

**Science Grade 2**

Teacher: Master Map

Month	Content and Essential Questions	Skills/Standards	Assessment/Standards	Resources
<p><b>September 2004</b></p>	<p>How does science vocabulary help me learn about science?                      What are some special kinds of weather?                      What happens to air and water when the weather changes?</p>	<p>*Locate vocabulary box and highlighted terms                      *Apply science vocabulary to discussion                      *Observe changes in the weather                      *Compare changes in water/air                      *Measure water evaporation                      *Construct a model of the water cycle                      *Communicate why the movement of water is called a cycle</p>	<p>*Teacher Observation                      *McGraw Hill Teacher Selected Blackling Masters                      *Teacher Made Culminating Activity                      -----  <b>Standard / Assessments :</b>  <b>NY Learning Standards</b>  <b>Subject Area : Math, Science and Technology</b>  <b>Items Addressed :</b>                      •{1 } Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.                      •{1.B } Scientific Inquiry                      •{1.C } Engineering Design                      •{4 } Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.                      •{4.A } Physical Setting                      •{5 } Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.                      •{5.C } Computer Technology                      •{6 } Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.                      •{6.B } Models                      •{7 } Students will apply the knowledge and</p>	<p>McGraw Hill Science Series                      McGraw Hill Lab Kit                      Math and Science Lab                      Science Big Books                      Nonfiction Text                      Guided Reading Text                      World Wide Web</p>

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			thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions. •{7.C }Skills and Strategies for Interdisciplinary Problem Solving •{4.A.2 }Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land. •{5.C.3 }Computers, as tools for design, modeling, information processing, communication, and system control, have greatly increased human productivity and knowledge. -----	
<b>October 2004</b>	Where does weather take place? What instruments do you use to describe weather? How do you read a weather map?	*Communicate layers of the atmosphere *Predict weather *Measure weather using thermometers *Construct your own barometer *Measure air pressure *Apply map key/symbols *Infer weather in different parts of the country *Conclude how the weather will travel/change	*Teacher Observation *McGraw Hill Teacher Selected Blackling Masters *Teacher Made Culminating Activity ----- <b>Standard / Assessments :</b> <b>NY_Learning_Standards</b> <b>Subject Area : Math, Science and Technology</b> <b>Items Addressed :</b> •{1 }Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. •{1.B }Scientific Inquiry •{1.C }Engineering Design •{4 }Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. •{4.A }Physical Setting •{5 }Students will apply technological	McGraw Hill Science Series McGraw Hill Lab Kit Math and Science Lab Science Big Books Nonfiction Text Guided Reading Text World Wide Web

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			<p>knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.</p> <ul style="list-style-type: none"> <li>•{5.A }Engineering Design</li> <li>•{5.C }Computer Technology</li> <li>•{6 }Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.</li> <li>•{6.B }Models</li> <li>•{6.C }Magnitude and Scale</li> <li>•{7 }Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.</li> <li>•{7.C }Skills and Strategies for Interdisciplinary Problem Solving</li> <li>•{4.A.2 }Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land.</li> </ul> <p>-----</p>	
<p><b>November 2004</b></p>	<p>How does the Earth change slowly?                      What is erosion?                      How does the Earth change quickly?                      What happens to the Earth's crust when a landslide, volcanic eruption, or an earthquake occurs?</p>	<ul style="list-style-type: none"> <li>*Communicate the ways in which the Earth erodes</li> <li>*Locate the layers of the Earth</li> <li>*Construct a model of a change in the Earth's crust</li> </ul>	<ul style="list-style-type: none"> <li>*Teacher Observation</li> <li>*McGraw Hill Teacher Selected Blackling Masters</li> <li>*Teacher Made Culminating Activity</li> </ul> <p>-----</p> <p><b>Standard / Assessments :</b>  <b>NY_Learning_Standards</b>  <b>Subject Area : Math, Science and Technology</b>  <b>Items Addressed :</b></p> <ul style="list-style-type: none"> <li>•{1 }Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.</li> <li>•{1.B }Scientific Inquiry</li> </ul>	<p>McGraw Hill Science Series                      McGraw Hill Lab Kit                      Math and Science Lab                      Science Big Books                      Nonfiction Text                      Guided Reading Text                      World Wide Web</p>

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<p><b>December 2004</b></p>	<p>What does the Earth do when it rotates?                      What causes night and day?                      How long does it take for the Earth to rotate one full turn?                      What causes seasons?                      Why do the seasons come in the same order</p>	<p>*Demonstrate how the earth rotates                      *Infer what causes night and day                      *Compare night and day                      *Communicate the pattern of the season cycle                      *Retell the cause and effect of the season</p>	<p>*Teacher Observation                      *McGraw Hill Teacher Selected Blackling Masters                      *Teacher Made Culminating Activity</p>	<p>McGraw Hill Science Series                      McGraw Hill Lab Kit                      Math and Science Lab                      Science Big Books                      Nonfiction Text                      Guided Reading Text</p>

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	every year? What is an orbit? What is the moon like? Where does moonlight come from? Why does the moon's shape change? What planets make up our solar system?	pattern *Observe a model of the moon *Infer what causes the phases of the moon *Compare/Contrast the Earth and the Moon *Predict the moon's phases from a calendar *Create a moon journal to record phases and check predictions *Name/locate the planets of our solar system	----- <b>Standard / Assessments :</b> <b>NY_Learning_Standards</b> <b>Subject Area : Math, Science and Technology</b> <b>Items Addressed :</b> <ul style="list-style-type: none"> <li>•{1 } Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.</li> <li>•{1.B } Scientific Inquiry</li> <li>•{4 } Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.</li> <li>•{4.A } Physical Setting</li> <li>•{5 } Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.</li> <li>•{6 } Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.</li> <li>•{6.B } Models</li> <li>•{6.E } Patterns of Change</li> <li>•{7 } Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.</li> <li>•{7.C } Skills and Strategies for Interdisciplinary Problem Solving</li> <li>•{4.A.1 } The Earth and celestial phenomena can be described by principles of relative motion and perspective.</li> </ul> -----	World Wide Web
<b>January</b>	What are the three states of matter?	*Infer that matter is anything that takes up	*Teacher Observation	McGraw Hill Science Series

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2005	What are the properties of each state? How can you classify matter according to its properties? How can you change matter? What is the difference between a physical and chemical change?	space *Observe states of matter *Identify the properties of each state *Communicate the difference between mass, volume, and weight	*McGraw Hill Teacher Selected Blackling Masters *Teacher Made Culminating Activity ----- <b>Standard / Assessments :</b> <b>NY Learning Standards</b> <b>Subject Area : Math, Science and Technology</b> <b>Items Addressed :</b> •{1 } Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. •{1.B } Scientific Inquiry •{4 } Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. •{4.A } Physical Setting •{6 } Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning. •{6.C } Magnitude and Scale •{7 } Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions. •{7.C } Skills and Strategies for Interdisciplinary Problem Solving •{4.A.3 } Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity. -----	McGraw Hill Lab Kit Math and Science Lab Science Big Books Nonfiction Text Guided Reading Text World Wide Web
February	How can things get warmer?	*Explore and communicate how heat can	*Teacher Observation	McGraw Hill Science Series

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2005	How can heat change matter? How can we use heat? How does light travel? How do we use light? What is sound and how is it made? What can sound move through? What is loudness and pitch?	change matter *Identify how heat energy can be used *Explore and observe how light can reflect off an object *Communicate the basic properties of light including reflection and refraction *Explore and observe how sounds are made. *Define loudness and pitch. *Design an instrument.	*McGraw Hill Teacher Selected Blackling Masters *Teacher Made Culminating Activity ----- <b>Standard / Assessments :</b> <b>NY Learning Standards</b> <b>Subject Area : Math, Science and Technology</b> <b>Items Addressed :</b> •{1 } Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. •{1.B } Scientific Inquiry •{4 } Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. •{4.A } Physical Setting •{7 } Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions. •{7.C } Skills and Strategies for Interdisciplinary Problem Solving •{4.A.3 } Matter is made up of particles whose properties determine the observable characteristics of matter and its reactivity. -----	McGraw Hill Lab Kit Math and Science Lab Science Big Books Nonfiction Text Guided Reading Text World Wide Web
<b>March</b> <b>2005</b>	What is electricity? Why do we need electricity? How do we use electricity? What is a cell? What is a circuit?	*Discuss the uses of electricity *Identify the basic components of a circuit including a cell and a switch *Construct a circuit using a battery, light bulb, and wire	*Teacher Observation *McGraw Hill Teacher Selected Blackling Masters *Teacher Made Culminating Activity -----	McGraw Hill Science Series McGraw Hill Lab Kit Math and Science Lab Science Big Books Nonfiction Text Guided Reading Text World Wide Web

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<p><b>April 2005</b></p>	<p>What makes things move?                      How do objects move?                      How far can things move?                      What slows things down?                      What happens when you change a force?</p>	<p>*Explore and measure how far things move                      *Communicate different ways that objects can move and change direction                      *Define terms force and gravity                      *Explore and compare how surfaces can change the force on an object                      *Define and understand the concept of friction                      *Recognize how a force and the direction of a force can change                      *Experiment with a ramp and various objects                      *Predict how change will affect the object</p>	<p>*Teacher Observation                      *McGraw Hill Teacher Selected Blackling Masters                      *Teacher Made Culminating Activity</p> <p>-----  <b>Standard / Assessments :</b>  <b>NY_Learning_Standards</b>  <b>Subject Area : Math, Science and Technology</b>  <b>Items Addressed :</b></p> <ul style="list-style-type: none"> <li>•{1 } Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.</li> <li>•{1.B } Scientific Inquiry</li> <li>•{1.C } Engineering Design</li> <li>•{4 } Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.</li> <li>•{4.A } Physical Setting</li> <li>•{5 } Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs.</li> <li>•{5.A } Engineering Design</li> <li>•{6 } Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.</li> <li>•{6.B } Models</li> <li>•{6.C } Magnitude and Scale</li> <li>•{7 } Students will apply the knowledge and thinking skills of mathematics, science, and technology to address real-life problems and make informed decisions.</li> </ul>	<p>McGraw Hill Science Series                      McGraw Hill Lab Kit                      Math and Science Lab                      Science Big Books                      Nonfiction Text                      Guided Reading Text                      World Wide Web</p>

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<p><b>May 2005</b></p>	<p>How do levers make work easier?                      How do we use levers?                      What is a ramp (inclined plane)?                      How do ramps help people?</p>	<ul style="list-style-type: none"> <li>*Draw a lever</li> <li>*Label the force, the load, and fulcrum</li> <li>*Communicate how a force lifts an object</li> <li>*Communicate how a lever lifts an object</li> <li>*Explore and measure how ramps move heavy loads</li> <li>*Communicate the relationship between the steepness of a ramp and how much force is needed to move things on it</li> </ul>	<ul style="list-style-type: none"> <li>*Teacher Observation</li> <li>*McGraw Hill Teacher Selected Blackling Masters</li> <li>*Teacher Made Culminating Activity</li> </ul> <p>-----</p> <p><b>Standard / Assessments :</b>  <b>NY_Learning_Standards</b>  <b>Subject Area : Math, Science and Technology</b>  <b>Items Addressed :</b></p> <ul style="list-style-type: none"> <li>•{1 }Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.</li> <li>•{1.B }Scientific Inquiry</li> <li>•{1.C }Engineering Design</li> <li>•{4 }Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science.</li> <li>•{4.A }Physical Setting</li> <li>•{6 }Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to these and other areas of learning.</li> <li>•{6.B }Models</li> <li>•{6.C }Magnitude and Scale</li> <li>•{7 }Students will apply the knowledge and thinking skills of mathematics, science,</li> </ul>	<p>McGraw Hill Science Series                      McGraw Hill Lab Kit                      Math and Science Lab                      Science Big Books                      Nonfiction Text                      Guided Reading Text                      World Wide Web</p>

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			and technology to address real-life problems and make informed decisions. •{7.C }Skills and Strategies for Interdisciplinary Problem Solving •{4.A.5 }Energy and matter interact through forces that result in changes in motion. -----	
<b>June 2005</b>	What does a magnet attract? What are poles? What can magnets pull through? How can you make a temporary magnet? How do we use magnets every day?  How have you become a better scientist?	*Explore and classify things attracted to magnets *Explore poles of a magnet *Define the term repel *Construct a magnet *Communicate common uses of magnets  *Reflect upon the science skills and terminology.	*Teacher Observation *McGraw Hill Teacher Selected Blackling Masters *Teacher Made Culminating Activity  ----- <b>Standard / Assessments :</b> <b>NY_Learning_Standards</b> <b>Subject Area : Math, Science and Technology</b> <b>Items Addressed :</b> •{1 }Students will use mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions. •{1.B }Scientific Inquiry •{1.C }Engineering Design •{4 }Students will understand and apply scientific concepts, principles, and theories pertaining to the physical setting and living environment and recognize the historical development of ideas in science. •{4.A }Physical Setting •{5 }Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems to satisfy human and environmental needs. •{5.A }Engineering Design •{6 }Students will understand the relationships and common themes that connect mathematics, science, and	McGraw Hill Science Series McGraw Hill Lab Kit Math and Science Lab Science Big Books Nonfiction Text Guided Reading Text World Wide Web

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