

Centerville-Abington Elementary Curriculum Mapping

Science – 5th Grade

1st Nine Weeks

Written by: Jason Talbot

Unit Chapter Lesson	Indiana Standard(s)	Key Concepts	Resources/Activities	Vocabulary	Assessments
Chapter 1 Properties of Matter Lesson 1: What makes up matter?	5.PS.2 Demonstrate that regardless of how parts of an object are assembled the mass of the whole object is identical to the sum of the mass of the parts; however, the volume can differ from the sum of the volumes. (Law of Conservation of Mass)	Students will use models to investigate that matter is made up of particles that are too small to be seen.	Interactive Science STEM Activity- pgs. 4-7 Reading pgs. 8-15	Atom Compound Molecule Atomic Theory	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Chapter 1 Properties of Matter Lesson 2: How can matter be described?	5.PS.1 Describe and measure the volume and mass of a sample of a given material.	Students will compare and contrast solids, liquids, and gases by using their basic properties.	Interactive Science: Explore it! Lab pg. 16 Reading pgs. 17-21	Mass (NCA) Balance Temperature Volume (NCA)	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Chapter 1 Properties of Matter Lesson	5.PS.3 Determine if matter has	Students will observe and measure properties of states of matter and will identify phase changes.	Interactive Science: Explore it! pg. 22 Reading pgs. 23-27	Gas Liquid	Blackline Masters, Exam View Test Bank,

<p>3: What are solids, liquids, and gases?</p>	<p>been added or lost by comparing mass when melting, freezing, or dissolving a sample of a substance. (Law of Conservation of Mass)</p>			<p>Solid</p>	<p>Teacher made tests, and/or project based rubrics.</p>
<p>Chapter 1 Properties of Matter Lesson 4: What are mixtures and solutions?</p>	<p>5.PS.3 Determine if matter has been added or lost by comparing mass when melting, freezing, or dissolving a sample of a substance. (Law of Conservation of Mass)</p>	<p>Students will investigate properties of solutions and will provide evidence for whether mixtures can be separated based on the properties of their parts.</p>	<p>Interactive Science: Explore it! 28 Reading pgs. 29-33</p>	<p>Mixture Solution</p>	<p>Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.</p>
<p>Chapter 1 Properties of Matter Lesson 5: How does matter change?</p>	<p>5.PS.3 Determine if matter has been added or lost by comparing mass when melting, freezing, or dissolving a sample of a substance.</p>	<p>Students will observe and compare physical and chemical changes and will analyze how these changes are affected by temperature.</p>	<p>Interactive Science: Explore it! 34 Reading pgs. 35-49 Investigate it! Lab Card</p>	<p>Chemical Change Physical Change</p>	<p>Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.</p>

	(Law of Conservation of Mass)				
Skills Book P.1 The Nature of Science Lesson 1 What do Scientists do?	6-8.E.1 Identify the criteria and constraints of a design to ensure a successful solution, taking into account relevant scientific principles and potential impacts on people and the natural environment that may limit possible solutions.	Students will investigate how scientists use inquiry to learn about the world around them.	Interactive Science: Stem Activity 314-418 Reading pgs. 322-327	Observation Hypothesis	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics. ** Pair with Science Fair or alternative project
Skills Book P.1 The Nature of Science Lesson 2 How do scientists investigate?	3-5.E.1 Identify a simple problem with the design of an object that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost.	Students will analyse how scientists investigate problems in many different ways.	Interactive Science: Explore it! 328 Reading pgs. 329-335	Procedures Experiment Control Group Variable	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics. ** Pair with Science Fair or alternative project
Skills Book P.1 The Nature of Science	3-5.E.1 Identify a simple problem with	Students will obtain information and interpret data using many different kinds of tools in a safe way.	Interactive Science: Explore it! 336 Reading pgs. 337-	Data Precision	Blackline Masters, Exam View Test Bank,

Lesson 3 How do scientists collect and interpret data?	the design of an object that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost.		343	Accuracy Inference	Teacher made tests, and/or project based rubrics. ** Pair with Science Fair or alternative project
Skills Book P.1 The Nature of Science Lesson 4 How do scientists support their conclusion?	3-5.E.2 Construct and compare multiple plausible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	Students will draw scientific conclusions and will support them using evidence.	Interactive Science: Explore it! 344 Reading pgs. 345-347 Chapter review: 348-359	Evidence	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics. ** Pair with Science Fair or alternative project

Curriculum Mapping
Science – 5th Grade
2nd Nine Weeks

Unit Chapter Lesson	Indiana Standard(s)	Key Concepts	Resources/Activities	Vocabulary	Assessments
Chapter 2: Forces and Motion Lesson 1 What are forces?	5.PS.4 Describe the difference between weight being dependent on gravity and mass comprised of the amount of matter in a given substance or material.	Students will investigate forces and will engage in argument about forces based on the evidence of gravity.	Interactive Science: Stem Activity pg. 54- 56 Reading pgs. 60-65	force contact force non-contact force friction gravity	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Chapter 2: Forces and Motion Lesson 2 What are Newton's Laws?	6.PS.2 Describe the motion of an object graphically showing the relationship between time and position.	Students will investigate and construct and argument that supports that a given objective will have more change of motion with a large force than with a small force and tat a given force will cause more change of motion on small masses than on large masses.	Interactive Science: Explore it! 66 Reading pgs. 67-73	acceleration inertia	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Chapter 2: Forces and Motion	6.PS.2 Describe the motion of an	Students will use math to add forces and will engage in an argument from evidence that a	Interactive Science: Explore it! 74 Reading pgs. 75-77	balanced	Blackline Masters, Exam View Test Bank,

Lesson 3 How are forces combined?	object graphically showing the relationship between time and position.	body will not start moving if the forces acting on it are balanced,			Teacher made tests, and/or project based rubrics.
Chapter 2: Forces and Motion Lesson 4 How are shadows formed?	5.ESS.2 Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.	students will investigate how shadows form and will communicate the results of their investigation.	Interactive Science: Explore it! 78 Reading pgs. 79-81 Ch. Review 82-99	shadow	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Chapter 3: Growth and Survival Lesson 1 What are some physical structures in living things?		the student should be able to compare and contrast the structures and functions of parts of plants and animals.	Interactive Science: STEM Activity pgs. 104-107 Reading pgs. 108-113	exoskeleton	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Chapter 3: Growth and Survival Lesson 2 How do adaptations help plants?		By the end of this lesson, the student should be able to construct an argument based on evidence that plants can survive in different environments because of adaptations.	Interactive Science: Explore it! Lab pg.114 Reading pgs. 115-119	adaptation	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based

					rubrics.
Chapter 3: Growth and Survival Lesson 3 How do adaptations help animals?		By the end of this lesson, the student should be able to construct an argument based on evidence that animals can survive in different environments because of adaptations.	Interactive Science: Explore it! Lab pg.120 Reading pgs 121-125	extinct species	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Chapter 3: Growth and Survival Lesson 4 What are the life cycles of some animals?		By the end of this lesson, the student should be able to model the life cycles of some animals and will investigate how some animals go through metamorphosis.	Interactive Science: Explore it! Lab pg.126 Reading pgs. 126-131 Ch. Review pgs.	metamorphosis	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.

Curriculum Mapping

Science – 5th Grade

3rd Nine Weeks

Unit Chapter Lesson	Indiana Standard(s)	Key Concepts	Resources/Activitie s	Vocabulary	Assessments
Ch. 4 Ecosystems Lesson 1 How do plants get and use energy?	5.LS.1 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.	the student should be able to analyze and interpret data that supports that plants use energy from the sun.	Interactive Science: STEM Activity pg. 144-149 Reading pgs. 150-157	cellular respiration photosynthesis	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Ch. 4 Ecosystems Lesson 2 How do organisms interact in ecosystems?	5.LS.2 Observe and classify common Indiana organisms as producers, consumers, decomposers, or predator and prey based on their relationships and interactions with other organisms in their ecosystem.	the student should be able to develop and use models that show the different ways that organisms interact in an ecosystem.	Interactive Science: Explore it Lab pg. 158 Reading pgs. 159-165	producer (NCA) consumer (NCA) decomposer (NCA) predator prey food chain food web	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Ch. 4 Ecosystems	5.LS.3 Use a model to	the student should be able to investigate how ecosystems change and will	Interactive Science: Explore it Lab pg. 166	competition	Blackline Masters, Exam

Lesson 3 How do ecosystems change?	describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.	construct an argument based on evidence that supports that some animals and plants adapt to survive changes to their ecosystems.	Reading pgs. 167-173 ** Grade 4 Ch. 4 Lesson 5	environment	View Test Bank, Teacher made tests, and/or project based rubrics.
Ch. 4 Ecosystems Lesson 4 How do humans impact ecosystems?	5.ESS.3 Investigate ways individual communities within the United States protect the Earth's resources and environment.	By the end of this lesson, the student should be able to define a problem relating to human impact on ecosystems and will analyze the consequences of how people can affect the environment.	Interactive Science: Explore it Lab. pg. 174 Reading pgs. 175-177 Ch. Review pgs. 178-195	conservation pollution	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
CH. 5 The Water Cycle and Weather Lesson 1 What is the water cycle?	5.ESS.4 Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.	the student should be able to model how water changes between solid, liquid, and gas states in the water cycle.	Interactive Science: STEM Activity pg. 198-203 Reading pgs. 204-209	water cycle evaporation condensation precipitation	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
CH. 5 The Water Cycle and Weather	5.ESS.4 Develop a	the student should be able to analyze data to investigate what makes up each of Earth's spheres.	Interactive Science: Planet Diary pg. 210	atmosphere (NCA)	Blackline Masters, Exam

Lesson 2 What are the spheres of Earth?	model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.		Reading pgs. 211-215	hydrosphere lithosphere biosphere (NCA)	View Test Bank, Teacher made tests, and/or project based rubrics.
CH. 5 The Water Cycle and Weather Lesson 3 What is weather?		the student should be able to analyze data and use evidence to identify the factors that determine weather.	Interactive Science: Explore it Lab pg. 216 Reading pgs. 217-223	weather barometric pressure humidity circulation	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
CH. 5 The Water Cycle and Weather Lesson 4 How do clouds and precipitation form?		the student should be able to classify precipitation and will investigate the relationship between precipitation and other weather conditions.	Interactive Science: Explore it Lab pg. 224 Reading pgs. 225-229	sleet hail	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
CH. 5 The Water Cycle and Weather Lesson 5 What is climate?		the student should be able to provide evidence to support that different climate zones have specific characteristics.	Interactive Science: Explore it Lab pg. 230 Reading pgs. 231-235	climate latitude elevation	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
CH. 5 The Water Cycle and Weather Lesson 6 What are erosion and deposition?		the student should be able to construct an evidence-based argument that erosion and deposition can change Earth's surface.	Interactive Science: Explore it Lab pg. 236 Reading pgs. 237-239 Ch. Review pgs. 242-	erosion deposition	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based

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Curriculum Mapping

Science – 5th Grade

4th Nine Weeks

Unit Chapter Lesson	Indiana Standard(s)	Key Concepts	Resources/Activitie s	Vocabulary	Assessments
Ch. 6 Earth and Space Lesson 1 How does Earth move?	5.ESS.1 Analyze the scale of our solar system and its components: our solar system includes the sun, moon, seven other planets and their moons, and many other objects like asteroids and comets.	the student should be able to model how Earth rotates and revolves. Students will also use observations and evidence to communicate why the sun, moon, and stars appear to move across the sky.	Interactive Science: STEM Activity pg. 256-263 Explore it Lab pg. 264 Reading pgs. 265-269	axis rotation orbit revolution Solar System	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Ch. 6 Earth and Space Lesson 2 What is a star?	5.ESS.1 Analyze the scale of our solar system and its components: our solar system includes the sun, moon, seven other planets and their moons, and many other	the student should be able to analyze the sun's physical characteristics and will investigate why the star Polaris is important.	Interactive Science: Reading pgs. 270-275	solar flare constellation	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.

	objects like asteroids and comets.				
Ch. 6 Earth and Space Lesson 3 What are inner planets?	5.ESS.1 Analyze the scale of our solar system and its components: our solar system includes the sun, moon, seven other planets and their moons, and many other objects like asteroids and comets.	the student should be able to use models to identify the outer planets, inner planets, and Earth's position in the solar system. Students will also communicate how technology has helped people explore space.	Interactive Science: Explore it Lab pg. 276 Reading pgs. 277-283	planet (NCA) inner planet space probe moon	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Ch. 6 Earth and Space Lesson 4 What are outer planets?	5.ESS.1 Analyze the scale of our solar system and its components: our solar system includes the sun, moon, seven other planets and their moons, and many other objects like asteroids and comets.	the student should be able to identify the outer planets and will compare and contrast the characteristics of the outer planets and inner planets.	Interactive Science: Explore it Lab pg. 284 Reading pgs. 285-289	outer planet	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics.
Ch. 6 Earth and Space	5.ESS.1 Analyze the	the student should be able to investigate the differences between moons,	Interactive Science: Explore it Lab pg.	asteroid	Blackline Masters, Exam

Lesson 5 What are asteroids, meteors, comets, and moons?	scale of our solar system and its components: our solar system includes the sun, moon, seven other planets and their moons, and many other objects like asteroids and comets.	asteroids, comets, meteoroids, meteors, and meteorites.	290 Reading pgs. 291-295 Ch. Review Pgs. 296-313	comet (NCA) dwarf planet	View Test Bank, Teacher made tests, and/or project based rubrics.
Skills Book P.2 Design and Function Lesson 1 What is Technology?	3-5.E.1 Identify a simple problem with the design of an object that reflects a need or a want. Include criteria for success and constraints on materials, time, or cost.	the student should be able to analyze how technology solves problems and provides solutions.	Interactive Science: STEM Activity pg. 360-367 Explore it Lab 368 Reading pgs. 369-373	technology microchip	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics. **Pair with Science Day Activity
Skills Book P.2 Design and Function Lesson 2 How does technology mimic living things?	3-5.E.2 Construct and compare multiple plausible solutions to a problem based on how well each is likely to meet the criteria and constraints of	the student should be able to investigate how technology can mimic the human muscular and skeletal systems.	Interactive Science: Reading pgs. 374-379	prosthetic limb	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics. **Pair with Science Day Activity

	the problem.				
Skills Book P.2 Design and Function Lesson 3 What is the design process?	3-5.E.3 Construct and perform fair investigations in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	the student should be able to define simple design problems and will design models by using the design process.	Interactive Science: Explore it Lab pg. 380 Reading pgs. 381- 387 Ch. Review pgs. 388-404	design process prototype (NCA)	Blackline Masters, Exam View Test Bank, Teacher made tests, and/or project based rubrics. **Pair with Science Day Activity
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