

Strand I Thinking and Practice

Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

Essential Question: How do we use scientific skills and processes to answer a scientific question?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Process of Investigation SCIENTIFIC METHOD</p> <p>Benchmark I: Use scientific methods to develop questions, design and conduct experiments using appropriate technologies, analyze and evaluate results, make predictions, and communicate findings.</p>	<p>1. Plan and conduct investigations, including formulating testable questions, making systematic observations, developing logical conclusions, and communicating findings.</p> <p>2. Use appropriate technologies (e.g., calculators, computers, balances, spring scales, microscopes) to perform scientific tests and to collect and display data.</p> <p>3. Use graphic representations (e.g., charts, graphs, tables, labeled diagrams) to present data and produce explanations for investigations.</p> <p>4. Describe how credible scientific investigations use reproducible elements including single variables, controls, and appropriate sample sizes to produce valid scientific results.</p> <p>5. Communicate the steps and results of a scientific investigation.</p>	<p>Understand that scientific hypotheses are based on facts and predictions that are testable.</p>	<p>No specific assessment – Use Test Generator</p> <p>Create a graphic organizer for “The Inquiry Process”: Pupil Edition, pp. S8 Teacher Edition, pp. T31</p> <p>Use <i>Independent Inquiry Activities</i> and <i>Science Investigation Notebook</i>, and pick an investigation based on any specific unit of study.</p>	<p>Pupil Edition, pp. S3-S16 Teacher Edition, pp. T9-T36</p> <p>Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD ELL Resources Lesson Planner and Test Generator CD ROM National Geographic, Discover! and Lab videos/CD www.eduplace.com for online support Dewey Decimal for library or video 507 (scientific method), 511 (graphing) 542 (techniques, equipment, materials) Websites: http://www.sciencebuddies.org/meroring/scientific-method.shtml “What is the Scientific Method” http://www.fcps.k12.va.us/OakView/ES/glazewsk/96-97/scientist/ES/glazewsk/96-97/scientist/Teaching Scientific Method http://scienceview.berkeley.edu/shwcases/ Interactive Science Activities</p>

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Strand I Thinking and Practice

Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

Essential Question: How do scientists do, review, and revise their work?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
Process of Investigation SCIENTIFIC THINKING Benchmark II: Understand the processes of scientific investigation and how scientific inquiry results in scientific knowledge	<p>1. Understand that different kinds of investigations are used to answer different kinds of questions (e.g., observations, data collection, controlled experiments).</p> <p>2. Understand that scientific conclusions are subject to peer and public review.</p>	Decide whether others will agree that how you set up your investigation answers your question.	No specific assessment - Use Test Generator Create a graphic Organizer for "The Inquiry Process": Pupil Edition, pp. S8 Teacher Edition, pp. T31 Also use: <i>Independent Inquiry Activities</i> and <i>Science Investigation Notebook</i> based on any specific unit of study.	Pupil Edition, pp. S3-S16 Teacher Edition, pp. T9-T36 Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD ELL Resources Lesson Planner and Test Generator CD ROM National Geographic, Discover! and Lab videos/CD www.eduplace.com for online support Dewey Decimal for library or video: 507, 511 Websites: http://www.chemistry.org/portal/a/cs/1/acsdisplay.html?DOC=vc2\4sf4.html "Setting up an Experiment" http://www.sciserv.org/isef/teacher/index.asp Science Fair Tips

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Standard I: Understand the processes of scientific investigations and use inquiry and scientific ways of observing, experimenting, predicting, and validating to think critically.

Essential Question: How can you use math to show the results of a scientific experiment and make predictions?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
Process of Investigation MATH SKILLS Benchmark III: Use mathematical ideas, tools, and techniques to understand scientific knowledge	<ol style="list-style-type: none"> 1. Use appropriate units to make precise and varied measurements. 2. Use mathematical skills to analyze data. 3. Make predictions based on analyses of data, observations, and explanations. 4. Understand the attributes to be measured in a scientific investigation and describe the units, systems, and processes for making the measurement. 	Understand that science is based on analyses of specific data and precise measurements.	No specific assessment – Use Test Generator Student Resources, pp. 201-218, math related lesson based on unit Create graphs or charts for any of the Science Inquiries within each unit. Look for the “Math in Science” sections at the beginning of each unit in the teacher’s edition Also look for the Lesson Wrap-Up at the end of each lesson. There is almost always a math activity under LINKS For Home and School	Student Resources, pp. 201-218 HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD ELL Resources Lesson Planner and Test Generator CD ROM National Geographic, Discover! and Lab videos/CD www.eduplace.com for online support Dewey Decimal for library or video: 510-519 (math topics), 530.8 (measurement) Websites: http://www.aimsedu.org/ AIMS Website http://nces.ed.gov/nceskids/Graphing/ Create printable graphs and charts

Stand II – Content of Science - PHYSICAL SCIENCE

Standard I): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

Essential Question: What changes does matter go through while changing from one state to another?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Strand II: Content of Science</p> <p>PHYSICAL SCIENCE Forms of Matter</p> <p>Benchmark I: Know the forms and properties of matter and how matter interacts</p>	<p>1. Describe properties (e.g., relative volume, ability to flow) of the three states of matter.</p> <p>2. Describe how matter changes from one phase to another (e.g., condensation, evaporation).</p> <p>3. Know that matter is made up of particles (atoms) that can combine to form molecules and that these particles are too small to see with the naked eye.</p> <p>4. Know that the periodic table is a chart of the pure elements that make up all matter.</p> <p>5. Describe the relative location and motion of the particles (atoms and molecules) in each state of matter.</p> <p>6. Explain the relationship between temperature and the motion of particles in each state of matter.</p>	<p>Understand how atoms behave in each state of matter.</p>	<p>Use Test Generator</p> <p>Review and Test Prep, end of chapters 12, 13, 14</p> <p>Unit E Review and Test Prep, pg. E94, student edition, and in Student Resources (back)</p> <p>Assessment Resources, see specific chapter test, unit tests, and performance assessments</p> <p>NMSBA Prep Student Workbook, Unit E, pp. 41-50</p>	<p>Unit E, Chapters 12-14</p> <p>Leveled reader: <i>It's In the Air</i></p> <p>Nat'l Geog. Videos: <i>Atoms, Elements, and States</i> and <i>Changing State</i></p> <p>Corresponding materials in the Study Guide A or B</p> <p>Student Resources, pg. 186, 188, 189</p> <p>Teacher Resource Book, pg. 75, 78, 80, 81</p> <p>Interactive Reading Support, pp. 68-85</p> <p>Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD ELL Resources Lesson Planner and Test Generator CD ROM</p>

				<p>National Geographic, Discover! and Lab videos/CD www.eduplace.com for online support</p> <p>Dewey Decimal for library or video: 531</p> <p>Websites: http://www.webelements.com Periodic Table Interactive http://www.quia.com/jg/65539.html 40 Elements Match Activity http://www.chem4kids.com/files/matter_intro.html States of Matter and Quiz</p>
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Stand II – Content of Science - PHYSICAL SCIENCE

Standard I): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

Essential Question: Why is heat energy?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Strand II: Content of Science</p> <p>PHYSICAL SCIENCE Properties of Matter</p> <p>Benchmark II: Explain the physical processes involved in the transfer, change, and conservation of energy</p>	<p>1. Know that heat is transferred from hotter to cooler materials or regions until both reach the same temperature.</p> <p>2. Know that heat is often produced as a by-product when one form of energy is converted to another form (e.g., when machines or organisms convert stored energy into motion).</p> <p>3. Know that there are different forms of energy.</p> <p>4. Describe how energy can be stored and converted to a different form of energy (e.g., springs, gravity) and know that machines and living things convert stored energy to motion and heat.</p>	<p>Understand that energy can be stored and converted to different forms.</p>	<p>Use Test Generator</p> <p>Review and Test Prep, end of chapters 16 and 17, in student edition, and in Student Resources (back)</p> <p>Assessment Resources, see specific chapter test, unit tests, and performance assessments</p> <p>NMSBA Prep Student Workbook, Unit F, pp. 58</p>	<p>Unit F, Chapters 16-17</p> <p>Leveled readers: <i>What Does An Electrician Do?</i> and <i>Niagara Falls. The Power of Water</i></p> <p>Corresponding materials in the Study Guide A or B</p> <p>Student Resources, pg. 193, 196, 197</p> <p>Teacher Resource Book, pg. 85, 88, 89</p> <p>Interactive Reading Support, pp. 92-94, 98-101</p> <p>Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD ELL Resources Lesson Planner and Test Generator CD ROM National Geographic, Discover!</p>

				<p>and Lab videos/CD www.eduplace.com for online support</p> <p>Dewey Decimal for library or video: 531 (energy)</p> <p>Websites: http://www.think-energy.com/ThinkEnergy/11-14/activities/EnergyTrans.aspx Energy Transformation http://www.eia.doe.gov/kids/energyfacts/science/formsofenergy.html Energy Kids Page (forms)</p>
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Stand II – Content of Science - PHYSICAL SCIENCE

Standard I): Understand the structure and properties of matter, the characteristics of energy, and the interactions between matter and energy.

Essential Question: What kinds of forces are present in a game of pool or a game of marbles?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Strand II: Content of Science</p> <p>PHYSICAL SCIENCE Forces of Matter</p> <p>Benchmark III: Describe and explain forces that produce motion in objects.</p>	<p>1. Understand how the rate of change of position is the velocity of an object in motion.</p> <p>2 Recognize that acceleration is the change in velocity with time.</p> <p>3. Identify forces in nature (e.g., gravity, magnetism, electricity, friction).</p> <p>4. Understand that when a force (e.g., gravity, friction) acts on an object, the object speeds up, slows down, or goes in a different direction.</p> <p>4. Identify simple machines and describe how they give advantage to users (e.g., levers, pulleys, wheels and axles, inclined planes, screws, wedges).</p>	<p>Understand Newton's first and second laws.</p>	<p>Use Test Generator</p> <p>Review and Test Prep, end of chapters 15 and 18, student edition, and in Student Resources (back)</p> <p>Unit F Review and Test Prep, pg. F134, student edition</p> <p>Assessment Resources, see specific chapter test, unit tests, and performance assessments</p> <p>NMSBA Prep Student Workbook, Unit F, pp. 55-57</p>	<p>Unit F, Chapters 15 (Forces, Motion, Work) and 18 (Electricity)</p> <p>Corresponding materials in the Study Guide A or B</p> <p>Student Resources, pp. 79-86, 190-192, 198-200, 218, 233</p> <p>Teacher Resource Book, pg. 82-84, 90-92</p> <p>Interactive Reading Support, pp. 86-90, 104-107</p> <p>Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD ELL Resources Lesson Planner and Test Generator CD ROM National Geographic, Discover! and Lab videos/CD www.eduplace.com for online</p>

				<p>support</p> <p>Dewey Decimal for library or video: 531 (motion, friction, momentum, gravity), 537 (electricity), 621.811 (simple machines)</p> <p>Websites: http://www.cln.org/themes/force_motion.html Force and Motion Theme Page http://www.funderstanding.com/k12/coaster/ Interactive Roller Coaster http://edtech.kennesaw.edu/web/simplemach.html Simple Machines</p>
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Strand II Content of Science – LIFE SCIENCE

Standard II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.

Essential Question: How are living and non-living things in an environment affected by change?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Strand II: Content of Science</p> <p>LIFE SCIENCE Forms & Structure</p> <p>Benchmark I: Explain the diverse structures and functions of living things and the complex relationships between living things and their environments.</p>	<p>1. Identify the components of habitats and ecosystems (producers, consumers, decomposers, predators).</p> <p>2. Understand how food webs depict relationships between different organisms.</p> <p>3. Know that changes in the environment can have different effects on different organisms (e.g., some organisms move, some survive, some reproduce, some die).</p> <p>4. Describe how human activity impacts the environment.</p>	<p>Understand how change affects the specific parts of an ecosystem.</p>	<p>Use Test Generator</p> <p>Review and Test Prep, end of chapters 4 and 5, student edition, and in Student Resources (back)</p> <p>Unit B Review and Test Prep, pg. B70-B71, student edition</p> <p>Assessment Resources, see specific chapter test, unit tests, and performance assessments</p> <p>NMSBA Prep Student Workbook, Unit B, pp. 11-20</p>	<p>Unit B, Chapters 4 (Ecosystems, communities, and Biomes) and 5 (Life in Ecosystems)</p> <p>Leveled reader: <i>Biomes</i></p> <p>Nat'l Geog. Video: Ecosystems and Biomes</p> <p>Corresponding materials in the Study Guide A or B</p> <p>Student Resources, pg. 19-28, 110-115, 160-165</p> <p>Teacher Resource Book, pp. 52-57</p> <p>Interactive Reading Support, pp. 20-30</p> <p>Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD ELL Resources Lesson Planner and Test Generator CD ROM</p>

				<p>National Geographic, Discover! and Lab videos/CD www.eduplace.com for online support</p> <p>Dewey Decimal for library or video: 574 (ecosystems, biomes) 577 (food chains/webs, habitats, ecology)</p> <p>Websites: http://library.thinkquest.org/11353/cosystems.htm Ecosystems of the World http://www.vtaide.com/png/foodchains.htm Food Webs http://www.gould.edu.au/foodwebs/kids_web.htm Interactive Build a Food Web</p>
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Strand II Content of Science – LIFE SCIENCE

Standard II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.

Essential Question: What physical & personal characteristics do you think you have inherited from your parents?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Strand II: Content of Science</p> <p>LIFE SCIENCE Life Forms in the Environment</p> <p>Benchmark II; Understand how traits are passed from one generation to the next and how species evolve</p>	<p>1. Know that plants and animals have life cycles that include birth, growth and development, reproduction, and death and that these cycles differ for different organisms.</p> <p>2. Identify characteristics of an organism that are inherited from its parents (e.g., eye color in humans, flower color in plants) and other characteristics that are learned or result from interactions with the environment.</p> <p>3. Understand that heredity is the process by which traits are passed from one generation to another.</p>	<p>Understand that an organism that passes through its life cycle successfully will pass on its traits to the next generation.</p>	<p>Use Test Generator</p> <p>Review and Test Prep, end of chapter 3 (Heredity), student edition, and in Student Resources (back)</p> <p>Assessment Resources, see specific chapter test, unit tests, and performance assessments for Chapter 3 only</p>	<p>Unit A, Chapters 2 (Plant Systems), and 3 (Traits of Living Things)</p> <p>Leveled Readers: <i>Barbara McClintock</i></p> <p>Nat'l Geog. Video: <i>How a Plant Works</i></p> <p>Corresponding materials in the Study Guide A or B</p> <p>Student Resources, pp. 15-18 (Heredity), 108-109, 158-159</p> <p>Teacher Resource Book, pg. 27, 49, and 50-51</p> <p>Interactive Reading Support, pp. 14-17 (Heredity)</p> <p>Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments</p>

				<p>Vocabulary Cards, Guide, CD ELL Resources Lesson Planner and Test Generator CD ROM National Geographic, Discover! and Lab videos/CD www.eduplace.com for online support</p> <p>Dewey Decimal for library or video: 571.8 (life cycles-plants) 575-576 (heredity, genes) 591.56 (life cycle-animals)</p> <p>Websites: http://esd.iu5.org/LessonPlans/Life Cycle/animals.htm Life Cycles of Animals http://www.fi.edu/tfi/units/life/living/ ving.html The Circle of Life http://chroma.gs.washington.edu/o utreach/genetics/traits/index.html Genetics Traits Activity</p>
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Strand II Content of Science – LIFE SCIENCE

Standard II (Life Science): Understand the properties, structures, and processes of living things and the interdependence of living things and their environments.

Essential Question: How are cells, tissues, organs, organ systems, organisms & ecosystems related to one another?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Strand II: Content of Science</p> <p>LIFE SCIENCE Life Forms in the Environment</p> <p>Benchmark III: Understand the structure of organisms and the function of cells in living systems.</p>	<p>1. Understand that all living organisms are composed of cells from one to many trillions, and that cells are usually only visible through a microscope.</p> <p>2. Know that some organisms are made of a collection of similar cells that cooperate (e.g., algae) while other organisms are made of cells that are different in appearance and function (e.g., corn, birds).</p> <p>3. Describe the relationships among cells, tissues, organs, organ systems, whole organisms, and ecosystems.</p>	<p>Understand that all living organisms are made of cells that are part of systems.</p>	<p>Use Test Generator</p> <p>Review and Test Prep, end of chapter 1, student edition, and in Student Resources (back)</p> <p>Unit A Review and Test Prep, pg. A110-A111, student edition</p> <p>Assessment Resources, see specific chapter test, unit tests, and performance assessments</p> <p>NMSBA Prep Student Workbook, Unit A, pp. 1-10</p>	<p>Unit A, Chapter 1 (Cells)</p> <p>Leveled readers: <i>Through the Cell Wall</i> and <i>The Amazing Amoeba</i></p> <p>Nat'l Geog. Video: <i>The Living Cell, How a Plant Works</i></p> <p>Corresponding materials in the Study Guide A or B</p> <p>Student Resources, pp. 1-8, 101, 151-154</p> <p>Teacher Resource Book, pp. 43-46</p> <p>Interactive Reading Support, pp. 2-7</p> <p>Classroom set: <i>Cells and Systems</i> By Robert S. Heinemann</p> <p>Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD</p>

				<p>ELL Resources Lesson Planner and Test Generator CD ROM National Geographic, Discover! and Lab videos/CD www.eduplace.com for online support</p> <p>Dewey Decimal for library or video: 571.6 (cells), 612 (physiology)</p> <p>Websites: http://www.cellsalive.com/ Cells Alive Interactive http://www.kidshealth.org/kid/body. mybody_SW.html My Body Interactive (parts of human body w/sound</p>
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Strand II Content of Science – EARTH AND SPACE SCIENCE

Standard III (Earth and Space Science): Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.

Essential Question: If you were planning a journey to explore the solar system, what and whom would you bring with you? Why?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Strand II: Content of Science</p> <p>EARTH & SPACE SCIENCE</p> <p>Universe/Solar System</p> <p>Benchmark I: Describe how the concepts of energy, matter, and force can be used to explain the observed behavior of the solar system, the universe, and their structures</p>	<p>1. Know that many objects in the universe are huge and are separated from one another by vast distances (e.g., many stars are larger than the sun but so distant that they look like points of light).</p> <p>2. Understand that Earth is part of a larger solar system, which is part of an even larger galaxy (Milky Way), which is one of many galaxies.</p> <p>3. Know that there have been manned and unmanned journeys to space and to the moon.</p>	<p>Understand that manned and unmanned journeys to space have shown us that Earth is part of a solar system, which is part of a galaxy, which is part of the universe, all separated by vast distances.</p>	<p>Use Test Generator</p> <p>Review and Test Prep, end of chapters 10 & 11, student edition, and in Student Resources (back)</p> <p>Unit D Review and Test Prep, pg. D86-D87, student edition</p> <p>Assessment Resources, see specific chapter test, unit tests, and performance assessments</p> <p>NMSBA Prep Student Workbook, Unit D, pp. 31-40</p>	<p>Unit D, Chapter 10 (Earth and Its Moon), and Chapter 11 (Exploring Space)</p> <p>Leveled readers: <i>Space Wardrobe</i> and <i>15 Facts About Space</i></p> <p>Nat'l Geog. Video: <i>Learning About Earth and Space</i></p> <p>Corresponding materials in the Study Guide A or B</p> <p>Student Resources, pp. 55-62, 128-131, 178-181, 211, 229, 267-269, 300-302</p> <p>Teacher Resource Book, pg. 17, 35, 70-73</p> <p>Interactive Reading Support, pp. 62-66</p> <p>Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD</p>

				<p>ELL Resources Lesson Planner and Test Generator CD ROM National Geographic, Discover! and Lab videos/CD www.eduplace.com for online support</p> <p>Dewey Decimal for library or video: 520-524 (various topics)</p> <p>Websites: http://www.windows.ucar.edu/ Our Solar System Astronomy and the Universe Parts are in Spanish also http://www.smithsonianeducation.org/students/idealabs/walking_on_the_moon.html Apollo 11 Movie http://spaceplace.nasa.gov/en/kids/games.shtml Space Topic Games also in Spanish</p>
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Strand II Content of Science – EARTH AND SPACE SCIENCE

Standard III (Earth and Space Science): Understand the structure of Earth, the solar system, and the universe, the interconnections among them, and the processes and interactions of Earth's systems.

Essential Question: Why is it colder in the Northern Hemisphere in the winter and warmer in the summer?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Strand II: Content of Science</p> <p>EARTH & SPACE SCIENCE Earth</p> <p>Benchmark II: Describe the structure of Earth and its atmosphere and explain how energy, matter, and forces shape Earth's systems.</p>	<p>1. Understand that water and air relate to Earth's processes, including:</p> <ul style="list-style-type: none"> ✓ how the water cycle relates to weather ✓ how clouds are made of tiny droplets of water, like fog or steam. <p>2. Know that air is a substance that surrounds Earth (atmosphere), takes up space, and moves, and that temperature fluctuations and other factors produce wind currents.</p> <p>3. Know that most of Earth's surface is covered by water, that most of that water is salt water in oceans, and that fresh water is found in rivers, lakes, underground sources, and glaciers.</p> <p>4. Recognize that the seasons are caused by Earth's motion around the sun and the tilt of Earth's axis of rotation.</p>	<p>Understand the relationship of water and air to Earth's processes and that the seasons are caused by Earth's tilt and revolution around the sun.</p>	<p>Use Test Generator</p> <p>Review and Test Prep, end of Unit C - chapter 6 & 7, and Unit D – chapter 9, student edition, and in Student Resources (back)</p> <p>Unit C Review and Test Prep, pg. C102-C103, student edition</p> <p>Unit D Review and Test Prep, pg. D86-D87, student edition</p> <p>Assessment Resources, see specific chapter test, unit tests, and performance assessments</p> <p>NMSBA Prep Student Workbook, Unit C, pp.21-30, and Unit D, pp. 31-40</p>	<p>Unit C, Chapter 6 (Earth's Changing Surface) and 7 (Earth's Structures)</p> <p>Unit D, Chapter 9 (Weather and Climate)</p> <p>Leveled readers: <i>Tornado Chasers</i>, and <i>Wind, Water, and Ice</i></p> <p>Nat'l Geog. Video: <i>Ice on the Move</i></p> <p>Corresponding materials in the Study Guide A or B</p> <p>Student Resources, pp. 37-38, 53-54, 119, 127, 207-210, 227, 255-257, 261-263</p> <p>Teacher Resource Book, pp. 58-61, 67-69</p> <p>Interactive Reading Support, pp. 32-35, 38-42, 50-61</p> <p>Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD edition Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets</p>

				<p>Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD ELL Resources Lesson Planner and Test Generator CD ROM National Geographic, Discover! and Lab videos/CD www.eduplace.com for online support</p> <p>Dewey Decimal for library or video: 525 (seasons) 551 (hydrology, meteorology)</p> <p>Websites: http://www.windows.ucar.edu Our Planet, Atmosphere, Seasons http://ga.water.usgs.gov/edu/watercycle.html Water Cycle in 30 languages http://kids.earth.nasa.gov/droplet.html Droplet Water Cycle Game http://ga.water.usgs.gov/edu/merrith.html Earth's Water http://www.brocktonpublicschools.com/schools/high/planetarium/activities/seasons/seasons3.html Reason for Seasons</p>
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Strand III Science & Society – **DISCOVER / INVENT** Scientific Influence

Standard I: Understand how scientific discoveries, inventions, practices, and knowledge influence, and are influenced by, individuals and societies.

Essential Question: How has science helped people in Los Alamos solve problems?

Category	Fifth Grade	End Learning Mastery	Assessment(s)	Resources
<p>Strand III: Science and Society</p> <p>Discover / Invent Scientific Influence</p> <p>Benchmark I: Explain how scientific discoveries and inventions have changed individuals and societies</p>	<p>1. Describe the contributions of science to understanding local or current issues (e.g., watershed and community decisions regarding water use).</p> <p>2. Describe how various technologies have affected the lives of individuals (e.g., transportation, entertainment, health).</p>	<p>Understand how science helps us understand current issues and how technology has affected people's lives.</p>	<p>Use Test Generator</p> <p>Use the worksheets provided in Interactive Reading Support</p>	<p>Student Edition: "Focus On" and "Careers in Science" sections often contain biography or articles about famous scientists and their contributions. There may also be a corresponding worksheet in Interactive Reading Support.</p> <p>Examples:</p> <p>"Rosalind Franklin" Student textbook, pg. A92-A93 Interactive Reading Support, pg. 18.</p> <p>"Chef" Student textbook, pg. A105 Interactive Reading Support, pg. 19.</p> <p>There are also numerous Technology Links and Activities scattered through out both the Student Edition and the Teacher's Edition</p> <p>Other HM Science Materials: Pupil & Teacher Editions: hardcover, online and CD editor Leveled readers & T.E. Study Guides A & B Science Notebook Transparency Sets</p>

				<p>Prof. Dev. Handbook Unit Resource Folder: worksheets and assessments Vocabulary Cards, Guide, CD ELL Resources Lesson Planner and Test Generator CD ROM National Geographic, Discover! and Lab videos/CD www.eduplace.com for online support</p> <p>Dewey Decimal for library or video: 600 (technology), 608 (patents and inventions)</p> <p>Websites: http://spaceplace.nasa.gov/en/kids/poes_tracking/index.shtml How Migrating Animals are Tracked by Satellite and Migration Concentration Game</p>
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KEY

magenta – introduce

green – develop

master – red

progress – black

extend - turquoise

Bibliography

Houghton Mifflin Science – Grade 5

Name of Resource:	Abbreviated or referenced as:	Uses:
Houghton-Mifflin Science, Pupil Edition Houghton-Mifflin Science Teacher Editions	Student Edition Teacher Edition	Primary text for student, 1 hardcover Primary teacher resources, 3 volumes 2 units per volume
eScience Student and Teacher's Editions	Online and CD Editions	Full texts for student and teacher available online, on CD-ROM, and MP3 CD
Leveled Independent Science Books and Leveled Readers with teacher resources Study Guide A, Study Guide B	Leveled Readers & T.E. Study Guides A & B	6 copies per strand with teacher guide, Audio CD, and Activity Cards Review worksheets for each lesson; Guide A is for extra support/special needs and Guide B is for on-level or challenge
Science Investigation Notebook, Science Notebook	Science Notebook	Workbook/Blackline Masters and teacher's answer key for recording investigations, lesson reviews, and writing worksheets
Teaching Transparencies, Reading and Content Transparencies organizers	Transparency Sets	2 sets, organized by unit and chapter: Chapter Content and Reading Skills; Interactive, Content, and Investigation
Professional Development Handbook	Prof. Dev. Handbook	Articles for teachers with an overview of each strand and relevant research
Unit Resource Folders:	Student Resources Teacher Resources Assessment Resources New Mexico NMSBA Prep	Main source of worksheets for review, test prep, math/writing, and investigations Newsletters, take homes, graphic organizers, and activity masters Chapter/unit tests and other assessments Reading and science practice tests
Reading Support: Building Vocabulary, Vocabulary Cards, Teacher's Guide, Games & Glossary CD ROM	Vocabulary Cards, Guide, CD	Worksheets, activities, CD-ROM games and teacher's guide for vocabulary
English Language Learner's Resources & CD-ROM Interactive Reading Support	ELL Resources Interactive Reading Support	Lessons, worksheets, and resources Interactive reading worksheets by lesson
Technology: Lesson Planner CD-ROM ExamView Test Generator, CD ROM Interactive Lab Videos on CD-ROM, Discover! Simulations on CD-ROM, and National Geographic Videos	Lesson Planner Test Generator National Geographic, Discover! and Lab videos/CD	Plans lessons and print resources Create printed or computer assessment Interactive labs, study guides, and exploration on CD-ROM and video
Independent Inquiry Activities	Independent Inquiry Activities	Student activity sheets, activity support masters, and transparencies for independent labs

Online Resources

www.eduplace.com

Main website for online Houghton Mifflin support

Standard: Strand I – Thinking and Practice

Websites:

<http://www.sciencebuddies.org/mentoring/scientific-method.shtml>

“What is the Scientific Method”

<http://www.fcps.k12.va.us/OakViewES/glazewsk/96-97/scientist/>

Teaching Scientific Method

<http://scienceview.berkeley.edu/showcase/>

Interactive Science Activities

<http://www.chemistry.org/portal/a/c/s/1/acsdisplay.html?DOC=vc2\4sf\sf4.html>

“Setting up an Experiment”

<http://www.sciserv.org/isef/teachers/index.asp>

Science Fair Tips

<http://www.aimsedu.org/>

AIMS Website

<http://nces.ed.gov/nceskids/Graphing/>

Create printable graphs and charts

Standard: Strand II – Content of Science - Physical Science

Websites:

<http://www.webelements.com>

Periodic Table Interactive

<http://www.quia.com/jg/65539.html>

40 Elements Match Activity

http://www.chem4kids.com/files/matter_intro.html

States of Matter and Quiz

<http://www.think-energy.com/ThinkEnergy/11-14/activities/EnergyTrans.aspx>

Energy Transformation

<http://www.eia.doe.gov/kids/energyfacts/science/formsofenergy.html>

Energy Kids Page (forms)

http://www.cln.org/themes/force_motion.html

Force and Motion Theme Page

<http://www.funderstanding.com/k12/coaster/>

Interactive Roller Coaster

<http://edtech.kennesaw.edu/web/simmach.html>

Simple Machines

Standard: Strand II – Content of Science - Life Science

Websites:

<http://library.thinkquest.org/11353/ecosystems.htm>

Ecosystems of the World

<http://www.vtaide.com/png/foodchains.htm>

Food Webs

http://www.gould.edu.au/foodwebs/kids_web.htm

Interactive Build a Food Web

<http://esd.iu5.org/LessonPlans/LifeCycle/animals.htm>

Life Cycles of Animals

<http://www.fi.edu/tfi/units/life/living/living.html>

The Circle of Life

<http://chroma.gs.washington.edu/outreach/genetics/traits/index.html>

Genetics Traits Activity

<http://www.cellsalive.com/>

Cells Alive Interactive

http://www.kidshealth.org/kid/body/mybody_SW.html

My Body Interactive (parts of human body w/sound)

Standard: Strand II – Content of Science – Earth and Space Science

Websites:

<http://www.windows.ucar.edu/>

Our Solar System -Astronomy and the Universe (Parts are in Spanish also)

http://www.smithsonianeducation.org/students/idealabs/walking_on_the_moon.html

Apollo 11 Movie

<http://spaceplace.nasa.gov/en/kids/games.shtml>

Space Topic Games also in Spanish

<http://www.windows.ucar.edu>

Our Planet, Atmosphere, Seasons

<http://ga.water.usgs.gov/edu/watercycle.html>

Water Cycle in 30 languages

<http://kids.earth.nasa.gov/droplet.html>

Droplet Water Cycle Game

<http://ga.water.usgs.gov/edu/mearth.html>

Earth's Water

<http://www.brocktonpublicschools.com/schools/high/planetarium/activities/seasons/seasons3.html>

Reason for Seasons

Standard: Strand III –Science & Society – Discover/Invent ~ Scientific Influence

Websites:

http://spaceplace.nasa.gov/en/kids/poes_tracking/index.shtml

How Migrating Animals are Tracked by Satellite and Migration Concentration Game