1st Nine Weeks				
Time	**Cluster**	**Standards**	**Learning Targets**	**Lesson Topics/Resources**
1st 9 Weeks	Engineering, Technology, and Applications of Science	ETS1.1 Categorize the effectiveness of design solutions by comparing them to specified criteria for constraints.	I can categorize the effectiveness of design solutions by comparing them to specified criteria for constraints.	HMH TN Science Unit 2
		ETS2.1 Use appropriate tools and measurements to build a model.	I can use appropriate tools and measurements to build a model.	HMH TN Science Unit 1
		ETS2.2 Determine the effectiveness of multiple solutions to a design problem given the criteria and the constraints.	I can determine the effectiveness of multiple solutions to a design problem given the criteria and the constraints.	HMH TN Science Unit 2
		ETS2.3 Explain how engineers have improved existing technologies to increase their benefits, to decrease known risks, and to meet societal demands (artificial limbs, seatbelts, and cell phones). *These topics do not need to be introduced in consecutive days, but all inquiry concepts will be assessed in the context of the standards assessed on all benchmarks.*	I can explain how engineers have improved existing technologies to increase their benefits, to decrease known risks, and to meet societal demands (artificial limbs, seatbelts, and cell phones).	HMH TN Science Unit 2
1st Nine Weeks	Ecosystems: Interactions, Energy	LS2.1 Support an argument with evidence that plants get the materials	I can support an argument with evidence that plants get	HMH TN Science Unit 6

	and Dynamics	they need for growth and reproduction chiefly through a process in which they use carbon dioxide from the air, water, and energy from the Sun to produce sugars, plant materials, and waste (oxygen); and that this process is called photosynthesis.	the materials they need for growth and reproduction chiefly through a process in which they use carbon dioxide from the air, water, and energy from the Sun to produce sugars, plant materials, and waste (oxygen); and that this process is called photosynthesis.	
		LS2.2 Develop models of terrestrial and aquatic food chains to describe the movement of energy among producers, herbivores, carnivores, omnivores, and decomposers.	I can develop models of terrestrial and aquatic food chains to describe the movement of energy among producers, herbivores, carnivores, omnivores, and decomposers.	HMH TN Science Unit 6
		LS2.3 Using information about the roles of organisms (producers, consumers, decomposers), evaluate how those roles in food chains are interconnected in a food web, and communicate how the organisms are continuously able to meet their needs in a stable food web.	I can use information about roles of organisms (producers, consumers, decomposers), evaluate how those roles in food chains are interconnected in a food web, and communicate how the organisms are able to meet their needs in a stable food web.	HMH TN Science Unit 6
		LS2.4 Develop and use models to determine the effects of introducing a	I can develop and use models to determine the effects of introducing a	HMH TN Science Unit 6

Time	Cluster	Standards	Learning Targets	Lesson
		species to, or removing a species from, an ecosystem and how either one can damage the balance of an ecosystem. LS2.5 Analyze and interpret data about changes (land characteristics, water distribution, temperature, food, and other organisms) in the environment and describe what mechanisms organisms can use to affect their ability to survive and reproduce.	species to, or removing a species from, an ecosystem and how either one can damage the balance of an ecosystem. I can analyze and interpret data about changes (land characteristics, water distribution, temperature, food, and other organisms) in the environment and describe what mechanisms organisms can use to affect their ability to survive and reproduce.	HMH TN Science Unit 5, 6
1ˢᵗ Nine Weeks	Biological Change: Unity and Diversity	LS4.1 Obtain information about what a fossil is and ways a fossil can provide information about the past.	I can obtain information about what a fossil is and ways a fossil can provide information about the past.	HMH TN Science Unit 8, Lesson 5

2ⁿᵈ Nine Weeks				
Time	**Cluster**	**Standards**	**Learning Targets**	**Lesson**

				Topics/Resources
2ⁿᵈ Nine Weeks	Earth's Place in the Universe	ESS1.1 Generate and support a claim with evidence that over long periods of time, erosion (weathering and transportation) and deposition have changed landscapes and created new landforms.	I can generate and support a claim with evidence that over long periods of time, erosion (weathering and transportation) and deposition have changed landscapes and created new landforms.	HMH TN Science Unit 7 and 8
		ESS1.2 Use a model to explain how the orbit of the Earth and Sun cause observable patterns: a. day and night; b. changes in length and direction of shadows over a day.	I can use a model to explain how the orbit of the Earth and Sun cause observable patterns: a. day and night; b. changes in length and direction of shadows over a day.	HMH TN Science Unit 7
2ⁿᵈ Nine Weeks	Earth's Systems	ESS2.1 Collect and analyze data from observations to provide evidence that rocks, soils, and sediments are broken into smaller pieces through mechanical weathering (frost wedging, abrasion, tree root wedging) and are transported by water, ice, wind, gravity, and vegetation.	I can collect and analyze data from observations to provide evidence that rocks, soils, and sediments are broken into smaller pieces through mechanical weathering (frost wedging, abrasion, tree root wedging) and are transported by water, ice, wind, gravity, and vegetation.	HMH TN Science Unit 8
		ESS2.2 Interpret maps to determine that the locations of mountain ranges,	I can interpret maps to determine that the locations	HMH TN Science Unit 8

		deep ocean trenches, volcanoes, and earthquakes occur in patterns.	of mountain ranges, deep ocean trenches, volcanoes, and earthquakes occur in patterns.	
		ESS2.3 Provide examples to support the claim that organisms affect the physical characteristics of their regions.	I can provide examples to support the claim that organisms affect the physical characteristics of their regions.	HMH TN Science Unit 6, Lesson 2
		ESS2.4 Analyze and interpret data on the four layers of the Earth, including thickness, composition, and physical states of these layers.	I can analyze and interpret data on the four layers of the Earth, including thickness, composition, and physical states of these layers.	HMH TN Science Unit 8
2nd Nine Weeks	Earth and Human Activity	ESS3.1 Obtain and combine information to describe that energy and fuels are derived from natural resources and that some energy and fuel sources are renewable (sunlight, wind, water) and some are not (fossil fuels, minerals).	I can obtain and combine information to describe that energy and fuels are derived from natural resources and that some energy and fuel sources are renewable (sunlight, wind, water) and some are not (fossil fuels, minerals).	HMH TN Science Unit 9
		ESS3.2 Create an argument, using evidence from research, that human activity (farming, mining, and	I can create an argument, using evidence from research, that human activity	HMH TN Science Unit 9

		building) can affect the land and ocean in positive and/or negative ways.	(farming, mining, and building) can affect the land and ocean in positive and/or negative ways.	

3rd Nine Weeks				
Time	**Cluster**	**Standards**	**Learning Targets**	**Lesson Topics/Resources**
3rd Nine Weeks	Energy	PS3.1 Use evidence to explain the cause and effect relationship between the speed of an object and the energy of an object.	I can use evidence to explain the cause and effect relationship between the speed of an object and the energy of an object.	HMH TN Science Unit 3
		PS3.2 Observe and explain the relationship between potential energy and kinetic energy.	I can observe and explain the relationship between potential energy and kinetic energy.	HMH TN Science Unit 3
		PS3.3 Describe how stored energy can be converted into another form for practical use.	I can describe how stored energy can be converted into another form for practical use.	HMH TN Science Unit 3
3rd Nine Weeks	Waves and Their Applications in Technology	PS4.1 Use a model of a simple wave to explain regular patterns of amplitude, wavelength, and direction.	I can use a model of a simple wave to explain regular patterns of amplitude, wavelength, and direction.	HMH TN Science Unit 4
		PS4.2 Describe how the colors of available light sources and the bending of light waves determine what we see.	I can describe how the colors of available light sources and the bending of light waves determine what we see.	HMH TN Science Unit 4
		PS4.3 Investigate how lenses and	I can investigate how lenses	HMH TN Science

		digital devices like computers or cell phones use waves to enhance human senses.	and digital devices like computers or cell phones use waves to enhance human senses.	Unit 4

4th Nine Weeks				
4th Nine Weeks	Engineering, Technology, and Applications of Science	ETS1.1 Categorize the effectiveness of design solutions by comparing them to specified criteria for constraints. (ongoing)	I can categorize the effectiveness of design solutions by comparing them to specified criteria for constraints.	HMH TN Science Units 1-9
		ETS2.1 Use appropriate tools and measurements to build a model. (ongoing)	I can use appropriate tools and measurements to build a model.	
		ETS2.2 Determine the effectiveness of multiple solutions to a design problem given the criteria and the constraints. (ongoing)	I can determine the effectiveness of multiple solutions to a design problem given the criteria and the constraints.	
		ETS2.3 Explain how engineers have improved existing technologies to increase their benefits, to decrease known risks, and to meet societal demands (artificial limbs, seatbelts, and cell phones). (ongoing) Review previously taught standards/learning targets.	I can explain how engineers have improved existing technologies to increase their benefits, to decrease known risks, and to meet societal demands (artificial limbs, seatbelts, and cell phones).	