



FOURTH GRADE SCIENCE PACING GUIDE

FIRST QUARTER					
UNIT	MODULE	PACING	TOPICS	STANDARDS	LEARNING OBJECTIVES
1: Forces & Energy	Energy in Motion	20 Days Aug. 11-Sept. 5	1. Forces & Motion 2. Speed & Energy 3. Energy Transfer in Collisions	4.PS3.1 4.PS3.2 4.ETS2.1; 4.PS3.3	- Students will construct an explanation to describe the cause and effect relationship between forces and motion; and the relationship between speed and energy. - Students will ask questions and construct an explanation to describe the transfer of energy when objects collide.
	Module Reviews, Activities & Assessments	3 Days Sept. 8 – Sept. 10	Lesson & Vocabulary Checks,* Inquiry Activity, Kahoot, Module Assessment*		
2: Using Energy	Energy Transformations	6 Days Sept. 11-Sept. 18	1. Energy Transforms 2. Energy & Systems	4.PS3.3 4.PS3.3	- Students will make observations and explain how different types of energy transform. - Students investigate the transformation of energy in systems.
	Natural Resources in the Environment	12 Days Sept 19 – Oct. 6	1. Energy from Nonrenewable resources 2. Energy from Renewable Resources 3. Impact of Energy Use 4. Design Energy Solutions	4.PS3.3, 4.ESS3.1, 4.ESS3.2 4.ESS3.1 4.ESS3.2 4.ESS3.2	- Students will obtain and combine information about the source of nonrenewable and renewable resources, and how their uses affect humans and the effects of nonrenewable resources in the environment - Students will use their observations to construct an explanation and design a device that convert energy from one form to another
	Module Review, Activities & Assessment	3 days Oct. 7-9	Lesson & Vocabulary Checks,* Inquiry Activity, Kahoot, Module Assessment*		

	SECOND QUARTER				
UNIT	MODULE	PACING	TOPICS	STANDARDS	LEARNING OBJECTIVES
3: Waves & Technology	Wave Model	14 Days Oct. 20 - Nov. 4	- Parts of a Wave - Light - Technology	4.PS4.1 4.PS4.2 4.PS4.3	- Students will explore mechanical wave properties, by modeling mechanical waves. - To construct an explanation for how the colors of available light sources and the bending of light waves determine what we see - To allow students to explore the ways that lenses and waves are used by humans
	Module Review, Activities & Assessment	3 Day Nov. 5 – Nov. 7	Lesson & Vocabulary Checks,* Inquiry Activity, Kahoot, Module Assessment*		
4: Organisms & Ecosystems	Food Webs & Ecosystems	12 Days Nov. 10 – Dec. 3	- Food Chains - Food Webs - Changes to our Ecosystem - Changes Affect Organisms	4.LS2.1 4.LS2.2 4.LS2.3 4.LS2.4	- Students will develop and use models to show how energy is transferred through an ecosystem - Students describe the cycling of matter and flow of energy through the food webs. - Students predict how changes in the ecosystem affect the cycling of matter and flow of energy in a food web.
	Module Review, Activities & Assessment	3 Days Dec. 4 – Dec. 8	Lesson & Vocabulary Checks,* Inquiry Activity, Kahoot, Module Assessment*		
Unit 1-4	Module Reviews Hands-on Activities	9 Days Dec. 9-19	- Design a Rollercoaster - Motion of cars change in collision - It's Time to Focus - Build an Eco-Column		

THIRD QUARTER					
UNIT	MODULE	PACING	TOPICS	STANDARDS	LEARNING OBJECTIVES
5: Our Dynamic Earth	Earth and it's Changing Features	9 DAYS Jan. 6 – Jan. 16	1. Weathering 2. Changes in Landscapes over time 3. Evidence from fossils & rocks	• 4.ESS2.1 • 4.ESS1.1, 4.ESS2.3 • 4.ESS1.1, 4.ETS2.1, 4.ESS2.2 • 4.LS4.1	• Students model and identify how changes to Earth's surface by wind, water, and ice result in the formation of landforms. • Students will plan and carry out investigations to observe the effects to Earth's surface by living and nonliving things. • Students will construct an explanation about how rock and fossil formations change a landscape over time.
	Module Review, Activities & Assessment	3 Days Jan. 20-Jan. 23	Lesson & Vocabulary Checks,* Inquiry Activity, Kahoot, Module Assessment*		
5. Our Dynamic Earth	Earthquakes	21 DAYS Jan. 26 – Feb. 25	1. Map Earth's Features 2. Map Earthquakes 3. Model Earthquake Movement 4. Reduce Earthquake Damage	• 4.ESS2.2 • 4.PS4.1 • 4.ETS2.1	• Students will use maps to interpret and analyze data to describe patterns in landforms and earthquake occurrences • Students will develop and use models to describe the patterns in waves and how waves cause objects to move. • Students will construct explanations about the effects of earthquakes on structures and design solutions to reduce earthquake damage.
	Module Review & Test	4 Days Feb. 26-Mar. 3	Lesson & Vocabulary Checks,* Inquiry Activity, Kahoot, Module Assessment*		
Unit 5	Module review, Activities	Mar. 4-13	• Design an Earthquake resistant building		

	FOURTH QUARTER				
UNIT	MODULE	PACING	TOPICS	STANDARDS	LEARNING OBJECTIVES
	TCAP Review Unit 1-3	Mar. 23-Mar. 27	Forces & Energy Energy in Motion Waves & Technology <i>TN Ready Practice Materials</i>	• 4.PS3.1 • 4.PS3.2 • 4.ETS2.1; 4.PS3.3 • 4.ESS3.1, 4.ESS3.2 • 4.PS4.1 • 4.PS4.2 • 4.PS4.3	• Describe the cause/effect of force & motion; speed & energy • Explain the transfer of energy in collisions • Energy transformation • Renewable and Non-renewable resources • Sound and Light energy; waves
	TCAP Review Unit 4	Mar. 30-Apr. 3	Organisms & Ecosystems <i>TN Ready Practice Materials</i>	• 4.LS2.1 • 4.LS2.2 • 4.LS2.3 • 4.LS2.4	• Explain flow of energy in ecosystems • Identify how changes in an ecosystem affects organisms
	TCAP Review Unit 5	Apr. 6-Apr. 10	Our Dynamic Earth <i>TN Ready Practice Materials</i>	• 4.ESS2.2 • 4.PS4.1 • 4.ETS2.1	• Identify patterns of Earth's features and location of Earthquakes • Evidence from fossils about Earth • Parts of a wave
	TCAP Review Unit 1-5	Apr. 13-Apr. 24	STEM Activities/Demonstrations <i>TN Ready Practice Materials</i>		• TCAP Practice, • On-line STEM demonstrations
		Apr. 27-May 20	Unit STEM Activities Invention/Inventor Research		• Group/partner collaboration choose a STEM activity to plan, collect research and present • Research notable engineers, inventors, scientist who have made a contribution to society
Family Life		May 4-8	Family Life Curriculum		