4th Grade Science Curriculum Map

#Days	Unit Title/ Due Dates / Essential Questions	Core Content & CC Standards	Resources/Materials/ Assessments
7	Chapter 1 Heat and Energy How does energy cause change? What are forms of energy? What is sound energy? What is light energy? What is heat?	Core Content: energy cause change, forms of energy, sound energy, light energy, and heat CC Standards: 4-PS3-2 Energy Make observations to provide evidence that energy can be transferred from place to place by sound, light, heat, and electric currents. 4-PS3-3 Energy Ask questions and predict outcomes about the changes in energy that occur when objects collide. 4-PS3-4 Energy Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.* 4-PS4-1 Waves and Their Applications in Technologies for Information Transfer	Resources: Teacher Textbook, notecards, smartboard, stem activity worksheets, stem activity materials Assessment: Test Sept. 17th , self assessments, stem work (classwork) homework

		Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. 4-PS4-2 Waves and Their Applications in Technologies for Information Transfer Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.	
7	Chapter 2 Motion How can motion be described and measured? What is motion? What is speed? How do you calculate speed?	Core Content:measure motion, describing motion, motion's definition, speed, calculating speed CC Standards:4-PS3-1 Energy Use evidence to construct an explanation relating the speed of an object to the energy of that object.	Resources:Teacher Textbook, notecards, smartboard, stem activity worksheets, stem activity materials, notebooks, interactive notes Assessment: Test Tuesday Oct.15th, self assessments, (classwork), homework

7	Chapter 3 Electricity How is electrical energy transferred and transformed? How do electric charges flow in a circuit? How can energy change?	Core Content: electrical energy is transferred and transformed, electric charges flowing in different kinds of circuits. changes in energy. CC Standards:3.2.4.B4 Apply knowledge of basic electrical circuits to the design and construction of simple direct current circuits. Compare and contrast series and parallel circuits. Demonstrate that magnets have poles that repel and attract each other.	Resources:Teacher book, student book, interactive notes, notecards Assessment:Test,Nov. 11th, self assessments, (classwork), homework
10	Chapter 4 Plants and Animals What do living organisms need to survive? How are plants and animals classified? How do plants reproduce? How do plants make food? What are adaptations? What plant and animal characteristics are inherited? How do animals respond to their environment?	Core Content:survival traits in living organisms, classification of plants and animals, reproduction of plants and how they make food. plant and animal adaptations. inherited traits of animals and how they respond to their environment.	Resources:Teacher book, student book, stem activity, interactive notes, smartboard, notecards Assessment: Test,Dec. 17th , self assessments, stem work (classwork), homework

		CC Standards:4-LS1-1 From Molecules to Organisms: Structures and Processes Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. 4-LS1-2 From Molecules to Organisms: Structures and Processes Use a model to 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.	

9	Chapter 5 Ecosystems How do living things interact with their environments? What are ecosystems? How do living things affect the environment?	Core Content:Living things interacting with their environments, within their ecosystems. living things affecting	Resources:Teacher book, student book, stem activity, interactive notes, smartboard, notecards Assessment:

	What are natural resources? What are fossils? What can fossils tell us?	other living things in the same environment, natural resources, fossils and what they are able to tell us. CC Standards:4-ESS1-1 Earth's Place in the Universe Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.	Test Feb. 4th, self assessments, stem work (classwork), homework
9	Chapter 6 Earth's Resources How do Earth's resources change? How are minerals classified? How are rocks classified? What are weathering and erosion? How can Earth's surface change rapidly? Where is Earth's water? What is the water cycle?	Core Content:resources changing on the earth over time, classification of minerals and rocks, weathering and erosion, the surface of the earth and its changes, earth's water, stages of the water cycle. CC Standards:4-ESS2-1 Earth's Systems Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation. 4-ESS2-2 Earth's Systems	Resources:Teacher book, student book, stem activity, interactive notes, smartboard, notecards Assessment:Test Mar. 10th, self assessments, (classwork), homework

		Analyze and interpret data from maps to describe patterns of Earth's features. 4-ESS3-1 Earth and Human Activity Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.	
7	Part 1: Nature of Science What is science? What questions do scientists ask? How do scientists use tools? How do scientists answer questions? How do scientists draw conclusions?	Content: scientists ask questions, use tools, answer questions, and draw conclusions about various topics. 3-5-ETS1-2 Engineering Design Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.	Resources: Teacher book, student book, stem activity, interactive notes, smartboard, notecards Assessment: Test Mon. Apr. 20th , self assessments, stem work (classwork), homework
7	Part 2: Technology and Design How does technology affect our lives? What is technology? What is the design process?	Core Content:technology, and the design process CC Standards:3-5-ETS1-1 Engineering Design	Resources:Teacher book, student book, stem activity, interactive notes, smartboard, notecards Assessment: Test May 12th, self assessments, stem work (classwork), homework

		Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. 3-5-ETS1-3 Engineering Design Plan and carry out fair tests in which variables are controlled and failure points are considered to identify aspects of a model or prototype that can be improved.	