Rose Hamilton Elementary Curriculum Mapping
Science – Grade 2
1st Nine Weeks

Unit Lesson	Indiana Standards	Key Questions Big Idea	Resources/Activities Materials Needed	Vocabulary	Assessment
Introduction **Be A Scientist** **Part 1** p. 1-11		**Key Questions:** What do scientists do? How do scientists work? How do scientists learn new things?	• Student Book p. 1-11 **Engage** • Chart paper for class KWL chart p.2 • Activity Flipchart p.1 **Explore** • Inquiry Activity p.4: paper plates, green crayons, string, pan of water, small toy frogs • Alternate Explore p.4: clay, materials that float, materials that will not float	**Preview this Vocabulary:** (Will be used throughout the year.) Observe Predict Investigate Question Model Measure Record Data Draw Conclusion Compare Classify Order Infer Communicate	Student Participation Observation of Activities Check Student Book
Introduction **Be A Scientist** **Part 2** p.12-18		**Scientific Method:** Observe Ask a Question Make a Prediction Make a Plan Follow the Plan Record the Results Try the Plan Again Draw a Conclusion	• Student Book p. 12-18 **Engage** • add to KWL chart p.12 • Flipchart p.2 (TE12) • (optional) p. 3, photos of scientists in different scientific fields **Explore** • Alternate Explore p.13: photos of ponds showing native plants and animals **Explain** • Activity p.15:animal photos **Extend** • Extend p.18: poster board	(Same as above)	(Same as above)

NS = **N**ational **S**tandard
The **N**ature of **S**cience – Students gain scientific knowledge by observing the natural and constructed world, performing and evaluating investigations and communicating their findings. These principles should guide student work and be integrated into the curriculum along with the content standards on a daily basis.

Unit 1 Lesson 1 **Describing Matter** p. 20-35	2.1.1 2.1.2 NS	**The Big Idea:** Changes in Matter How can matter change? **Key Questions:** What is matter? What things are made of matter? How do we describe things made of matter? What is a solid? **Inquiry Skill:** Record Data	• Student Book p.20-35 • Graphic Organizer 10 p.TR 12, p.26,27,33 • Create KWL chart p.20 • Log On e-Journal p.20 **Engage** • add to KWL p.22 • Warm Up p. 23 sm.paper bag **Explore** • Inquiry Activity p.24: crackers • Open Inquiry p.25: cracker boxes **Explain** • Read a Photo p.26, recording sheet p247 • Vocabulary p.27: sm red rubber ball • Quick Lab p.30, recording sheet p.265: balance • Animations Science in Motion: Changes in Matter Measuring Solids p.xii, p.30 • Read a Photo p.30, recording sheet p248 • Classroom Equity p.31: string, rulers, balance • Foldables p.31, p.284, for directions see TE Txii-Txiii **Evaluate**◀ • add to KWL chart p. 32 • Math Link p.32: poster board, yard/meter stick • Integrate Math, Graphing p.34: graph paper **Extend** • Apply It p.35, medium-size glass clear jars, buttons or other small materials with multiple attributes • Flipchart p.41 (TE35)	matter mass property solid	Student Participation Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

2.1.1 Observe, describe and measure ways in which the properties of a sample of water (including volume) change or stay the same as the water is heated and cooled and then transformed into different states.
2.1.2 Predict the result of combining solids and liquids in pairs. Mix; observe, gather, record and discuss evidence of whether the result may have different properties than the original materials.
NS Use a scientific notebook to record predictions, questions and observations about data with pictures, numbers or in words.

Unit 1 Lesson 2 **Liquids and Gases** p.36-47	2.1.1 2.1.2 NS	**Key Questions:** What are the three forms of matter? What is a liquid? What is a gas? How are liquids and gases like solids? How are liquids and gases different from solids? **Be a Scientist:** Which liquid flows the fastest?	• Student Book p.36-47 • Graphic Organizer 11 p.TR 13, p.40, 45, 47 **Engage** • add to KWL chart p.36 • Warm Up p.37 sand, clear containers of different sizes, hand lenses **Explore** • Inquiry Activity p. 38: measuring cup, different sized clear containers, shallow tray, food coloring, water • Open Inquiry p.39: thicker liquids like maple syrup, mustard, corn syrup, ketchup, milk shakes, vegetable oil **Explain** • Read a Photo p.41, recording sheet p.249 • Quick Lab p.43, recording sheet p.266 6 cans with different lids, 2 different solids, 2 different liquids • Foldables p. 43, p.284 **Evaluate**◀ • add to KWL chart p.44 • Health Link p.44: poster board **Extend** • Inquiry Investigation p.46: honey, dish soap, mustard, ketchup, cardboard • Open Inquiry p.47, cooking oil, baby lotion, vinegar, milk, juice, syrup	liquid volume gas	Student Participation Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View* *Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

2.1.1 Observe, describe and measure ways in which the properties of a sample of water (including volume) change or stay the same as the water is heated and cooled and then transformed into different states.
2.1.2 Predict the result of combining solids and liquids in pairs. Mix; observe, gather, record and discuss evidence of whether the result may have different properties than the original materials.
NS Generate questions and make observations about natural processes.
NS Recognize a fair [scientific] test.

Unit 1 Lesson 3 **Heat Can Change Matter** p.48-59	2.1.1 NS	**Key Questions:** How can solids and liquids change? How can liquids and gases change? **Be a Scientist:** Does a solid have more mass than a liquid?	• Student Book p. 48-59 • Graphic Organizer 3 p.TR 5, p.52, 57 **Engage** • add to KWL chart p.48 • Warm Up p.49, *One Hot Summer Day* by Nina Crews **Explore** • Inquiry Activity p.50: ice cubes, 2 clear cups and Sharpie to label them, thermometer **Explain** • Animations Science in Motion: Changes in Matter Water Changes p.xii, p.52 • Read a Photo p.53, recording sheet p.250 • Quick Lab p.53, recording sheet p.267 measuring cup, plastic bottle, water • Addressing Misconceptions p.55 cold drinking cup or cold can of Coke • Foldables p.55, p.288 **Evaluate**◀ • add to KWL chart p.56 • Health Link p.56: juice, frozen juice pops **Extend** • Inquiry Investigation p.58, balloons, balance, water, measuring cup, funnel	freeze melt evaporate condense	Student Participation Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

2.1.1 Observe, describe and measure ways in which the properties of a sample of water (including volume) change or stay the same as the water is heated and cooled and then transformed into different states.
NS Use a scienfific notebook to record predictions, questions and observations about data with pictures, numbers or in words.
NS Make predictions based on observations.

Unit 1 Lesson 4 **Mixtures** p.60-73	2.1.2 2.1.3	**Key Questions:** What are mixtures? What happens when you mix things together? What happens when you mix solids and liquids? Which mixtures stay mixed? What happens when you try to take a mixture apart? **Writing in Science:** Write a Recipe	• Student Book p. 60-73 • Graphic Organizer 8 p.TR10, p.64, 71 **Engage** • add to KWL chart p.60 • Warm Up p.61, clear plastic glass, sugar, lemon slices, ice, wooden spoon, water **Explore** • Inquiry Activity p.62 measuring cups, sand, salt, spoons, plastic clear cups • Alternate Explore p.62, two lidded plastic baby food jars or larger lidded clear plastic jars, hot and cold water, salt • Open Inquiry p.63, other solids to mix with water like ??? **Explain** • (optional) Make paper mache p.64, newspaper, flour, water, bowls, balloons • Read a Photo p.66, recording sheet p.251 • (optional) Make Smoothies p.66,71 blender, strawberries, bananas, vanilla yogurt, ice cubes, spoon, small dixie cups • Explore the Main Idea p.67, lidded clear plastic jar, vegetable oil, water, food coloring • Quick Lab p.68, recording sheet p.268, salt water, shallow container • (optional)Make three mixtures p.68-69, sand and water, sand and rocks, salt and water • Foldables p.69, p.286 **Evaluate**◀ • add to KWL chart p.70 **Extend** • Write a Recipe p.72, 5x7 recipe cards **Unit 1 Review** • add to KWL chart p.74 • Leveled Readers p.77 • Log On Leveled Reader Database p.77	mixture solution dissolve (evaporation)	Student Participation Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Unit 1 Review p.74-77 Log On e-Review Narrated Summary and Quiz Foldables Study Guide p.78, p.290-291 Test Prep p.79 (ISTEP+ format)

2.1.2 Predict the result of combining solids and liquids in pairs. Mix; observe, gather, record and discuss evidence of whether the result may have different properties than the original materials.

2.1.3 Predict and experiment with methods (e.g. sieving, evaporation) to separate solids and liquids based on their physical properties.

Unit 2 Lesson 1 **Position and Motion** p.80-93	2.1.4 2.1.5 NS	**The Big Idea:** Motion and Forces How do things move? **Key Questions:** What are position and motion? What is speed? **Inquiry Skill**: Investigate	• Student Book p.80-93 • Graphic Organizer 7 p.TR9, p.86,91 • Create KWL chart p.80 • Log On e-Journal p.80 **Engage** • add to KWL chart p.80,82 • Warm Up p.83, *I Spy: A Balloon* by Jean Marzollow and Walter Wick **Explore** • Inquiry Activity p.84: various classroom objects **Explain** • Foldables p.86, p281 • (optional) Make Word Cards p.86: under, over, above, etc • Quick Lab p.88, recording sheet p.269 (same as "Apply It" in Extend*) • Read a Graph p.89, recording sheet p.252 **Evaluate**◀ • add to KWL chart p.90 • Social Studies Link p.90 **Extend** • *Apply It p.93, (use Quick Lab recording sheet p.269) masking tape, meter stick, stopwatch • Flipchart p.50, p.93	position **motion** speed	Student Participation Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

2.1.4 Observe, sketch, demonstrate and compare how objects can move in different ways (e.g., straight, zig-zag, back-and-forth, rolling, fast and slow).
2.1.5 Describe the position or motion of an object relative to a point of reference (e.g., background, another object).
NS Use a scientific notebook to record predictions, questions and observations about data with pictures, numbers or in words.

Unit 2 Lesson 2 **Forces** p.94-107	2.1.6 2.1.7 NS	**Key Questions:** What makes things move? What is gravity? What do magnets do? **Be a Scientist:** How does distance affect the pull of a magnet on metal objects? **Career in Science:** Food Chemist	• Student Book p.94-107 • Graphic Organizer 8,p.TR10, p.98, 105 **Engage** • add to KWL chart p.94 • Warm Up p.95, *Jump, Frog, Jump* by Robert Kalan **Explore** • Inquiry Activity p.96: toy cars, masking tape, rulers • Alternate Explore p.96, two heavy books, rubber band, something to secure the rubber band to the books, ruler, masking tape • Open Inquiry p.97, recording sheet, objects such as balls, marbles, wooden blocks, masking tape, ruler, recording chart **Explain** • (optional) photos p.99 of people doing different physical activities • Foldables p.99, p.286 • Quick Lab p.101, recording sheet p.270, balls of different sizes, stopwatch • Address Misconceptions p.101, photos of the Mars Rover on Mars, (optional)pictures or models of the planets, photos of astronauts floating in space • Read a Chart p.103, recording sheet p.253 • Differentiated Instruction p.103, magnets, chart paper, paper clips • Explore the Main Idea p.103, a piece of *magnetite* also called *lodestone* and other sm. rocks **Evaluate**◀ • add to KWL chart p.104 • Guide the Learning p.105, iron, nickel, wax, plastic **Extend** • Inquiry Investigation p.106, magnet, ruler, paper clips • Guided Inquiry p.107, shallow container of water **Unit 2 Review** • add to KWL chart p.108 • Leveled Readers p.111 • Log On Leveled Reader Database p.111 • Books, stories, articles, photos about Food Chemists	force gravity weight attract magnetism	Student Participation Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Unit 2 Review p.108-111 Foldables Study Guide p.112, p.290-291 Log On e-Review Narrated Summary and Quiz Test Prep p.113 (Istep+ format)

2.1.6 Observe, demonstrate, sketch and compare how applied force (i.e., push or pull) changes the motion of objects.
2.1.7 Investigate the motion of objects when they are acted upon at a distance by forces like gravity and magnetism.
NS Generate questions and make observations about natural processes.

Additional Support / Resources
www.macmillanmh.com- on-line Student Edition, e-Journal, e-Glossary, e-Review, e-Career, vocabulary games
http://nsdl.org/refreshers/science

Rose Hamilton Elementary Curriculum Mapping
Science – Grade 2
2nd Nine Weeks

Unit Lesson	Indiana Standards	Key Questions Big Idea	Resources/Activities Materials Needed	Vocabulary	Assessment
Unit 3 Lesson 1 **Weather** p.116-129	2.2.1 2.2.2 2.2.4	**The Big Idea:** Weather and Sky How do the weather and sky change? **Key Questions:** What is weather? What is wind? **Be a Scientist:** What is the weather like this week? How do people know what the weather will be like tomorrow? What is the weather like in different seasons?	• Student Book p.116-129 • Graphic Organizer 5 p.122, 127 • Create KWL chart p.116-117 • Log On e-Journal p.116 **Engage** • add to KWL chart p.118 • (Optional) Weather photos, posters **Explore** • Inquiry Activity p.120: thermometer, construction paper • Open Inquiry: resource materials for weather research p.121 **Explain** • Read a Photo p.124, recording sheet p.254 • Foldables p.125, p.288 **Evaluate◀** • add to KWL chart p.126 • Homework: read the weekly news forecasts **Extend** • Inquiry Investigation p.128, craft stick, crepe streamer, tape, jar, thermometer, ruler • Integrate Writing(Reading) (Optional) Poetry Books on the weather p.129 • Guided Inquiry p.129, chart paper	temperature thermometer precipitation rain gauge wind vane anemometer	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

2.2 Day to day and over the seasons, observe, measure, record and recognize patterns and ask questions about features of weather. Investigate how the position of the sun and moon and the shape of the moon change in observable patterns.
2.2.1 Construct and use tools to observe and measure weather phenomena like precipitation, changes in temperature, wind speed and direction.
2.2.2 Experience and describe wind as the motion of the air.
2.2.4 Ask questions about charted observations and graphed data. Identify the day-to-day patterns and cycles of weather. Understand seasonal time scales in terms of temperature and amounts of rainfall and snowfall.

Unit 3 Lesson 2 **Changes in Weather** p.130-141	2.2.4 2.2.5 2.2.6 2.4.2	**Key Questions:** Where does rain come from? What happens before storms? How can clouds help predict the weather? How does the sun change water? What do you do to stay safe during a storm? **Reading in Science:** Predicting Storms	• Student Book p.130-141 • Graphic Organizer 8 **Engage** • **Explore** • **Explain** • Quick Lab p.134, recording sheet p.272, craft sticks, streamer crepe paper, masking tape • Foldables p.135, p.288 • Read a Diagram p.135, p.255 • Animations Science in Motion: Weather and Sky The Water Cycle p.xii, p.135 • Quick Lab p.136, recording sheet p.273, drawing paper • Read a Chart p.136, recording sheet p.256 • Classroom Equity p.136, National Weather Service www.nws.noaa.gov, or Weather Wiz Kids www.weatherwizkids.com • Develop Vocabulary p.137, photos showing different types of severe weather **Evaluate**◀ • add to KWL chart p.138 • RtI p. 139, Photos of different landscapes with a variety of weather conditions, photos of severe weather conditions **Extend** • (Optional) Photos of lightning, Photo of The Empire State Building	water cycle	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

2.2.4 Construct and use tools to observe and measure weather phenomena like precipitation, changes in temperature, wind speed and direction.
2.2.5 Ask questions and design class investigations on the effect of the sun heating the surface of the earth.
2.2.6 Learn about, report on and practice severe weather safety procedures.
2.4.2 Identify technologies developed by humans to meet human needs. Investigate the limitations of technologies and how they have improved quality of life.

Unit 3 Lesson 3 **The Sun and Earth** p.142-165	2.2.7 NS	**Key Questions:** How are day and night different? Why can't we see the Sun at night? How does day change to night? Why can we see shadows during the day? **Inquiry Skill:** Draw Conclusions	• Student Book p.142-165 • Graphic Organizer 12, p.146, 151 **Engage** • add to KWL chart p.142 • Warm Up p.143, photo of Earth from space in daylight, globe **Explore** • Inquiry Activity p.144, flashlight • Alternate Explore p.144, flashlight, globe **Explain** • Read a Diagram p.147, recording sheet p.257 • Quick Lab p. 148, recording form p.274, 10 index cards, markers, stapler • Foldables p.148, p.282 **Evaluate**◀ • add to KWL chart p.150 • Social Studies Link p.150, flashlight, globe • RtI p.151, photos of tree with shadows on ground at different times of the day. **Extend** • Skill Builder p.153, craft stick, small pot with dirt, drawing paper • Integrate Writing p.152, photos taken at different times of the day • Apply It p.153, photos of the same place in different times of the year • Flipchart p.153, p.35	rotation axis	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz
2.2.7 Investigate how the sun appears to move through the sky during the day by observing and drawing the length and direction of shadows. NS Generate questions and make observations about natural processes. NS Discuss observations with peers and be able to support your conclusion with evidence.					

Unit 3 Lesson 4 **The Moon** p.154-165	2.2.8 2.2.9 NS	**Key Questions:** How do we see the Moon at night? What does the Moon look like? Where and when do you see the Moon? Why can we see the Moon from Earth? Why does the Moon seem to change shape? What else might you see in the night sky? **Be a Scientist:** How does the Moon seem to change during one month? **Careers in Science:** Science Writer	• Student Book 154-165 • Graphic Organizer 4, p.TR6, p.158, 163,168 **Engage** • add to KWL chart p.154 • Warm Up p. 155 Papa, Please Get the Moon for Me by Eric Carle • **Explore** • Alternate Explore p.156, different colored rocks, black construction paper, flashlight • Inquiry Activity p.157 • Open Inquiry p.157, print and non-print resources about the moon for research **Explain** • Discuss Main Idea p.158, rock • Read a Diagram p.158, recording sheet p.258 • ELL Support p.159, labeled photo cards of Moon, Earth, Sun • Explore the Main Idea p.159, globe, ball, flashlight • Quick Lab p.161, recording sheet p.275, 10 index cards, markers, stapler • Foldables p.161, p.288 **Evaluate**◀ • add to KWL chart p.162 • Art Link p.162, drawing paper • RtI p.163, pictures/photos of Moon's phases **Extend** • Inquiry Investigation p.164, calendar, markers, local newspaper or internet site that indicates tonight's Moon phase • Draw Conclusions p.165, flashlight, globe, ping pong ball • Open Inquiry p.165, blank calendar pages **Unit 3 Review** • add to KWL chart p.166 • Leveled Readers p.166 • Log On Leveled Reader Database p.169 • Write About It p.172, resources for researching Science Writers	orbit phase	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View* *Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz Foldables Study Guide p.170, p.290-291

2.2.8 Investigate how the moon appears to move through the sky during the day by observing and drawing its location at different times.
2.2.9 Investigate how the shape of the moon changes from day to day in a repeating cycle that lasts about a month.
NS Discuss observations with peers and be able to support your conclusion with evidence.

Additional Support / Resources
www.macmillanmh.com- on-line Student Edition, e-Journal, e-Glossary, e-Review, e-Career, vocabulary games
http://nsdl.org/refreshers/science

Curriculum Mapping
Science – Grade 2
3rd Nine Weeks

Unit Chapter Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
Unit 4 Lesson 1 **Plants Make New Plants** p.174-189	2.3.1 2.3.2 NS	**The Big Idea:** Living Things Grow and Change How do plants and animals grow and change? **Key Questions:** How do plants make seeds? Where do seeds come from? What are the parts of a seed? How would you describe seeds? What is a life cycle? How does a plant grow from a seed to an adult plant? What do living things need? **writing in Science:** Expository Paragraph	• Student Book p.174-189 • Graphic Organizer 35, p.TR9, p.180, 187 • Graphic Organizer 1 p.TR3, p.188-189 • Create KWL chart p.174 • Log On e-Journal p.174, 189	flower seed pollen life cycle seedling	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

Unit 4 Lesson 1 **Plants Make New Plants** p.174-189	2.3.1 2.3.2 NS	**The Big Idea:** Living Things Grow and Change How do plants and animals grow and change? **Key Questions:** How do plants make seeds? Where do seeds come from? What are the parts of a seed? How would you describe seeds? What is a life cycle? How does a plant grow from a seed to an adult plant? What do living things need? **writing in Science:** Expository Paragraph	**Engage** • add to KWL chart p.176 • Warm Up p.177, Science Songs CD lyrics could be used as poetry TR24 **Explore** • Inquiry Activity p.178, wet lima bean, dry lima bean, hand lens • Alternative Explore p.178, diagram of outside and inside of a seed (lima bean) • Guided Inquiry p.179, wet and dry seeds other than lima beans	flower seed pollen life cycle seedling	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

Unit 4 Lesson 1 **Plants Make New Plants** p.174-189	2.3.1 2.3.2 NS	**The Big Idea:** Living Things Grow and Change How do plants and animals grow and change? **Key Questions:** How do plants make seeds? Where do seeds come from? What are the parts of a seed? How would you describe seeds? What is a life cycle? How does a plant grow from a seed to an adult plant? What do living things need? **writing in Science:** Expository Paragraph	**Explain** • Quick Lab p.180, p.276 • Animations Science in Motion Living Things Grow and Change Life Cycle of a Pine Tree p.181, p.xii • Log On e-Glossary p.181 • ELL p.182 a series of photos/pictures of a flower going through stages of growth • Differentiated Instruction p.183, apple, (Optional) photos of apple blossoms, apple trees, and orchard • Develop Vocabulary p.183, flour • Read a Diagram p.184, recording sheet p.259 • Foldable p.185, p.284	flower seed pollen life cycle seedling	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

Unit 4 Lesson 1 **Plants Make New Plants** p.174-189	2.3.1 2.3.2 NS	**The Big Idea:** Living Things Grow and Change How do plants and animals grow and change? **Key Questions:** How do plants make seeds? Where do seeds come from? What are the parts of a seed? How would you describe seeds? What is a life cycle? How does a plant grow from a seed to an adult plant? What do living things need? **writing in Science:** Expository Paragraph	**Evaluate**◀ • add to KWL chart p.186 • Log On e-Review p.186 Narrated Summary and Quiz **Extend** Integrate Writing p.189, photos/pictures of ways seeds move • Student Book p.190-203 • Graphic Organizer 3, p.TR5, p.194, 201, 207 • Graphic Organizer 10, p.TR12, p.193,p.199, 206 • Log On e-Glossary p.195 **Engage** • add to KWL chart p.190 • Warm Up p.191 poem "Baby Chick" by Aileen Fisher from Eric Carle's *Animals, Animals*	flower seed pollen life cycle seedling	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

Unit 4 Lesson 1 **Plants Make New Plants** p.174-189	2.3.1 2.3.2 NS	**The Big Idea:** Living Things Grow and Change How do plants and animals grow and change? **Key Questions:** How do plants make seeds? Where do seeds come from? What are the parts of a seed? How would you describe seeds? What is a life cycle? How does a plant grow from a seed to an adult plant? What do living things need? **writing in Science:** Expository Paragraph	**Evaluate**◀ • add to KWL chart p.200 • Social Studies Link p.200, research cardinals • Homework p.200, poster board • Log On e-Review p.200 **Extend** • Inquiry Investigation p.202, oatmeal, small shallow container with lid, hand lens, mealworm larva, slice of apple, ruler • Open Inquiry p.203, research animals from eggs	flower seed pollen life cycle seedling	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

Unit 4 Lesson 1 **Plants Make New Plants** p.174-189	2.3.1 2.3.2 NS	**The Big Idea:** Living Things Grow and Change How do plants and animals grow and change? **Key Questions:** How do plants make seeds? Where do seeds come from? What are the parts of a seed? How would you describe seeds? What is a life cycle? How does a plant grow from a seed to an adult plant? What do living things need? **writing in Science:** Expository Paragraph	**Unit 4 Review** • add to KWL chart p.204 • Leveled Readers p.207 • Log On Leveled Reader Database p.207 • Log On e-Careers p.210 • books, articles, research on bird banders, wildlife guides, vets p.210	flower seed pollen life cycle seedling	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

2.3 Observe, ask questions about and describe how organisms change their forms and behaviors during their life cycles.
2.3.1 Observe closely over a period of time and then record in pictures and words the changes in plants and animals throughout their life cycles-including details of their body plan, structure and timing of growth, reproduction and death.
2.3.2 Compare and contrast details of body plans and structures within the life cycles of plants and animals.
NS Use a scientific notebook to record predictions, questions and observations about data with pictures, numbers or in words.

Additional Support / Resources
www.macmillanmh.com- on-line Student Edition, e-Journal, e-Glossary, e-Review, e-Career, vocabulary games
http://nsdl.org/refreshers/science
Suggested **Field Trips**: Apple Orchard in Fall, Spring
Cope Environmental Center in Fall, Spring**Additional Support / Resources**

Unit 4 Lesson 2 **Animals Grow and Change** p.190-203	2.3.1 2.3.2 NS	**Key Questions:** **Be a Scientist:** How do mealworms grow? **Careers in Science:** Bird Bander	• Student Book p.190-203 • Graphic Organizer 3, p.TR5, p.194, 201, 207 • Graphic Organizer 10, p.TR12, p.193,p.199, 206 • Log On e-Glossary p.195 **Engage** • add to KWL chart p.190 • Warm Up p.191 poem "Baby Chick" by Aileen Fisher from Eric Carle's *Animals, Animals* **Explore** • Inquiry Activity p.192 • Alternative Explore p.192, magazine photos of baby and adult animals	tadpole larva pupa	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz Foldables Study Guide p.208, p.290-291

Unit 4 Lesson 2 **Animals Grow and Change** p.190-203	2.3.1 2.3.2 NS	**Key Questions:** **Be a Scientist:** How do mealworms grow? **Careers in Science:** Bird Bander	**Explain** • Quick Lab p.194, recording sheet p.277, index cards • Animations Science in Motion Panda and Chicken Life Cycles p.195 • Read a Diagram p.194-195, recording sheet 260 • Develop Vocabulary p.196, photos of tadpoles and adult frogs • ELL Support p.196, photos of frog life cycle • Differentiated Instruction p.197, research different types of frogs • Foldables p.199, p.284 • Differentiated Instruction p.199, research animals going through *metamorphosis*	tadpole larva pupa	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz Foldables Study Guide p.208, p.290-291

Unit 4 Lesson 2 **Animals Grow and Change** p.190-203	2.3.1 2.3.2 NS	**Key Questions:** **Be a Scientist:** How do mealworms grow? **Careers in Science:** Bird Bander	**Evaluate**◀ • add to KWL chart p.200 • Social Studies Link p.200, research cardinals • Homework p.200, poster board • Log On e-Review p.200 **Extend** • Inquiry Investigation p.202, oatmeal, small shallow container with lid, hand lens, mealworm larva, slice of apple, ruler • Open Inquiry p.203, research animals from eggs	tadpole larva pupa	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz Foldables Study Guide p.208, p.290-291

Unit 4 Lesson 2 **Animals Grow and Change** p.190-203	2.3.1 2.3.2 NS	**Key Questions:** **Be a Scientist:** How do mealworms grow? **Careers in Science:** Bird Bander	**Unit 4 Review** • add to KWL chart p.204 • Leveled Readers p.207 • Log On Leveled Reader Database p.207 • Log On e-Careers p.210 • books, articles, research on bird banders, wildlife guides, vets p.210	tadpole larva pupa	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz Foldables Study Guide p.208, p.290-291

2.3.1 Observe closely over a period of time and then record in pictures and words the changes in plants and animals throughout their life cycles-including details of their body plan, structure and timing of growth, reproduction and death.
2.3.2 Compare and contrast details of body plans and structures within the life cycles of plants and animals.
NS Use a scientific notebook to record predictions, questions and observations about data with pictures, numbers or in words.
NS Conduct investigations that may happen over time as a class, in small groups, or independently.

Additional Support / Resources
www.macmillanmh.com- on-line Student Edition, e-Journal, e-Glossary, e-Review, e-Career, vocabulary games
http://nsdl.org/refreshers/science
Suggested **Guest Speakers or Field Trips**: Naturalists from Cope Environmental Center and Hayes Regional Arboretum
Greensfork Animal Hospital

Curriculum Mapping
Science – Grade 2
4th Nine Weeks

Unit Chapter Lesson	Indiana Standard(s)	Key Questions	Resources/Activities	Vocabulary	Assessments
Unit 5 Lesson 1 **We Use Tools** p.214-225	2.4.1 2.4	**The Big Idea:** Technology and Design How can technology help meet our needs? **Key Questions:** What are tools? How can we use tools? What is technology? How do you use technology? **Reading in Science:** X-Rays	• Student Book p.214-225 • Graphic Organizer 7, p.TR9, p.218, 223 • Log On e-Journal p.212, 224 • Log On e-Glossary p.219 • Create KWL chart p.212 **Engage** • add to KWL chart p.214 • Warm Up p.215, photos of various tools (saw,phone, fork,remote, scissors, hammer,etc.)	tools technology	Observation of Activities Check Student Book See **Evaluate** in previous column. ◄ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

Unit 5 Lesson 1 **We Use Tools** p.214-225	2.4.1 2.4	**The Big Idea:** Technology and Design How can technology help meet our needs? **Key Questions:** What are tools? How can we use tools? What is technology? How do you use technology? **Reading in Science:** X-Rays	**Explore** • Inquiry Activity p.216, paper towel tube, scissors, paper plate, scotch tape, glue, scrap printer paper, construction paper, kitchen broom, push broom Alternative Explore p.216, photos of outside tools (rake, snow shovel, saw, ax, garden shovel, hoe) **Explain** • Quick Lab p.220, recording sheet p.278, magazines, construction paper, scissors, glue, markers • Read a Photo p.220, recording sheet p.261 • Foldables p.220, p.280	tools technology	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

Unit 5 Lesson 1 **We Use Tools** p.214-225	2.4.1 2.4	**The Big Idea:** Technology and Design How can technology help meet our needs? **Key Questions:** What are tools? How can we use tools? What is technology? How do you use technology? **Reading in Science:** X-Rays	**Evaluate**◀ • add to KWL chart p.222 • Social Studies Link p.222, photos of workers in various careers with the tools and technology they use **Extend** • (Optional) Before Reading p.224, photos of doctors, dentists, and technicians using x-rays, samples of x-rays to hang in the window	tools technology	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz

2.4 Describe how technologies have been developed to meet human needs.
2.4.1 Identify parts of the human body that can be used as tools¿like hands for grasping and teeth for cutting and chewing.
2.4.2 Identify technologies developed by humans to meet human needs. Investigate the limitations of technologies and how they have improved quality of life.

Additional Support / Resources
www.macmillanmh.com- on-line Student Edition, e-Journal, e-Glossary, e-Review, e-Career, vocabulary games
http://nsdl.org/refreshers/science

Unit 5 Lesson 2 **The Design Process** p.226-237	2.4.3	**Key Questions:** How can you design a solution? How is testing a model important? **Focus on Skills:** The Design Process **Careers in Science:** Crash Tester	• Student Book p.214-225 • Graphic Organizer 7,p.TR9, 230, 235 • Graphic Organizer 12,p.TR14, 240 • Log On e-Careers, p.244 • Log On e-Glossary p.231 **Engage** • add to KWL chart p.226 • Warm Up p.227 Mike Milligan and His Steam Shovel by Virginia Lee Burton **Explore** • Inquiry Activity p.228, ice cubes, newspaper, aluminum foil, bubble wrap, masking tape • Alternative Explore p.228, ice cubes, a thermos, plastic bag, metal cup, a mug	solution design brainstorm model	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz Foldables Study Guide p.242, p.290-291

Unit 5 Lesson 2 **The Design Process** p.226-237	2.4.3	**Key Questions:** How can you design a solution? How is testing a model important? **Focus on Skills:** The Design Process **Careers in Science:** Crash Tester	**Explain** • Read a Diagram p.231, recording paper p.262 • Quick Lab p.233, recording sheet 279, pencil, crayons • Foldables p.233, p.287 **Evaluate◀** • add to KWL chart p.234 • Log On e-Review p.234 • RtI p.235, lg. black plastic bag, lg. clear plastic bag, string, deep dish, water, scissors **Extend** • Skill Builder p.236, paper, pencil • Integrate Writing p.236, design a backpack	solution design brainstorm model	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz Foldables Study Guide p.242, p.290-291

Unit 5 Lesson 2 **The Design Process** p.226-237	2.4.3	**Key Questions:** How can you design a solution? How is testing a model important? **Focus on Skills:** The Design Process **Careers in Science:** Crash Tester	**Unit 5 Review** • add to KWL chart p.238 • Leveled Readers p.241 • Log On Leveled Reader Database p.241 • Crash Tester p.244, research materials	solution design brainstorm model	Observation of Activities Check Student Book See **Evaluate** in previous column. ◀ Exam*View Assessment Suite CD-ROM* Log On e-Review Narrated Summary and Quiz Foldables Study Guide p.242, p.290-291
2.4.3 Identify a need and design a simple tool to meet that need					

Additional Support / Resources
www.macmillanmh.com- on-line Student Edition, e-Journal, e-Glossary, e-Review, e-Career, vocabulary games
http://nsdl.org/refreshers/science