a bee over for a visit • MATH CONNECTION "Math In Science" Calculate elapsed time on a calendar • Examine seeds and predict how long it would take to produce fruit from the time the seeds would be planted	• Scott Foresman Science (Pearson Education, 2006) p. 15 • Scott Foresman Science (Pearson Education, 2006) pp. 28-29	• "Elapsed Time", Workbook - Scott Foresman Science (Pearson Education, 2006) p.9 • Create a Concept Flow Chart to illustrate how plants grow. Scott Foresman Science (Pearson Education, 2006) p. 1
B. Describe Basic Needs of Plants and Animals. • Water, air, food, shelter, space (See related content, 4.6, 4.3, 4.4).	• Read and discuss "What All Animals Need" • Complete concept map, "Habitat" to define needs animals have	• Scott Foresman Science (Pearson Education, 2006) p.39 "Habitat" Worksheet Appendix, p. 3	• Plant Test, Assessment Appendix, pp. 8-12 • Create a wildlife wheel, Assessment Appendix, p. 13

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Know that characteristics are inherited and, thus, offspring closely resemble their parents.**

State Curriculum Standard: **3.3 Biological Sciences: Describe living things, their appearance, different types of life, the scope of their similarities and differences, where and how they live, and how life has changed over time.**

Communication Arts Cross Curricular Connection: **1.2.3A Read and understand essential content of informational text and documents in all academic areas by differentiating fact from fiction, distinguishing between essential and nonessential information within a text, making inferences, drawing conclusions, and analyzing text organization and content to derive meaning.**

Course Content	Student Performance	Resources	Assessments
A. Identify Characteristics for Animal and Plant Survival in Different Climates. • Identify adaptations.	• Read and discuss "How Do Adaptations Help Animals?" • Complete anticipation guide and discuss after reading text	• Scott Foresman Science (Pearson Education, 2006) p. 48-53, Workbook - Scott Foresman Science (Pearson Education, 2006) p. 18	• Teacher observation and anecdotal information • Student discussion
• *Communication Arts Curricular Connection.*	• Read and discuss "Shapes and Sizes of Sea Birds" Identify beaks and feet that meet birds' needs for survival • Conduct experiment, using the steps of the scientific process, "The Right Beak For The Job"	• Imagine That! (Pearson Education, 2002) p 226 – 227 "Bird Beaks" and "Bird Feet" Worksheet Appendix p. 4-5 • "The Right Beak for the Job" Worksheet Appendix, pp. 6-7	• "Write About It" Imagine That! (Pearson Education, 2002) p. 226

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Know that characteristics are inherited and, thus, offspring closely resemble their parents.**

State Curriculum Standard: **3.3 Biological Sciences: Describe living things, their appearance, different types of life, the scope of their similarities and differences, where and how they live, and how life has changed over time.**

Communication Arts Cross Curricular Connection: **1.2.3A Read and understand essential content of informational text and documents in all academic areas by differentiating fact from fiction, distinguishing between essential and nonessential information within a text, making inferences, drawing conclusions, and analyzing text organization and content to derive meaning.**

Course Content	Student Performance	Resources	Assessments
• *Technology Connection.*	• Choose an ecosystem and research to find out the kinds of plants that are found there, and create a power point slide show to present the information	• www.sfreading.com, computer, Imagine That! TE (Pearson Education, 2002) p. 144h	• PowerPoint presentation
• *Communication Arts Connection.*	• Read and discuss plant adaptations for gathering food • "Fly Traps! Plants That Bite Back"	• Imagine That! (Pearson Education, 2002) pp. 147-164	• Selection Test Scott Foresman Reading Practice Book 3.1 pp 55-56
	• Choose an animal eating plant, and draw and label a picture of it. Give an oral report about the plant	• Imagine That! TE (Pearson Education, 2002) p. 167e	• Oral report

Science Planned Course – Third Grade

Unit: **Plants and Animal**

Content Standard: **Know that characteristics are inherited and, thus, offspring closely resemble their parents.**

State Curriculum Standard: **3.3 Biological Sciences: Describe living things, their appearance, different types of life, the scope of their similarities and differences, where and how they live, and how life has changed over time.**

Course Content	Student Performance	Resources	Assessments
B. Identify Physical Characteristics That Appear in Both Parent and Offspring and Differ Between Families, Strains, and Species. • Indicate knowledge of differences and adaptations, (ex. beaver, deer) (See related content 4.7).	• Read and discuss information about beavers' adaptations and their habitat • Complete "Beavers at Work" packet	• "Beavers at Work" (Evan Moor Corp, 1999) and "Beaver" (Pennsylvania Game Commission Wildlife Notes 175-14), Worksheet Appendix, pp. 8-15	• Student discussion
	• Complete "A Helpful Body" worksheet	• A Helpful Body", Scholastic News" Edition, 1996, Worksheet Appendix, p. 16	
	• Create "Busy Beaver" book	• Worksheet Appendix, pp. 17-19	• Create a beaver habitat and label adaptations according to rubric. Assessment Appendix, pp. 14-15
	• Read and discuss information about deer	• Pennsylvania Game Commission Wildlife Notes 175-14, worksheets appendix pages 20-22 "White-Tailed Deer" (Pennsylvania Game Commission Wildlife Notes 175-28), Worksheet Appendix, pp. 23-25	• Create a deer habitat and label adaptations. Assessment Appendix, p. 16 • "Deer or Beaver", Assessment Appendix, p. 17

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Know that characteristics are inherited and, thus, offspring closely resemble their parents.**

State Curriculum Standard: **3.3 Biological Sciences: Describe living things, their appearance, different types of life, the scope of their similarities and differences, where and how they live, and how life has changed over time.**

Communication Arts Cross Curricular Connection: **1.2.3A Read and understand essential content of informational text and documents in all academic areas by differentiating fact from fiction, distinguishing between essential and nonessential information within a text, making inferences, drawing conclusions, and analyzing text organization and content to derive meaning.**

Course Content	Student Performance	Resources	Assessments
• *Communication Arts Connections.*	• Read and discuss Goldilocks and The Three Bears	• Imagine That! (Pearson Education, 2002) pp. 42-62	• Venn Diagram comparing the bears in Goldilocks to real bears
	• Read and discuss American Black Bears	• Imagine That! (Pearson Education, 2002) pp. 66-67	• Student discussion
	• Read "Nights of the Pufflings" and discuss characteristics of puffins	• Imagine That! (Pearson Education, 2002) pp. 228 - 243	• Labeled drawing of a puffin

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Design, create, use, evaluate, and modify systems of Biotechnologies, Information Technologies, and Physical Technologies.**

State Curriculum Standard: **3.6 Technology Education.**

Course Content	Student Performance	Resources	Assessments
A. Identify Waste and Pollution Resulting From a Manufacturing Enterprise.	• Read to find reasons for pollution • Identify reasons why animals may become endangered	• Scott Foresman Science (Pearson Education, 2006) p. 493, "An Endangering Environment", Worksheet Appendix, p. 26	• Journal "Write about reasons why animals may become endangered"

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Recognize and evaluate the relationship between technological advances and society.**

State Curriculum Standard: **3.8 Science, Technology, and Human Endeavors.**

Course Content	Student Performance	Resources	Assessments
A. Identify and Distinguish Between Natural and Human Made Resources.	• Read and discuss leveled readers and respond in journal	• Leveled Readers Scott Foresman Science (Pearson Education, 2006)	• Journal • Student discussion

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Analyze the needs of people and factors affecting the availability of renewable and nonrenewable resources.**

State Curriculum Standard: **4.2 Renewable and Nonrenewable Resources**

Math Cross Curricular Connection: **Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.**

Course Content	Student Performance	Resources	Assessments
A. Identify Needs of People. • Identify how the environment provides for the needs of people. • *Math Cross Curricular Connection.*	• Read to find about natural resources and how people can use them responsibly • Complete anticipation guides and discuss after reading text • Analyze and draw conclusions from a bar graph	• Scott Foresman Science (Pearson Education, 2006) pp. 246-261 • Workbook - Scott Foresman Science (Pearson Education, 2006) pp. 84-86 • Workbook - Scott Foresman Science (Pearson Education, 2006) p. 87	• Student discussion • Teacher observation and anecdotal information • Chapter 9 Test Assessment Book Scott Foresman Science (Pearson Education, 2006) pp. 47-50 • Using a Venn Diagram compare and contrast reusing and recycling. Scott Foresman Science (Pearson Education, 2006) p. 263

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Examine the flow of energy within an ecosystem and how its organisms have changed over time.**

State Curriculum Standard: **4.6 Ecosystems and their Interactions.**

Course Content	Student Performance	Resources	Assessments
A. Understand That Living Things are Dependant on Nonliving Things in the Environment for Survival.	• Complete prediction guide "What are Ecosystems?"	• Workbook - Scott Foresman Science (Pearson Education, 2006) p. 26	• Create a collage of an ecosystem. Scott Foresman Science (Pearson Education, 2006) p. 65e TE
• Identify plants and animals with their habitat and food sources.	• Read and discuss "Parts of an Ecosystem"	• Scott Foresman Science (Pearson Education, 2006) pp. 72-73	
	• Create a booklet to illustrate animals that live in a tree	• Worksheet Appendix, p. 27	• Student discussion
• Describe how animals interact with plants to meet their needs for shelter.	• Design a bulletin board showing animals that depend on a tree for shelter		
• Identify animals that live underground.	• Brainstorm a list of animals that live underground. Add to tree bulletin board	• Paper, pencil	• Teacher observation and anecdotal information
	• Make a hibernation flap book	• "Hibernation Flap Book", Worksheet Appendix, pp. 28-30	• Choose a Pocono animal and draw a picture showing where it would find shelter

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Describe the biological diversity of an ecosystem and explain how natural or human actions cause the loss of species.**

State Curriculum Standard: **4.7 Threatened, Endangered, and Extinct Species.**

Course Content	Student Performance	Resources	Assessments
A. Identify Differences in Living Things.	• Read and identify reasons why animals have certain characteristics	• Scott Foresman Science (Pearson Education, 2006) pp. 50 – 51	• "Animals in Hiding" Assessment Appendix, p.18
• Explain why plants and animals are different colors, shapes and sizes, and how these differences relate to their survival.	• Complete Flip Chart Activity "How Does Skin Color Help an Animal?"	• Activity Book - Scott Foresman Science (Pearson Education, 2006) p. 47	• Student discussion
• Explain why each of the four elements in a habitat is essential for survival.	• Complete site activities at Meesing Nature Program	• Meesing Representative	• Teacher observation and anecdotal information
• Identify local plants and animals and describe their habitat.	• Complete graphic organizers about the 3 Pocono habitats	• One Happy Community", "Pocono Habitats" Worksheet Appendix, pp. 31-32	• Design and create a habitat brochure according to rubric, Assessment Appendix, p. 19
B. Know That Adaptations are Important for Survival.	• Read and discuss "Adaptations for Protection"	• Scott Foresman Science (Pearson Education, 2006) pp. 50 – 51	• "Adaptations That Help Animals Get Food", Assessment Appendix, p. 20
• Explain how specific adaptations can help a living organism to survive.	• Complete "Self –Defense" and "Parts That Protect"	• Worksheet Appendix, pp. 33-34	

Science Planned Course – Third Grade

Unit: **Plants and Animals**

Content Standard: **Describe the biological diversity of an ecosystem and explain how natural or human actions cause the loss of species.**

State Curriculum Standard: **4.7 Threatened, Endangered, and Extinct Species.**

Course Content	Student Performance	Resources	Assessments
C. Define and Understand Extinction. • Identify plants and animals that are extinct.	• Read and discuss "How are Plants from the Past like Today's Plants?" • Complete "We Will Never See Them Again"	• Scott Foresman Science (Pearson Education, 2006) p. 22 – 23 • Worksheet Appendix, p. 35	• Student discussion
• Explain why some plants and animals are extinct.	• Read "Why Animals Become Endangered or Extinct". Use population flow chart to explain extinction	• Worksheet Appendix, pp. 36-37	• Complete "Extinction" flow chart, Assessment Appendix, p. 21 **Enrichment Activity:** Endangered Animal Report and Commemorative Stamp Assessment Appendix, pp. 22-24

Science Planned Course – Third Grade

Unit: **Magnets and Electricity**

Content Standard: **Integrate the fundamental concepts of science and technology; motion in force, energy, structure of matter, change over time, and simple machines.**

State Curriculum Standard: **3.1 Unifying Themes.**

Course Content	Student Performance	Resources	Assessments
A. Know That Natural and Human-Made Objects are Made Up of Parts. • Identify system parts that are natural and human made (e.g. simple electrical circuits).	• Read and discuss information about electrical currents and circuit • Build a circuit and identify parts of a circuit by completing worksheets on circuits	• Scott Foresman Science (Pearson Education, 2006) pp. 376-377 • Worksheet Appendix, pp. 38-39	• Student discussion • Build a complete circuit, Assessment Appendix, p. 25

Science Planned Course – Third Grade

Unit: **Magnets and Electricity**

Content Standard: **Apply the scientific process to solve real life problems.**

State Curriculum Standard: **3.2 Inquiry and Design.**

Course Content	Student Performance	Resources	Assessments
A. Recognize and Use the Elements of Scientific Inquiry to Solve Problems.	• Conduct electrical circuit activity, using the elements of scientific inquiry	• "Current Electricity Activity", Worksheet Appendix, p. 40	• Student discussion
• Generate questions about objects, organisms and/or events that can be answered through scientific investigations.	• Organize items to conduct circuit experiment	• Circuit Activity, Worksheet Appendix, p. 42	• Teacher observation and anecdotal information
• Design an investigation.	• Predict which circuits will work	• "Will the Current Flow?", Worksheet Appendix, p. 41	
• Conduct an experiment.			
• State a conclusion that is consistent with the information.	• Complete circuit experiment		• "Magnetism and Electricity Journal", Assessment Appendix, pp. 26-27

Science Planned Course – Third Grade

Unit: **Magnets and Electricity**

Content Standard: **Investigate the structure and properties of objects.**

State Curriculum Standard: **3.4 Physical Science, Chemistry and Physics.**

Course Content	Student Performance	Resources	Assessments
A. Know Basic Energy Types, Sources and Conversions. • Know the concept of the flow of energy by measuring flow through an object or system.	• Brainstorm a list of ways you use electricity at your house. Complete "Be a Meter Reader"	• "Be a Meter Reader" Worksheet Appendix, p. 43	• Teacher observation and anecdotal information
	• Read and identify the characteristics of electrical energy	• Scott Foresman Science (Pearson Education, 2006) pp. 374-375	
• Describe static electricity in terms of attraction, repulsion and sparks.	• Conduct Electrical Charge Activity in cooperative groups	• Scott Foresman Science (Pearson Education, 2006) p. 53E • Activity flip chart p. 26 • Activity Book - Scott Foresman Science (Pearson Education, 2006) pp. 58-160	• "Charge It", Assessment Appendix, p. 28
• Classify materials as conductors and nonconductors.	• Read and discuss "Conductors and Insulators".	• Electrical Energy (MacMillan/McGraw Hill) p.p. 28-29	• Student discussion
	• Predict which items are conductors or insulators, and how conductors and insulators affect the flow of electricity. Conduct experiments to find out	• "Fill the Gap" and "Conductors and Insulators" Worksheet Appendix, pp. 44-45	• Electricity Test, Assessment Appendix, pp. 9-32

Science Planned Course – Third Grade

Unit: **Magnets and Electricity**

Content Standard: **Investigate the structure and properties of objects**

State Curriculum Standard: **3.4 Physical Science, Chemistry and Physics.**

Course Content	Student Performance	Resources	Assessments
B. Observe and Describe Different Types of Force and Motion.	• Read and Discuss <u>What Makes a Magnet?</u>	• <u>What Makes a Magnet?</u> By Franklyn M. Branley (Harper Collins @1996)	• Student discussion
• Recognize Forces that Attract or Repel Other Objects and Demonstrate Them.	• Deduce, observe, and examine magnetic characteristics through completion of experiments, activities, observation, and discussion, using Magnetic Packet	• "Magnetic Packet, Worksheet Appendix, pp. 46-64	• "What Does It Attract" Assessment Appendix, pp. 37-38 • Teacher observation and anecdotal information
	• Review Magnet Study Guide	• "Magnet Study Guide" Worksheet Appendix, pp. 65-66	• "Magnet Quiz" Assessment Appendix, pp. 33-36

Science Planned Course – Third Grade

Unit: **Solar System**

Content Standard: **Integrate the fundamental concepts of science and technology; motion in force, energy, structure of matter, change over time, and simple machines.**

State Curriculum Standard: **3.1 Unifying Themes**

Cross Curricular Standard: **7.1 Basic Geographic Literacy**

Course Content	Student Performance	Resources	Assessments

A. Know Models as Useful Simplifications of Objects or Processes.
• Identify theories that serve as models.
• *Cross Curricular Connection:*
  • Maps and globes Social Studies Connection 7.1 Basic Geographic Literacy.
B. Illustrate patterns that regularly occur and reoccur in nature.
• Use knowledge of natural patterns to predict next occurrences (e.g., seasons, lunar phases) (3.4 D bullet 2).
	• Conduct the Quick Activity experiment to introduce the concept of the sun's heat
	• Read "What Are Some Patterns that Repeat Every Day?"
	  • Explain how the movement of Earth in relation to the Sun determines the daily patterns of day and night
		• Scott Foresman Science (Pearson Education, 2006) p. 454
		• Scott Foresman Science (Pearson Education, 2006) pp. 422 – 425, flashlights and globes
			• Teacher observation and anecdotal information
			• Model the positions of the Sun and Earth using a flashlight and globe, and explain what causes day and night

Science Planned Course – Third Grade

Unit: **Solar System**

Content Standard: **Integrate the fundamental concepts of science and technology; motion in force, energy, structure of matter, change over time, and simple machines.**

State Curriculum Standard: **3.1 Unifying Themes**

Cross Curricular Standard: **7.1 Basic Geographic Literacy**

Math Cross Curricular Connection: **Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.**

Course Content	Student Performance	Resources	Assessments
A. Illustrate Patterns That Regularly Occur and Reoccur in Nature. • Use knowledge of natural patterns to predict next occurrences (e.g., seasons, lunar phases) (3.4 D bullet 2).	• Read "What Patterns Repeat every Year?" and explain how revolution of the sun and the Earth's tilt on its axis cause the four seasons	• Scott Foresman Science (Pearson Education, 2006) pp. 428 – 431	• Scott Foresman Science Workbook (Pearson Education, 2006) p. 143
• *Math Cross Curricular Connection.*	• Do a survey of students' favorite season, and make a bar graph to show the results	• Paper, pencil	• Student discussion
	• Read "Why Does the Moon's Shape Change?" Draw a diagram that shows the position of the Earth, moon, and sun during a lunar eclipse, and describe how the Moon and Earth interact. Illustrate the phases of the moon	• Scott Foresman Science (Pearson Education, 2006) pp. 432 – 435, paper, pencil	

Science Planned Course – Third Grade

Unit: **Solar System**

Content Standard: **Integrate the fundamental concepts of science and technology; motion in force, energy, structure of matter, change over time, and simple machines.**

State Curriculum Standard: **3.1 Unifying Themes**

Cross Curricular Standard: **7.1 Basic Geographic Literacy**

Math Cross Curricular Connection: **Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.**

Course Content	Student Performance	Resources	Assessments
B. Illustrate Patterns That Regularly Occur and Reoccur in Nature. • *Math Cross Curricular Connection.*	• Calculate elapsed time between moonrise and moonset	• Scott Foresman Science Workbook (Pearson Education, 2006) p. 146	• Teacher observation and anecdotal information • Scott Foresman Science (Pearson Education, 2006) pp. 442 - 443

Science Planned Course – Third Grade

Unit: **Solar System**

Content Standard: **Integrate the fundamental concepts of science and technology; motion in force, energy, structure of matter, change over time, and simple machines.**

State Curriculum Standard: **3.1 Unifying Themes**

Cross Curricular Standard: **7.1 Basic Geographic Literacy**

Math Cross Curricular Connection**: Formulate or answer questions that can be addressed with data and/or organize, display, interpret or analyze data.**

Course Content	Student Performance	Resources	Assessments
C. Illustrate Patterns That Regularly Occur and Reoccur in Nature.	• Read "Star Patterns" and explain how constellations move in night sky • Complete Guided Inquiry "When is the Big Dipper not the Big Dipper?" • Research a favorite constellation • Write a report and recreate the constellation using white gel pens on black paper	• Scott Foresman Science (Pearson Education, 2006) pages 436 – 439 • Scott Foresman Science (Pearson Education, 2006) pp. 440 – 441 • Resource materials	• Chapter 15 Test Assessment Book - Scott Foresman Science (Pearson Education, 2006) pp. 99-102

Science Planned Course – Third Grade

Unit: **Solar System**

Content Standard: **Integrate the fundamental concepts of science and technology; motion in force, energy, structure of matter, change over time, and simple machines.**

State Curriculum Standard: **3.1 Unifying Themes**

Course Content	Student Performance	Resources	Assessments
A. Know That Scale is an Important Attribute of Natural and Human Made Objects, Events, and Phenomena.	• Read "How objects in the Solar System Move" and discuss distances of the planets from the sun	• Scott Foresman Science (Pearson Education, 2006) pp. 456-457	• Student discussion
• Identify the use of scale as it relates to the measurement of distance, volume and mass 3.4C.	• Complete "A Strip of Space", "Keeping The Order" and "So Far Apart"	• Worksheet Appendix, pp. 67-69	• Label The Map quiz appendix p. 39 • Teacher observation and anecdotal information
• Describe scale as a ratio.	• Investigate and design differences in the Earth and the moon, using "Modeling the Earth and The Moon"	• Math in Space (Evan-Moor@ 1994) Worksheet Appendix, pp. 0-72	

• Explain the importance of scale in producing models and apply it to a model.	• Create a distance model of the solar system, using scale to determine size and distance
	  • Determine how distance effects space travel and respond in Activity Book
	  • Use checklist to self assess
		• Scott Foresman Science (Pearson Education, 2006) page 452, Activity Book - Scott Foresman Science (Pearson Education, 2006) pp. 185-186	• Completed scale size clay model of the Earth and the moon
			• Distance model of planets, use rubric in Activity Book - Teacher's Guide, Scott Foresman Science (Pearson Education, 2006) p. 102

Science Planned Course – Third Grade

Unit: **Solar System**

Content Standard: **Apply the scientific process to solve real life problems-**

State Curriculum Standard: **3.2 Inquiry and Design**

Course Content	Student Performance	Resources	Assessments
A. Recognize and Use the Technological Design Process to Solve Problems. • Recognize and explain basic problems.	• Generate a brainstorming web on how astronomers study space	• Inspirations Rapid Fire Web	• Teacher observation and anecdotal information
• Identify possible solutions and their course of action. • Try a solution.	• Read "The Hubble Space Telescope" and explain how it helps us study space	• Scott Foresman Science (Pearson Education, 2006) pp. 446-447	• Student discussion
• Describe the solution, identify its impacts and modify if necessary.	• Read A Day in Space by Suzanne Lord and Jolie Epstein	• A Day in Space by Suzanne Lord and Jolie Epstein (Scholastic Books @ 1986)	
• Show the steps taken and the results.	• Create an invention on how to make life on the space shuttle easier for astronauts		• Student inventions

Science Planned Course – Third Grade

Unit: **Solar System**

Content Standard: **Investigate the structure and properties of objects.**

State Curriculum Standard: **3.4 Physical Science, Chemistry and Physics**

Course Content	Student Performance	Resources	Assessments
A. Know Basic Energy Types, Sources and Conversions. • Identify energy forms and examples.	• Read "Future Sources of Energy" and discuss solar energy • Complete Sun packet appendix pp. 73-84 • Read and discuss p. 455 in Scott Foresman Science	• Scott Foresman Science (Pearson Education, 2006) p. 494 • Sun Packet, Worksheet Appendix, pp. 83-84 • Scott Foresman Science (Pearson Education, 2006) p. 455	• Student discussion • Sun Report and Painting, Assessment Appendix, pp. 40-41 • Sun Report Rubric, Assessment Appendix, p. 42

Science Planned Course – Third Grade

Unit: **Solar System**

Content Standard: **Investigate the structure and properties of objects.**

State Curriculum Standard: **3.4 Physical Science, Chemistry and Physics**

Communication Arts Connection: **Use reference materials to find facts about a topic.**

Course Content	Student Performance	Resources	Assessments
B. Describe the Composition and Structure of the Universe and the Earth's Place in It.	• Read and discuss pp. 24-425 in Scott Foresman Science	• Scott Foresman Science (Pearson Education, 2006) pp. 424-425	• Student discussion
• Recognize Earth's Place in the Solar System.	• Label, illustrate, and distinguish all aspects of Earth related to space	• Earth Packet, Worksheet Appendix, pp. 85-102	• Earth Quiz, Assessment Appendix, pp. 43-44
• Identify planets in our solar system and their general characteristics.	• Identify planets and their characteristics	• Scott Foresman Science (Pearson Education, 2006) pp. 458-469 (Also refer to thematic unit.)	• Chapter 16 Test Assessment Book - Scott Foresman Science (Pearson Education, 2006) pp. 103-106
	• Compare, contrast, and distinguish planet characteristics	• Planet Packet, Worksheet Appendix, pp. 113-114	• Planet Cube Project and Rubric, Assessment Appendix, pp. 45-48
• *Communication Arts Connection.*	• Choose a planet to research, and create an illustrated book explaining why there is no life on that planet	• Imagine That! TE (Pearson Education, 2002) p. 168g	• Illustrated book

Science Planned Course – Third Grade

Unit: **Solar System**

Content Standard: **Investigate the structure and properties of objects**

State Curriculum Standard: **3.4 Physical Science, Chemistry and Physics.**

Communication Arts Cross Curricular Connection: **1.2.3A Read and understand essential content of informational text and documents in all academic areas by differentiating fact from fiction, distinguishing between essential and nonessential information within a text, making inferences, drawing conclusions, and analyzing text organization and content to derive meaning.**

Course Content	Student Performance	Resources	Assessments
C. Describe the Solar System Motions and Use Them to Explain Time, Major Lunar Phases and Eclipses.	• Define, summarize, and be able to document facts about the moon	• Moon Packet, Worksheet Appendix, pp. 115-124	• Moon Test, Assessment Appendix, pp. 49-51 • Student discussion
• *Communication Arts Connection.*	• Read and discuss Guys in Space. Science Work Station "Life On Earth" • Read and Discuss Floating Home • Research and create slides on aspects of the space program • Listen to "Visit a Mission Specialist" and read Spacewalk Talk	• "Imagine That", Scott Foresman Reading, (Pearson, 2002), p.168 • Scott Foresman Reading (Pearson, 2002), pp. 344-361 • Scott Foresman Reading (Pearson, 2002), p. 342h, www.sfreading.com • Scott Foresman Building Background audio tape 15 side 1 and Scott Foresman Reading, (Pearson, 2002) pp. 364-365	• Student produced illustrated books • Scott Foresman Reading Practice Book 3.2, pp. 135-136 • Completed PowerPoint slides

Science Planned Course – Third Grade

Unit: **Solar System**

Content Standard: **Use principles from physical sciences, geography, and mathematics to study the forces of nature that build the earth and wear down the earth.**

State Curriculum Standard: **3.5 Earth Science**

Communication Arts Cross Curricular Connection: **1.2.3A Read and understand essential content of informational text and documents in all academic areas by differentiating fact from fiction, distinguishing between essential and nonessential information within a text, making inferences, drawing conclusions, and analyzing text organization and content to derive meaning.**

Course Content	Student Performance	Resources	Assessments
A. Know Basic Weather Elements. • Explain how the different seasons effect plants, animals, food availability and daily human life. • *Communication Arts Connection.*	• Read and discuss pages • Complete Anticipation Guide before and discuss after reading • Read "Tornado Alert" to find out facts about tornadoes	• Scott Foresman Science (Pearson Education, 2006) pp. 180-181 Workbook - Scott Foresman Science (Pearson Education, 2006) p. 57 • Imagine That! (Pearson Education, 2002) pp. 190 - 205	• Student discussion • Students choose two seasons to illustrate the differences of the seasons. Scott Foresman Science, TE, (Pearson Education, 2006) p. 180 • Create a safety poster illustrating a safety rule to remember during a tornado.