5th Grade Science
2023 - 2024 NE CARES Pacing Guide

Resources Provided by NC Department of Public Instruction (NCDPI):

Grades 3-5 Essential Standards Unpacking Document K-12 Science Glossary of Terminology	EOG Test Specifications Released EOG 2019 Graphic Organizers for Science	NC Check-In 2.0 Information NC Check-In 2.0 Test Specifications NC DPI Science Team ** be sure to stay updated regarding 2023 Science Standards implementation - the link above will house updates and details **

Additional Resources:

Quick Reference Guide for NC Standard Course of Study (Grade 5) North Carolina Environmental Educator Resources 5th Grade 2015 NC Science Released EOG 5th Grade 2009 Science Released EOG	Science Education PBS North Carolina Lesson Plans from City of Durham Science Classroom Energizers NC 5th Grade Essential Standards Live Binders

School Year at a Glance:

Domain/Cluster/Strand	Standards			
	1st Nine Weeks	2nd Nine Weeks	3rd Nine Weeks	4th Nine Weeks
Earth Systems, Structures and Processes	5.E.1 5.E.1.1 5.E.1.2 5.E.1.3			
Matter: Properties and Change	5.P.2.1		5.P.2. 5.P.2.2 5.P.2.3	
Structures and Functions of Living Organisms		5.L.1 5.L.1.1 5.L.1.2		

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Evolution and Genetics		5.L.3 5.L.3.1 5.L.3.2 Example Lesson Plan		
Ecosystems		5.L.2 5.L.2.1 5.L.2.2 5.L.2.3		
Energy: Conservation and Transfer			5.P.3 5.P.3.1 Example Lesson Plan	5.P.3.2
Force and Motion			5.P.1.1 5.P.1.2 5.P.1.3 5.P.1.4	

Unit/Module Pacing: Earth Science - 1st Nine Weeks/Quarter 1

Number of Days	Name of Unit/Module	Pre-Requisites	Standards	Academic Vocabulary	Instructional Resources
11 days	**Earth Systems, Structures and Processes**	4.E.1.1 Explain the cause of day and night based on the rotation of Earth on its axis. 4.E.1.2 Explain the monthly changes in the appearance of the moon, based on the moon's orbit around the Earth.	5.E.1 Understand weather patterns and phenomena, making connections to the weather in a particular place and time. 5.E.1.1 Compare daily and seasonal changes in weather conditions (including wind speed and direction, precipitation, and temperature) and patterns.	weather, climate, seasonal weather patterns, latitude, equator, hemisphere, wind speed, direction, precipitation, temperature, clouds, cumulus, cirrus, stratus, cumulonimbus, fog, overcast	NC 5th Grade Essential Standards Live Binders Water Cycle Study Jam www.weatherwizkids.com The weather Channel Kids EG Videos - North Carolina Science Weather Live Binders
11 days	**Earth Systems, Structures**	2.E.1.3 Compare weather patterns that occur over	5.E.1.2 Predict upcoming weather events from weather data collected	meteorology, wind vane/ weather, vane, barometer, anemometer rain gauge, thermometer,	https://www.youtube.com/watch?v=wagrbfKV5bE

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	and Processes	time and relate observable patterns to time of day and time of year. 2.E.1.4 Recognize the tools that scientists use for observing, recording, and predicting weather changes from day to day and during the seasons.	through observation and measurements	humidity, air pressure, Jet streams, Global Winds, Precipitation, Temperature	Earth's Atmosphere Air Pressure and Wind Air Masses and Fronts EG Videos - North Carolina Science
10 days	**Earth Systems, Structures and Processes**	2.E.1.4 Recognize the tools that scientists use for observing, recording, and predicting weather changes from day to day and during the seasons.	5.E.1.3 Explain how global patterns such as the jet stream and water currents influence local weather in measurable terms such as temperature, wind direction and speed, and precipitation.	precipitation, rain, hail, sleet, snow, freezing rain, condenses, cold front, warm front, stationary, front, jet stream, gulf stream, trade winds, Pacific Ocean, Atlantic Ocean, currents, El Nino, La Nina	EG Videos - North Carolina Science
7 days	**Matter: Properties and Change**	2.P.2.3 Compare what happens to water left in an open container over time as to water left in a closed container.	5.P.2 Understand the interactions of matter and energy and the changes that occur. 5.P.2.1 Explain how the sun's energy impacts the processes of the water cycle (including, evaporation, transpiration,	water cycle, Energy, Heat, Thermal energy, evaporation, condensation, precipitation, transpiration, runoff, groundwater, water vapor, clouds, atmosphere, biotic, abiotic	Betterlesson-Investigating Change of State

			condensation, precipitation and runoff).		
NC Check-In 2.0 on Earth Science administered end of October/beginning of November					

1st Nine Weeks/Quarter 1 Learning Targets

Day #	Daily Learning Target	How will the daily learning target be assessed?
1	I can tell what causes daily and seasonal weather. (***5.E.1.1)***	● Oral presentation: Have students give an oral presentation on the topic, explaining the causes of daily and seasonal weather. This will allow you to assess their understanding of the concepts and their ability to communicate them effectively.
2	I can tell how daily and seasonal changes in weather are interconnected. (***5.E.1.1)***	● Short-answer questions: ○ What are some of the factors that influence daily weather changes? ○ What are some of the factors that influence seasonal weather changes? ○ How are daily and seasonal weather changes interconnected?
3	I can tell what weather is. (***5.E.1.1)***	● Short-answer questions: ○ What is weather? ○ What are some of the factors that influence weather? ○ How do we measure weather?
4	I can tell what climate is. (***5.E.1.1)***	● Short-answer questions: ○ What is climate? ○ What are the different factors that influence climate? ○ How do we measure climate?
5	I can tell the difference between weather and climate. (***5.E.1.1)***	● Teachers can have some pictures posted on the board and have the students identify whether it is weather or if it is climate. ● Performance tasks: ● Create a model that shows the difference between weather and climate.
6	I can compare changes in weather conditions using the appropriate tools. (***5.E.1.1)***	● Short-answer questions: ○ What are some tools that can be used to measure weather conditions? ○ How can you use these tools to compare changes in weather conditions? ○ What are some factors that can influence weather conditions?
7	I can graph weather changes over a period	● Short-answer questions:

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	of time based on data given. (***5.E.1.1)***	○ What are the different types of graphs that can be used to represent weather data? ○ How do you choose the appropriate graph for a given set of weather data? ○ How do you interpret a graph of weather data?
8	I can use weather trends from graphs to predict weather conditions. (***5.E.1.1)***	● Short-answer questions: ○ What are some weather trends that can be observed in graphs? ○ How can you use weather trends to predict future weather conditions? ○ What are some factors that can affect the accuracy of weather predictions?
9	I can describe different kinds of weather conditions(wind speed, wind direction, precipitation, temperature, air pressure). (***5.E.1.1)***	● Short-answer questions: ○ What are the different factors that can affect wind speed? ○ What are the different factors that can affect wind direction? ○ What are the different types of precipitation? ○ What are the different scales used to measure temperature? ○ What are the different units used to measure air pressure?
10	I can compare different latitudes and hemispheres that result in different seasonal weather patterns. (***5.E.1.1)***	● Short-answer questions: ○ What is the difference between latitude and longitude? ○ How do latitude and longitude affect the amount of sunlight a location receives? ○ How do the different hemispheres experience different seasons? ○ What are some of the factors that contribute to the different weather patterns in different latitudes and hemispheres?
11	Review and Assessment of 5.E.1.1	
12	I can identify parts of a weather model. (5.E.1.2)	Short-answer questions: ○ What are the different parts of a weather model? ○ What is the purpose of each part of a weather model? ○ How do the different parts of a weather model work together? ○ What are some of the limitations of weather models?
13	I can use a model to predict weather. (5.E.1.2)	● Short-answer questions: ○ What is the difference between a weather forecast and a weather prediction? ○ What are the different types of weather models that can be used to predict weather? ○ How do you choose the appropriate weather model for a given situation? ○ How do you interpret the output of a weather model?
14	I can tell how global factors influence local weather conditions. (5.E.1.2)	● Short-answer questions: ○ What is the difference between a local weather condition and a global weather

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		condition? ○ What are some of the most important global factors that influence local weather conditions? ○ How can you use weather data to identify the influence of global factors on local weather conditions?
15	I can use data to predict changes in weather. (5.E.1.2)	Short-answer questions: ● What is the difference between a weather forecast and a weather prediction? ● What is the difference between weather and climate? ● What are some of the different types of data that can be used to predict changes in weather? ● How do you use data to predict changes in weather? ● What are some of the limitations of using data to predict changes in weather?
16	I can collect and compare weather data to predict particular weather conditions. (5.E.1.2)	● Short-answer questions: ○ What are some of the different types of weather data that can be collected? ○ How do you collect weather data? ○ How do you compare weather data? ○ How can you use weather data to predict particular weather conditions?
17	I can read basic weather instruments (barometer, thermometer, anemometer, wind vane, and rain gauge). (5.E.1.2)	● Short-answer questions: ○ What is a barometer and what does it measure? ○ What is a thermometer and what does it measure? ○ What is an anemometer and what does it measure? ○ What is a wind vane and what does it measure? ○ What is a rain gauge and what does it measure?
18	I can name the different types of clouds. (5.E.1.2)	● Teachers can have some clouds posted or some characteristics of the clouds and have students to either identify the cloud or identify the characters of the cloud depending on what is posted. ● Short-answer questions: ○ What are the different types of clouds that are formed at high altitudes? ○ What are the different types of clouds that are formed at low altitudes? ○ What are the different types of clouds that are formed in between high and low altitudes? ○ What are the different types of clouds that are associated with precipitation?
19	I can name the different types of fronts. (5.E.1.2)	Teachers can use formative assessments through questioning,Kahoots, Quizizz, Experiments, Schoolnet Questions, Projects, Gimkit or through a worksheet that they may find to go along with the learning target. ● Short-answer questions:

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		○ What is the difference between a cold front and a warm front? ○ What is a stationary front? ○ What is an occluded front? ○ What are the different types of weather associated with a cold front?
20	I can identify different atmospheric conditions and make basic weather predictions. (5.E.1.2)	● Short-answer questions: ○ What is the difference between high pressure and low pressure? ○ What are some of the different types of clouds that can be used to make weather predictions? ○ What are some of the limitations of using weather maps to make weather predictions?
21	I can work with a partner to create sorting cards for a review on standard from standard 5.E.1.2 which is to Predict upcoming weather events from weather data collected through observation and measurements***.*** (5.E.1.2)	● Performance assessment: You can have students perform a task that requires them to predict upcoming weather events from weather data. For example, you could have students collect weather data over a period of time and then use that data to predict the weather for the following day. You could then ask students to explain their predictions and to justify their reasoning. ● Lab activity: You can have students conduct a lab activity that involves predicting upcoming weather events. For example, you could have students collect weather data from a variety of sources and then use that data to predict the weather for a specific location. You could then ask students to explain their predictions and to justify their reasoning. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in predicting upcoming weather events. The quiz could include questions about the different types of weather data, how to collect weather data, and how to use weather data to predict upcoming weather events. ● Discussion: You can have a class discussion about the concepts involved in predicting upcoming weather events. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in predicting upcoming weather events. For example, students could create a weather forecasting app or write a report about the different ways that weather forecasting is used in everyday life. ● What is weather data? ● How do you collect weather data? ● How do you use weather data to predict upcoming weather events? ● What are some of the factors that can affect weather predictions? ● How are weather forecasts used in everyday life?
22	Review and Assessment of 5.E.1.2	
23	I can tell how weather conditions in one area or region influence the weather conditions in another area or region.	● Short-answer questions: ○ What are some of the ways that weather conditions in one area can influence the

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	(5.E.1.3)	weather conditions in another area? ○ What are some of the factors that can affect how weather conditions in one area influence the weather conditions in another area? ○ What are some examples of how weather conditions in one area have influenced the weather conditions in another area?
24	I can tell the factors that influence weather and climate on a global scale. (5.E.1.3)	Performance tasks: ● Identify the factors that influence weather and climate on a global scale. ● Observe how weather and climate change over time and identify the factors that may be influencing these changes.
25	I can tell how the weather and climate are interconnected. (5.E.1.3)	● Performance tasks: ○ Identify the ways in which weather and climate are interconnected. ○ Create a model that shows how weather and climate interact with each other. ○ Observe how weather and climate change over time and identify how these changes may be interconnected.
26	I can analyze global weather patterns and their influence on local weather. (5.E.1.3)	● Short-answer questions: ○ What are some of the global weather patterns that can influence local weather? ○ How do global weather patterns influence local weather? ○ What are some of the limitations of our understanding of how global weather patterns influence local weather?
27	I can identify local weather conditions. (5.E.1.3)	● Compare and contrast the different methods of identifying local weather conditions. ● Short-answer questions: ○ What are some of the different factors that can influence local weather conditions? ○ How can you identify local weather conditions? ○ What are some of the tools that can be used to identify local weather conditions?
28	I can identify what causes changes in local weather. (5.E.1.3)	● Performance tasks: ○ Identify the factors that have caused changes in local weather in a specific region. ○ Create a model that shows how changes in local weather can occur. ○ Observe how local weather changes over time and identify the factors that may be causing these changes.
29	I can recognize the jet stream and Gulf stream as a factor in local weather conditions. (5.E.1.3)	● Short-answer questions: ○ What is the difference between the jet stream and the Gulf Stream? ○ What are some of the factors that can influence the jet stream and the Gulf Stream? ○ What are some of the different types of weather that can be caused by the jet stream

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		and the Gulf Stream?

30	I can discuss the movement and directions of global wind patterns and ocean currents. (5.E.1.3)	• Short-answer questions:
		  ○ What is the difference between global wind patterns and ocean currents?
		  ○ What are some of the different types of global wind patterns?
		  ○ What are some of the different types of ocean currents?

31	I can illustrate and label global weather patterns and water currents. (5.E.1.3)	Performance tasks: • Illustrate global weather patterns and water currents using different tools and methods. • Create a model that shows how global weather patterns and water currents can be illustrated.
32	Review and Assessment of 5.E.1.3	

33	I can define the sun as the source of all energy for life on earth. (***5.P.2.1)***	• Short-answer questions:
		  ○ What is the sun?
		  ○ How does the sun produce energy?
		  ○ How does the sun's energy reach Earth?
		  ○ How does the sun's energy support life on Earth?

34	I can explain the role of the sun in life processes. (***5.P.2.1)***	• Short-answer questions
		  ○ What is the role of the sun in the water cycle?
		  ○ What is the role of the sun in the global climate?
		  ○ What are some of the other ways that the sun affects life on Earth?

35	I can explain the difference between biotic (living) and abiotic (non-living) organisms.(***5.P.2.1)***	• Short-answer questions:
		  ○ What is the difference between a biotic and an abiotic factor?
		  ○ What are some examples of biotic factors?
		  ○ What are some examples of abiotic factors?

36	I can explain the movement of water through the water cycle. (***5.P.2.1)***	• https://www.flippity.net/vb.php?k=1kusTBaR7Wwr_40_Z9567w9jmRhPONp-Rog2Its47E1k
		• Short-answer questions:
		  ○ What are the different forms of water in the water cycle?
		  ○ What are the different processes that move water through the water cycle?
		  ○ What are some of the ways that humans are affecting the water cycle?

37	I can illustrate the steps in the water cycle and explain the sun's energy as a driving force. (***5.P.2.1)***	Short-answer questions: • What are the different steps in the water cycle? • How does the sun's energy drive the water cycle? • What are some of the factors that can affect the water cycle?

38	I can explain the steps of the water cycle based on my illustration. (***5.P.2.1)***	Exit ticket - After illustrating the water cycle students can present and explain in front of the class. ● Discuss the different ways that the sun's energy drives the water cycle. ● Compare and contrast the different methods of studying the water cycle.
39	Review and Assessment of 5.P.2.1	
40	I can explain the main points of standards 5.E.1.1 through a review with my teacher.	Teachers can go over a powerpoint presentation or a nearpod and then create a schoolnet with the standard. They then can do activities with students such as showdown or 4 corners to get students engaged in reviewing.
41	I can explain the main points of standards 5.E.1.2 through a review with my teacher.	Teachers can go over a powerpoint presentation or a nearpod and then create a schoolnet with the standard. They then can do activities with students such as showdown or 4 corners to get students engaged in reviewing.
42	I can explain the main points of standards 5.E.1.3 through a review with my teacher.	Teachers can go over a powerpoint presentation or a nearpod and then create a schoolnet with the standard. They then can do activities with students such as showdown or 4 corners to get students engaged in reviewing.
43	I can explain the main points of standards 5.P.2.1 through a review with my teacher.	Teachers can go over a powerpoint presentation or a nearpod and then create a schoolnet with the standard. They then can do activities with students such as showdown or 4 corners to get students engaged in reviewing.

Unit/Module Pacing: Life Science - 2nd Nine Weeks/Quarter 2

Number of Days	Name of Unit/Module	Pre-Requisites	Standards	Academic Vocabulary	Instructional Resources
4 Days	**Structures and Functions of Living Organisms**	1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive.	5.L.1 Understand how structures and systems of organisms (to include the human body) perform functions necessary for life. 5.L.1.1 Explain why some organisms are capable of surviving as a single cell while others require many cells that are specialized to survive.	Single-cell, Multi-cellular, Organism, Specializing, Unicellular	Study Jams- Human Body Powerpoint on Multicellular and Unicellular Organisms
15 Days	**Structures**	3.L.1 Understand	5.L.1.2 Compare the major	Skeletal System, Muscular	Study Jams - Human Body

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	and Functions of Living Organisms	human body systems and how they are essential for life: protection, movement and support. 4.L.2 Understand food and the benefits of vitamins, minerals and exercise.	systems of the human body (digestive, respiratory, circulatory, muscular, skeletal, and cardiovascular) in terms of their functions necessary for life.	System, Circulatory System, Blood, Veins, Gas exchange, Carbon dioxide Oxygen, Cardiovascular System, Heart , Blood, Respiratory System, Nose, Trachea, Lungs, Digestive System, Mouth, Esophagus, Stomach, Intestines, Gallbladder, Throat, Nervous System, Brain, Spinal Cord, Nerves, Life Functions	Neuroscience for Kids Study Jams- Ecosystems
4 Days	**Evolution and Genetics**	2.L.2 Remember that organisms differ from or are similar to their parents based on the characteristics of the organism.	5.L.3 Understand why organisms differ from or are similar to their parents based on the characteristics of the organism. 5.L.3.1 Explain why organisms differ from or are similar to their parents based on the characteristics of the organism.	Characteristics, Inherited Traits, Genetics, Species, Culture, Offspring, Learned Behavior, Dominant, Recessive, Traits, Population, Instinct , DNA, Chromosome, Acquired Trait	Example Lesson Plan https://learn.genetics.utah.edu/ Genetics and Heredity Powerpoint Study Jams- Human Body/Heredity What are DNA and Genes
3 Days	**Evolution and Genetics**	2.L.2.1 Identify ways in which many plants and animals closely resemble their parents in observed appearance and ways they are different.	5.L.3.2 Give examples of likenesses that are inherited and some that are not.	Characteristics, Inherited, Traits, Genetics, Species, Culture, Offspring, Learned Behavior, Dominant, Recessive, Traits, Population, Likeness	Genetic Science Experiments What is Inheritance
5 days	**Ecosystems**	1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive. 3.L.2 Understand how	5.L.2 Understand the interdependence of plants and animals with their ecosystem. 5.L.2.1 Compare the characteristics of several common ecosystems, including estuaries and salt marshes,	Oceans, Lakes, Ponds, Ecosystems, Terrestrial, Aquatic, Estuary, Salt Marsh, Grasslands, Deciduous Forest, Rainforest, Climate, Population, Community, Biomes, Habitat, Niche,	Ecosystems 5th grade Livebinders North Carolina ecosystems video Study Jams - Ecosystems Study Jams Ecosystems/Biomes

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		plants survive in their environments. 4.L.1 Understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats.	oceans, lakes and ponds, forests, and grasslands.	Biotic, Abiotic, Tundra, Taiga	http://kids.nceas.ucsb.edu/biomes/
7 days	**Ecosystems**	4.L.1.4 Explain how differences among animals of the same population sometimes give individuals an advantage in surviving and reproducing in changing habitats.	5.L.2.2 Classify the organisms within an ecosystem according to the function they serve: producers, consumers, or decomposers (biotic factors)	Ecosystems, Food Chains, Food Webs, Producers, Consumers, Decomposers, Scavengers, Energy Pyramid, Species, Herbivore, Carnivore, Omnivore, Competition, Limiting Factor, Prey, Predator	5th Grade Life Science Ecosystem Unit Food chain game Food Chains Study Jams Fabulous Food Chains Video Study Jams Ecosystems-food webs Food Chains/Food Webs Powerpoint Food Chain Game Interactions Among Living Things Powerpoint
5 days	**Ecosystems**	1.L.1.2 Give examples of how the needs of different plants and animals can be met by their environments in North Carolina or different places throughout the world.	5.L.2.3 Infer the effects that may result from the interconnected relationship of plants and animals to their ecosystem.	population, population density, predator, prey, predation, competition, symbiosis, mutualism, commensalism, parasitism, endangered species, limiting factor	Study Jams- Population Growth Limiting Factors Powerpoint

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NC Check-In 2.0 on Life Science administered end of January

2nd Nine Weeks/Quarter 2 Learning Targets

Day #	Daily Learning Target	How will the daily learning target be assessed?
1	I can distinguish between single celled and multicellular organisms. (5.L.1.1) .	● What is the difference between single-celled organisms' and multicellular organisms' ability to survive? ● Performance assessment: You can have students perform a task that requires them to distinguish between single celled and multicellular organisms. For example, you could have students create a chart or table that lists the characteristics of single celled and multicellular organisms. You could then ask students to identify whether different organisms are single celled or multicellular. ● Lab activity: You can have students conduct a lab activity that involves the identification of single celled and multicellular organisms. For example, you could have students examine a drop of pond water under a microscope and identify the single celled and multicellular organisms present. You could then ask students to draw pictures of the organisms they identified. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in distinguishing between single celled and multicellular organisms. The quiz could include questions about the definition of single celled and multicellular organisms, the characteristics of single celled and multicellular organisms, and examples of single celled and multicellular organisms. ● Discussion: You can have a class discussion about the concepts involved in distinguishing between single celled and multicellular organisms. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in distinguishing between single celled and multicellular organisms. For example, students could create a presentation about the different ways that single celled and multicellular organisms are classified or write a report about the different ways that single celled and multicellular organisms are used in everyday life. ● What is a single celled organism? ● What is a multicellular organism? ● What are the characteristics of single celled organisms? ● What are the characteristics of multicellular organisms? ● What are some examples of single celled organisms? ● What are some examples of multicellular organisms?
2	-I can describe the specialized functions of	● What are the four main specialized functions of multicellular organisms?

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	multicellular organisms. (5.L.1.1)	• Performance assessment: You can have students perform a task that requires them to describe the specialized functions of multicellular organisms. For example, you could have students create a presentation that describes the different specialized functions of the cells in a plant or animal. You could then ask students to explain how these specialized functions work together to keep the organism alive. • Lab activity: You can have students conduct a lab activity that involves the identification of the specialized functions of cells in a multicellular organism. For example, you could have students examine a slice of onion under a microscope and identify the different cell types and their specialized functions. You could then ask students to draw pictures of the cells and explain their functions. • Quiz: You can give students a quiz that tests their understanding of the concepts involved in describing the specialized functions of multicellular organisms. The quiz could include questions about the definition of specialized functions, the different types of specialized functions, and examples of specialized functions in different organisms. • Discussion: You can have a class discussion about the concepts involved in describing the specialized functions of multicellular organisms. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. • Project: You can have students complete a project that involves the concepts involved in describing the specialized functions of multicellular organisms. For example, students could create a model of a cell and label the different parts and their functions or write a report about the different ways that specialized functions are used in everyday life. • What are specialized functions? • What are the different types of specialized functions? • How do specialized functions work together to keep an organism alive? • What are some examples of specialized functions in different organisms?
3	I can give examples of single celled and multicellular organisms.(5.L.1.1)	• What is the difference between a single-celled organism and a multicellular organism? • Give three examples of single-celled organisms. • Give three examples of multicellular organisms. • What are some of the advantages of being a single-celled organism? • What are some of the advantages of being a multicellular organism?
4	I can discuss the relationships between cells, tissue and organs. (5.L.1.1)	• Which is the order of cellular organization from least to most complex in multicellular organisms? • What is the difference between a cell, a tissue, and an organ? • How do cells, tissues, and organs work together to maintain the body's functions?
5	I can identify each system of the human body (circulatory, cardiovascular,	• https://www.flippity.net/ma.php?k=1GHD22lw4ibIdYOmAxCHjTNSdE34p0943ltnmj8LqpTI

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	respiratory, skeletal, muscular, digestive, nervous). (5.L.1.2)	
6	I can describe the circulatory system. (5.L.1.2)	• What are the two main parts of the circulatory system? • What are the functions of the circulatory system? • What are some of the diseases that can affect the circulatory system?
7	I can describe the cardiovascular system.(5.L.1.2)	• Explain the role of the heart in the circulatory system. • How does blood flow through the body? • What are the different types of blood vessels? • What are the functions of the blood cells? • What are some of the diseases that can affect the circulatory system?
8	I can describe the respiratory system.(5.L.1.2)	• What is the main function of the respiratory system? • What are the two main parts of the respiratory system? • How do the lungs exchange gasses with the blood? • What are some of the factors that can affect breathing? • What are some of the diseases that can affect the respiratory system?
9	I can describe the skeletal system.(5.L.1.2)	• What is the main function of the respiratory system? • What are the two main parts of the respiratory system?
10	I can describe the muscular system. (5.L.1.2)	• What is the main function of the skeletal system?
11	I can describe the digestive system.(5.L.1.2)	• What is the main function of the digestive system?
12	-I can describe the nervous system.(5.L.1.2)	• How does the nervous system communicate with other systems in the body?
13	-I can illustrate, name, and label major parts of each system. (5.L.1.2)	• Draw or diagram a system, and label the major parts
14	I can identify the special functions of each body system.(5.L.1.2)	• What is the special function of the…system?
15	I can differentiate between each human	• How do the skeletal system and the muscular system work together to allow for movement?

	body system and its function.(5.L.1.2)	• How does the circulatory system transport oxygen and nutrients to the cells? • How does the respiratory system exchange gasses with the environment? • How does the digestive system break down food and absorb nutrients? • How does the excretory system remove waste products from the body? • How does the nervous system control and coordinate the body's activities? • How does the endocrine system regulate the body's functions?
16	I can infer how these systems work together to maintain health and fitness.(5.L.1.2)	• How do the different body systems work together to maintain homeostasis?
17	-I can explain the interconnection of how each system is dependent on each other for survival.(5.L.1.2)	• Why is it important for the different body systems to work together? • What would happen if one of the body systems stopped working?
18	I can explain the interconnection of how each system is dependent on each other for survival(5.L.1.2)	• How does the skeletal system depend on the muscular system?
19	Review an Assessment on 5.L.1.1 and 5.L.1.2	
20	I can recognize that characteristics are transmitted from parent to offspring. (**5.L.3.1)**	• How do genes determine the characteristics of an organism?
21	I can recognize that each individual has a unique and broad range of characteristics.(**5.L.3.1)**	• How do genes, environment, and personal experiences influence an individual's characteristics?
22	I can explain how traits can be varied from individual to individual within a population (**5.L.3.1)**	• What are some of the factors that contribute to variation in traits? • How does genetic variation affect the characteristics of a population?
23	I can identify traits that give an organism advantages in survival and reproduction (**5.L.3.1)**	• What are some traits that can give an organism advantages in survival? • What are some traits that can give an organism advantages in reproduction?
24	I can identify and explain some traits that are inherited from parents. **(5.L.3.2)**	• What are some traits that are inherited from parents? • How are these traits passed down from parents to offspring?
25	I can compare characteristics between	• How can we explain the similarities and differences between offspring and their parents?

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	offspring and parents. **(5.L.3.2)**	
26	I can explain ways in which traits are learned from parents, population, and/or culture. **(5.L.3.2)**	• What are some of the ways in which traits can be learned? • How do parents, population, and culture influence the learning of traits?
27	Review an Assessment on 5.L.3.1 and 5.L.3.2	
28	I can define and describe each common ecosystem. **(5.L.2.1)**	• What is an ecosystem? • What are the different types of ecosystems? • What are the characteristics of each type of ecosystem? • How do the different types of ecosystems interact with each other? • How are humans affecting ecosystems?
29	I can illustrate plants and animals within each ecosystem.**(5.L.2.1)**	• What are some of the plants and animals that live in forests? • What are some of the plants and animals that live in grasslands?
30	I can identify characteristics of fresh and saltwater ecosystems.**(5.L.2.1)**	• https://www.flippity.net/vb.php?k=1Q0dhg-wDNzPgWEgKaYQKJHVzkDCrDqYJmmy9Mexu5M0
31	I can infer how the environment determines plant and animal life in each ecosystem.**(5.L.2.1**)	• What are some of the factors that determine the type of plant and animal life in an ecosystem?
32	I can differentiate between aquatic and terrestrial ecosystems. **(5.L.2.1)**	• How do the plants and animals in aquatic and terrestrial ecosystems adapt to their environment?
33	I can recognize plants as producers that make (produce) their own energy from the sun (photosynthesis). **(5.L.2.2)**	• What are producers in an ecosystem? • What is photosynthesis? • How do plants use photosynthesis to make their own food? • What are some examples of plants that are producers? • What are some of the benefits of having producers in an ecosystem?
34	I can identify consumers as animals that get energy by eating (consuming) other organisms. **(5.L.2.2)**	• What are the different types of consumers? • How do consumers get energy?
35	I can give examples of different types of decomposers. **(5.L.2.2)**	• Give examples of different types of decomposers.

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36	I can explain the role of a decomposer.**(5.L.2.2)**	• What do decomposers do? • How do decomposers benefit an ecosystem?
37	I can explain the role of producers, consumers, and decomposers in the food chain/food web/energy pyramids. **(5.L.2.2)**	• What are the roles of producers, consumers, and decomposers in a food chain/food web/energy pyramid?
38	I can illustrate a food chain showing the role of producers, consumers, and decomposers. **(5.L.2.2)**	• Illustrate a food chain showing the role of producers, consumers, and decomposers.
39	I can illustrate a food web showing the role of producers, consumers, and decomposers. **(5.L.2.2)**	• Illustrate a food web showing the role of producers, consumers, and decomposers.
40	Review an Assessment on 5.L.2.1 and 5.L.2.2	
41	I can explain each relationship and its impact on an ecosystem. **(5.L.2.3)**	• What are the different types of relationships between organisms in an ecosystem?
42	I can discuss the factors that impact populations within an ecosystem.**(5.L.2.3)**	• What are some of the factors that can impact the population of an organism in an ecosystem?
43	I can identify various relationships that organisms share in an ecosystem (food web, symbiosis, population, community).**(5.L.2.3)**	• What is symbiosis? • What are the different types of symbiotic relationships?

Unit/Module Pacing: Physical Science - 3rd Nine Weeks/Quarter 3

Number of Days	Name of Unit/Module	Pre-Requisites	Standards	Academic Vocabulary	Instructional Resources
10 Days	**Forces and Motion**	3.P.2 Understand the structure and properties of matter before and after they undergo a change.	5.P.1 Understand force, motion and the relationship between them. 5.P.1.1 Explain how factors such as gravity, friction, and change in mass affect	Gravity, Force, Motion, Friction, Mass, Matter, Inertia, Newton's First Law, Balanced force, Unbalanced force, Momentum	Powerpoint on Forces Slides on Newton's Laws of Motion Friction Study Guide Newton's Law Article

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			the motion of objects.		Gravity and Inertia Study Jam Force and Motion Study Jam Newton's First Law of Motion Study Jam
7 Days	**Forces and Motion**	3.P.1 Understand motion and factors that affect motion.	5.P.1.2 Infer the motion of objects in terms of how far they travel in a certain amount of time and the direction in which they travel	Infer, Motion, Speed, Inertia, Newton's first Law of Motion, Distance, Time, Acceleration, Units, Meters (m), Seconds (s), Meters per second (m/s)	5.P.1 Unit Plan
7 Days	**Forces and Motion**	3.P.1.2 Compare the relative speeds (faster or slower) of objects that travel the same distance in different amounts of time.	5.P.1.3 Illustrate the motion of an object using a graph to show a change in position over a period of time	Graph, Distance, Time, Motion, Constant speed, stationary, Accelerate, Accelerating, Decelerate, Decelerating, Inertia	Distance and Time Graphs Powerpoints Motions and Graph Cheat Sheet Graphing Practice Properties of Matter Newton's Second Law Study Jam Newton's Third Law of Motion Study Jam
6 Days	**Forces and Motion**	3.P.1.1 Infer changes in speed or direction resulting from forces acting on an object.	5.P.1.4 Predict the effect of a given force or a change in mass on the motion of an object.	Mass, Motion, Momentum, Gravity, Friction, Force, Balanced force, Unbalanced force, Direction	Physics 4 Kids Motion And Velocity
7 Days	**Matter: Properties and Change**	2.P.2.1 Give examples of matter that change from a solid to a liquid and from a liquid to a solid by heating and cooling. 2.P.2.2 Compare the amount (volume and weight) of water in a container before and after freezing.	5.P.2 Understand the interactions of matter and energy and the changes that occur. 5.P.2.2 Compare the weight of an object to the sum of the weight of its parts before and after an interaction.	Matter, Mass, Sum, Weight, object, chemical change, physical change, State of matter, Solid, Liquid, Gas, Heating, cooling	Powerpoint-Law of Conservation of Mass

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6 Days	**Matter: Properties and Change**	3.P.2.3 Summarize changes that occur to the observable properties of materials when different degrees of heat are applied to them, such as melting ice or ice cream, boiling water or an egg, or freezing water.	5.P.2.3 Summarize properties of original materials, and the new material(s) formed, to demonstrate that a change has occurred	Matter, Chemical property, Physical property, Chemical change, Physical change, Qualitative, Quantitative, Data, Heat, Thermal energy	Changes of Matter Study Jam Blowing Up Balloons Experiment Slides on Physical and Chemical Changes States of Matter - Slides Slides on Measuring Matter
NC Check-In 2.0 on Physical Science administered end of March/beginning week of April					

3rd Nine Weeks/Quarter 3 Learning Targets

Day #	Daily Learning Target	How will the daily learning target be assessed?
1	I can explain how gravity affects the motion of an object. (**5.P.1.1)**	• What is gravity? • How does gravity affect the motion of an object? • What are some examples of how gravity affects the motion of objects in our everyday lives? • What would happen if there was no gravity? • How can we calculate the gravitational force between two objects? • What are some different ways to measure gravity? • How does gravity affect the shape of objects? • What are some different theories about how gravity works?
2	I can define and understand the concept of motion, mass and matter. (**5.P.1.1)**	• What is motion? • What are the different types of motion? • What is mass? • What is matter? • How are mass and matter related? • What are some examples of different types of matter? • How does motion affect the mass of an object? • How does mass affect the motion of an object? • What are some examples of how motion and mass are used in everyday life?
3	I can explain why objects of different mass are pulled toward the earth's (**5.P.1.1)**	• Written assessment: You can give students a written assessment that asks them to explain why

		objects of different mass are pulled toward the earth's. The assessment could include multiple-choice questions, short-answer questions, or essay questions. ● Quiz: You can give students a quiz that tests their understanding of the concept of gravity. The quiz could include questions about the definition of gravity, the factors that affect the gravitational force between two objects, and examples of how gravity affects the motion of objects. ● Lab activity: You can have students conduct a lab activity that demonstrates the effects of gravity on objects of different mass. For example, you could have students drop objects of different mass from a height and measure how long it takes them to fall. ● Discussion: You can have a class discussion about the concept of gravity. This would give you a chance to assess students' understanding of the concept and to answer any questions they may have. ● Project: You can have students complete a project that involves the concept of gravity. For example, students could create a model of the solar system or write a report about the effects of gravity on the Earth.
4	I can explain why all matter has mass.(**5.P.1.1)**	● Written assessment: You can give students a written assessment that asks them to explain why all matter has mass. The assessment could include multiple-choice questions, short-answer questions, or essay questions. ● Quiz: You can give students a quiz that tests their understanding of the concept of mass. The quiz could include questions about the definition of mass, the factors that affect mass, and examples of objects with different masses. ● Lab activity: You can have students conduct a lab activity that demonstrates the effects of mass on objects. For example, you could have students measure the mass of different objects and then compare their weights. ● Discussion: You can have a class discussion about the concept of mass. This would give you a chance to assess students' understanding of the concept and to answer any questions they may have. ● Project: You can have students complete a project that involves the concept of mass. For example, students could create a model of the solar system or write a report about the effects of mass on the Earth.
5	I can define friction and inertia.(**5.P.1.1)**	● What is friction? ● What are the different types of friction? ● What are the factors that affect friction? ● What is inertia? ● How does inertia affect the motion of objects? ● What are some examples of friction and inertia in everyday life? ● Written assessment: You can give students a written assessment that asks them to define friction and inertia. The assessment could include multiple-choice questions, short-answer

		questions, or essay questions. ● Quiz: You can give students a quiz that tests their understanding of the concepts of friction and inertia. The quiz could include questions about the definition of friction and inertia, the factors that affect friction and inertia, and examples of how friction and inertia affect the motion of objects. ● Lab activity: You can have students conduct a lab activity that demonstrates the effects of friction and inertia on objects. For example, you could have students slide objects across a surface with different levels of friction or have them roll objects down a ramp with different masses. ● Discussion: You can have a class discussion about the concepts of friction and inertia. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts of friction and inertia. For example, students could create a model of a car that demonstrates how friction affects the car's motion or write a report about the different types of friction.
6	I can explain Newton's First Law of Motion and give examples of it (**5.P.1.1)**	● Written assessment: You can give students a written assessment that asks them to explain Newton's First Law of Motion and give examples of it. The assessment could include multiple-choice questions, short-answer questions, or essay questions. ● Quiz: You can give students a quiz that tests their understanding of Newton's First Law of Motion. The quiz could include questions about the definition of inertia, the factors that affect inertia, and examples of how inertia affects the motion of objects. ● Lab activity: You can have students conduct a lab activity that demonstrates Newton's First Law of Motion. For example, you could have students roll a ball down a ramp and observe how it moves. ● Discussion: You can have a class discussion about Newton's First Law of Motion. This would give you a chance to assess students' understanding of the concept and to answer any questions they may have. ● Project: You can have students complete a project that involves Newton's First Law of Motion. For example, students could create a model of a car that demonstrates how inertia affects the car's motion or write a report about the different ways that inertia is used in everyday life. ● What is Newton's First Law of Motion? ● What is inertia? ● What are the factors that affect inertia? ● How does inertia affect the motion of objects? ● What are some examples of inertia in everyday life?
7	I can summarize the factors that affect the motion of objects.(**5.P.1.1)**	● Written assessment: You can give students a written assessment that asks them to summarize the factors that affect the motion of objects. The assessment could include multiple-choice questions, short-answer questions, or essay questions.

		• Quiz: You can give students a quiz that tests their understanding of the factors that affect the motion of objects. The quiz could include questions about the definition of each factor, the effects of each factor on the motion of objects, and examples of how each factor affects the motion of objects in everyday life. • Lab activity: You can have students conduct a lab activity that demonstrates the effects of the factors that affect the motion of objects. For example, you could have students roll a ball down a ramp with different amounts of friction or have them drop objects of different masses from a height and measure how long it takes them to fall. • Discussion: You can have a class discussion about the factors that affect the motion of objects. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. • Project: You can have students complete a project that involves the factors that affect the motion of objects. For example, students could create a model of a car that demonstrates how different factors affect the car's motion or write a report about the different ways that factors that affect the motion of objects are used in everyday life. • What are the factors that affect the motion of objects? • How do each of these factors affect the motion of objects? • What are some examples of how each of these factors affect the motion of objects in everyday life?
8	I can predict how a change in mass will affect the motion of objects (**5.P.1.1)**	• Written assessment: You can give students a written assessment that asks them to predict how a change in mass will affect the motion of objects. The assessment could include multiple-choice questions, short-answer questions, or essay questions. For example, you could ask students to predict what would happen to the motion of a car if the mass of the car was doubled. • Quiz: You can give students a quiz that tests their understanding of the relationship between mass and motion. The quiz could include questions about the definition of mass, the effects of mass on the motion of objects, and examples of how changes in mass affect the motion of objects. • Lab activity: You can have students conduct a lab activity that demonstrates the effects of changes in mass on the motion of objects. For example, you could have students roll balls of different masses down a ramp and observe how they move. • Discussion: You can have a class discussion about the relationship between mass and motion. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. • Project: You can have students complete a project that involves the relationship between mass and motion. For example, students could create a model of a car that demonstrates how changes in mass affect the car's motion or write a report about the different ways that changes in mass affect the motion of objects in everyday life. • What is mass? • How does mass affect the motion of objects?

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		● What are some examples of how changes in mass affect the motion of objects? ● How can you predict how a change in mass will affect the motion of an object?
9	Explain how gravity, friction, and change in mass affect the motion of objects. (5.P.1.1	● Short answer questions: Ask students to write short answers to questions about how gravity, friction, and change in mass affect the motion of objects. For example, you could ask them to explain why a ball falls to the ground or how the speed of a car will change if its mass is increased. ● Diagrams: Ask students to draw diagrams to illustrate how gravity, friction, and change in mass affect the motion of objects. For example, you could ask them to draw a diagram of a ball rolling down a hill and explain how the force of gravity affects the ball's motion.
10	Review and Assessment on 5.P.1.1	
11	I can push objects of varying mass across different surfaces. (**5.P.1.2)**	● Performance assessment: You can have students perform a task that requires them to push objects of varying mass across different surfaces. For example, you could have students push a toy car across a carpeted surface, a smooth surface, and a rough surface. You could then observe how much force students use to push the car in each case and how the car's motion changes. ● Lab activity: You can have students conduct a lab activity that investigates the effects of mass and surface type on the motion of objects. For example, you could have students roll balls of different masses down a ramp with different surface types and measure how long it takes them to reach the bottom of the ramp. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in pushing objects of varying mass across different surfaces. The quiz could include questions about the definition of mass, the effects of mass on the motion of objects, the effects of surface type on the motion of objects, and examples of how these concepts are used in everyday life. ● Discussion: You can have a class discussion about the concepts involved in pushing objects of varying mass across different surfaces. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● What is mass? ● How does mass affect the motion of objects? ● What are the different types of surfaces? ● How do different surfaces affect the motion of objects? ● How can you predict how the motion of an object will change if you change its mass or the surface it is moving across?
12	I can use different models to observe how friction affects the motion of an object. (**5.P.1.2)**	● Performance assessment: You can have students perform a task that requires them to use a model to observe how friction affects the motion of an object. For example, you could have students build a model of a car and roll it down a ramp with different surface types. You could

		then observe how the car's motion changes depending on the surface type and ask students to explain their observations. ● Lab activity: You can have students conduct a lab activity that investigates the effects of friction on the motion of an object using a model. For example, you could have students roll balls down a ramp with different surface types and measure how long it takes them to reach the bottom of the ramp. You could then ask students to analyze their data and explain how friction affects the motion of objects. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in using models to observe how friction affects the motion of an object. The quiz could include questions about the definition of friction, the effects of friction on the motion of objects, the different types of models that can be used to observe friction, and examples of how these models are used in everyday life. ● Discussion: You can have a class discussion about the concepts involved in using models to observe how friction affects the motion of an object. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● What is friction? ● How does friction affect the motion of objects? ● What are the different types of models that can be used to observe friction? ● How can you use a model to observe how friction affects the motion of an object? ● What are some examples of how models are used to observe friction in everyday life?
13	I can explain how friction slows objects down. (**5.P.1.2)**	● Written assessment: You can give students a written assessment that asks them to explain how friction slows objects down. The assessment could include multiple-choice questions, short-answer questions, or essay questions. For example, you could ask students to explain why a car stops when you take your foot off the gas pedal. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in how friction slows objects down. The quiz could include questions about the definition of friction, the effects of friction on the motion of objects, and examples of how friction is used in everyday life. ● Lab activity: You can have students conduct a lab activity that investigates the effects of friction on the motion of an object. For example, you could have students roll balls down a ramp with different surface types and measure how long it takes them to reach the bottom of the ramp. You could then ask students to explain how friction affects the motion of objects. ● Discussion: You can have a class discussion about the concepts involved in how friction slows objects down. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in how friction slows objects down. For example, students could create a model of a car and explain how friction affects the car's motion or write a report about the different ways that friction is used in everyday life. ● What is friction?

		● How does friction affect the motion of objects? ● What are some examples of how friction is used in everyday life? ● How can you explain why a car stops when you take your foot off the gas pedal?
14	I can analyze how different kinds of surfaces create the least/most amount of friction (**5.P.1.2)**	● Performance assessment: You can have students perform a task that requires them to analyze how different kinds of surfaces create the least/most amount of friction. For example, you could have students build a model of a car and roll it down a ramp with different surface types. You could then observe how the car's motion changes depending on the surface type and ask students to explain their observations. ● Lab activity: You can have students conduct a lab activity that investigates the effects of different surface types on the motion of an object. For example, you could have students roll balls down a ramp with different surface types and measure how long it takes them to reach the bottom of the ramp. You could then ask students to analyze their data and explain how different surface types affect the motion of objects. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in analyzing how different kinds of surfaces create the least/most amount of friction. The quiz could include questions about the definition of friction, the effects of different surface types on friction, and examples of how different surface types are used in everyday life. ● Discussion: You can have a class discussion about the concepts involved in analyzing how different kinds of surfaces create the least/most amount of friction. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in analyzing how different kinds of surfaces create the least/most amount of friction. For example, students could create a model of a car and explain how different surface types affect the car's motion or write a report about the different ways that different surface types are used in everyday life. ● What is friction? ● What are the different factors that affect friction? ● How do different surface types affect friction? ● What are some examples of how different surface types are used in everyday life? ● How can you analyze how different kinds of surfaces create the least/most amount of friction?
15	I can create graphs or charts to represent the motion of objects and use the graphs or charts to make inferences about the objects' motion.(**5.P.1.2)**	● Short answer questions: You could ask students to write short answers to questions about how to create graphs or charts to represent the motion of objects. For example, you could ask them to explain the difference between a line graph and a bar graph or to describe how to represent the speed of an object in a graph. ● Diagrams: You could ask students to draw diagrams to illustrate how to create graphs or charts to represent the motion of objects. For example, you could ask them to draw a diagram of a line graph and label the axes or to draw a bar graph to represent the distance a car travels over

<table>
<tr><td></td><td></td><td>time.
• Graphing activities: You could give students data about the motion of objects and have them create graphs or charts to represent the data. You could then ask them to use the graphs or charts to make inferences about the objects' motion.
• Reflection questions: You could ask students to reflect on their learning about how to create graphs or charts to represent the motion of objects. For example, you could ask them to write about what they learned in the lesson or to identify one thing they still need to learn.</td></tr>
<tr><td>16</td><td>I can use data to infer the motion of objects in terms of how far they travel in a certain amount of time and the direction in which they travel.(5.P.1.2)</td><td>• Given the following data about the distance a car travels over time, what can you infer about the car's motion
<table><tr><th>Time (seconds)</th><th>Distance Traveled (meters)</th></tr><tr><td>0</td><td>0</td></tr><tr><td>1</td><td>10</td></tr><tr><td>2</td><td>20</td></tr><tr><td>3</td><td>30</td></tr><tr><td>4</td><td>40</td></tr></table>Export to Sheets
• What other data would you need to make a more accurate inference about the car's motion?
• What are some of the limitations of using data to infer the motion of objects?</td></tr>
<tr><td>17</td><td colspan="2">Review and Assessment on 5.P.1.2</td></tr>
<tr><td>18</td><td>I can create graphs to demonstrate motion. (5.P.1.3)</td><td>• Performance assessment: You can have students perform a task that requires them to create graphs to demonstrate motion. For example, you could have students roll a ball down a ramp and create a graph of the ball's position over time. You could then ask students to explain the meaning of the graph and how it demonstrates the motion of the ball.
• Lab activity: You can have students conduct a lab activity that involves creating graphs to</td></tr>
</table>

		demonstrate motion. For example, you could have students roll balls down a ramp with different surface types and create graphs of the ball's position over time. You could then ask students to analyze their data and explain how the graphs demonstrate the effects of different surface types on the motion of objects. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in creating graphs to demonstrate motion. The quiz could include questions about the different types of graphs that can be used to demonstrate motion, how to create graphs, and how to interpret graphs of motion. ● Discussion: You can have a class discussion about the concepts involved in creating graphs to demonstrate motion. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in creating graphs to demonstrate motion. For example, students could create a presentation about the different types of graphs that can be used to demonstrate motion or write a report about the different ways that graphs are used to demonstrate motion in everyday life. ● What is a graph? ● What are the different types of graphs that can be used to demonstrate motion? ● How do you create a graph? ● How do you interpret a graph of motion? ● What are some examples of how graphs are used to demonstrate motion in everyday life?
19	I can explain the basic types of lines seen in distance time graphs, and what type of motion they represent. (5.P.1.3)	● Performance assessment: You can have students perform a task that requires them to explain the basic types of lines seen in distance-time graphs. For example, you could have students roll a ball down a ramp and create a graph of the ball's position over time. You could then ask students to identify the type of line on the graph and explain what type of motion it represents. ● Lab activity: You can have students conduct a lab activity that involves creating graphs of different types of motion. For example, you could have students roll balls down a ramp with different surface types and create graphs of the ball's position over time. You could then ask students to analyze their data and explain the different types of lines on the graphs and what type of motion they represent. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in explaining the basic types of lines seen in distance-time graphs. The quiz could include questions about the different types of lines that can be seen in distance-time graphs, what type of motion each type of line represents, and how to interpret distance-time graphs. ● Discussion: You can have a class discussion about the concepts involved in explaining the basic types of lines seen in distance-time graphs. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in explaining the basic types of lines seen in distance-time graphs. For example, students could create a presentation about the different types of lines that can be seen in distance-time graphs or write a report about the different ways that graphs are used to demonstrate motion in

		everyday life. ● What are the different types of lines that can be seen in distance-time graphs? ● What type of motion does each type of line represent? ● How can you interpret a distance-time graph? ● What are some examples of how distance-time graphs are used in everyday life?
20	I can explain how we can transfer a table of motion data into a line graph (5.P.1.3)	● Performance assessment: You can have students perform a task that requires them to transfer a table of motion data into a line graph. For example, you could have students create a table of data for a ball rolling down a ramp and then create a line graph of the data. You could then ask students to explain how they transferred the data from the table to the graph. ● Lab activity: You can have students conduct a lab activity that involves transferring tables of motion data into line graphs. For example, you could have students roll balls down a ramp with different surface types and create line graphs of the data for each type of surface. You could then ask students to analyze their data and explain how the graphs differ for each type of surface. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in transferring tables of motion data into line graphs. The quiz could include questions about how to create line graphs, how to interpret line graphs, and how to transfer data from tables into graphs. ● Discussion: You can have a class discussion about the concepts involved in transferring tables of motion data into line graphs. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in transferring tables of motion data into line graphs. For example, students could create a presentation about the different ways that tables of motion data can be transferred into line graphs or write a report about the different ways that line graphs are used in everyday life. ● What are the different types of line graphs that can be created from tables of motion data? ● How do you transfer data from a table into a line graph? ● How do you interpret a line graph of motion data? ● What are some examples of how line graphs are used in everyday life?
21	I can create a graph illustrating the motion of each object on both the sloped and flat surfaces.(5.P.1.3)	● Performance assessment: You can have students perform a task that requires them to create a graph illustrating the motion of each object on both the sloped and flat surfaces. For example, you could have students roll a ball down a ramp and then create a graph of the ball's position over time on both the sloped and flat surfaces. You could then ask students to explain the differences in the graphs and how they relate to the motion of the ball. ● Lab activity: You can have students conduct a lab activity that involves creating graphs of the motion of different objects on both the sloped and flat surfaces. For example, you could have students roll balls, cars, and blocks down a ramp and create graphs of their motion on both the sloped and flat surfaces. You could then ask students to analyze their data and explain the

		differences in the graphs for each object. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in creating graphs of the motion of objects on both the sloped and flat surfaces. The quiz could include questions about how to create graphs, how to interpret graphs, and how the motion of objects changes on different surfaces. ● Discussion: You can have a class discussion about the concepts involved in creating graphs of the motion of objects on both the sloped and flat surfaces. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in creating graphs of the motion of objects on both the sloped and flat surfaces. For example, students could create a presentation about the different ways that graphs can be used to demonstrate the motion of objects on different surfaces or write a report about the different ways that graphs are used in everyday life. ● What are the different types of graphs that can be used to illustrate the motion of objects on different surfaces? ● How do you create a graph of the motion of an object on a sloped surface? ● How do you create a graph of the motion of an object on a flat surface? ● How do you interpret graphs of the motion of objects on different surfaces? ● What are some examples of how graphs are used to demonstrate the motion of objects on different surfaces in everyday life?
22	I can explain how the distance that an object travels is related to the period of time it is traveling. **(5.P.1.3)**	● How is the distance that an object travels related to the period of time it is traveling? ● What happens to the distance that an object travels if the period of time it is traveling increases? ● What happens to the distance that an object travels if the speed of the object increases? ● Can you design an experiment to test the relationship between distance and time? ● Can you explain the relationship between distance and time in your own words? ● Short answer questions: You could ask students to write short answers to questions about how the distance that an object travels is related to the period of time it is traveling. For example, you could ask them to explain why the distance that an object travels increases as the period of time it is traveling increases. ● Diagrams: You could ask students to draw diagrams to illustrate how the distance that an object travels is related to the period of time it is traveling. For example, you could ask them to draw a diagram of a car traveling at a constant speed and label the diagram to show how the distance the car travels increases as the time it travels increases. ● Experiments: You could have students conduct experiments to test the relationship between distance and time. For example, the students could design an experiment to test how the distance that a car travels changes as the speed of the car changes. ● Reflection questions: You could ask students to reflect on their learning about how the distance that an object travels is related to the period of time it is traveling. For example, you could ask them to write about what they learned in the lesson or to identify one thing they still need to

		learn. ● Group discussion: You could have students discuss how the distance that an object travels is related to the period of time it is traveling. This would allow them to share their understanding of the concepts with each other and to receive feedback from their classmates. ● Presentations: You could have students give presentations about how the distance that an object travels is related to the period of time it is traveling. This would allow them to share their understanding of the concepts with a wider audience and to receive feedback from their teacher and classmates.
23	I can explain how graphs and data can be used to make sense of the world around us. **(5.P.1.3)**	● Short answer questions: You could ask students to write short answers to questions about how graphs and data can be used to make sense of the world around us. For example, you could ask them to explain how a graph can be used to track the spread of a disease or to illustrate the relationship between two variables. ● Diagrams: You could ask students to draw diagrams to illustrate how graphs and data can be used to make sense of the world around us. For example, you could ask them to draw a diagram of a graph and label the axes or to draw a diagram of a situation that could be represented by a graph. ● Data analysis activities: You could give students data about a real-world situation and have them analyze the data to make sense of the situation. For example, you could give them data about the number of cases of a disease over time and have them use the data to track the spread of the disease. ● Reflection questions: You could ask students to reflect on their learning about how graphs and data can be used to make sense of the world around us. For example, you could ask them to write about what they learned in the lesson or to identify one thing they still need to learn. ● Group discussion: You could have students discuss how graphs and data can be used to make sense of the world around us. This would allow them to share their understanding of the concepts with each other and to receive feedback from their classmates. ● Presentations: You could have students give presentations about how graphs and data can be used to make sense of the world around us. This would allow them to share their understanding of the concepts with a wider audience and to receive feedback from their teacher and classmates.
24	Review and Assessment on 5.P.1.3	
25	I can design an experiment to test how mass affects momentum. (5.P.1.4)	● Performance assessment: You can have students perform a task that requires them to design an experiment to test how mass affects momentum. For example, you could have students design an experiment to test how the mass of a ball affects how far it travels when rolled down a ramp. You could then ask students to explain their experimental design and how it will test the

		relationship between mass and momentum. ● Lab activity: You can have students conduct a lab activity that involves designing an experiment to test how mass affects momentum. For example, you could have students design an experiment to test how the mass of a ball affects how long it takes to come to a stop after being rolled down a ramp. You could then ask students to analyze their data and explain how the mass of the ball affect its momentum. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in designing an experiment to test how mass affects momentum. The quiz could include questions about the definition of momentum, how mass affects momentum, and how to design an experiment to test the relationship between mass and momentum. ● Discussion: You can have a class discussion about the concepts involved in designing an experiment to test how mass affects momentum. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in designing an experiment to test how mass affects momentum. For example, students could create a presentation about the different ways that momentum is used to demonstrate the motion of objects or write a report about the different ways that momentum is used in everyday life. ● What is momentum? ● How does mass affect momentum? ● How do you design an experiment to test the relationship between mass and momentum? ● What are some factors that could affect the results of your experiment? ● How would you analyze your data to determine the relationship between mass and momentum?
26	I can explain how force affects the motion of an object. (5.P.1.4)	● Short-answer questions: ○ What is force? ○ What are the different types of forces? ○ How do forces affect the motion of an object? ● Essay questions: ○ Write an essay that explains how force affects the motion of an object. ○ Discuss the different ways that forces can affect the motion of an object. ○ Compare and contrast the different methods of studying the effects of forces on motion. ● Performance tasks: ○ Create a model that shows how forces affect the motion of an object. ○ Observe how forces affect the motion of objects in the real world. ○ Research the different ways that humans are using forces to control the motion of objects.
27	I can explain how the mass of an object is related to its momentum.(5.P.1.4)	● Short-answer questions:

		○ What is the difference between momentum and inertia? ○ How does the direction of an object's motion affect its momentum? ○ What is the momentum of a car traveling at 60 miles per hour? ○ Discuss the different ways that momentum can be changed.
28	I can explain how gravity and mass are connected.(5.P.1.4)	● Short-answer questions: ○ What is gravity? ○ What is mass? ○ How are gravity and mass related? ● Essay questions: ○ Write an essay that explains how gravity and mass are connected. ○ Discuss the different ways that gravity and mass can be measured. ○ Compare and contrast the different methods of studying the relationship between gravity and mass. ● Performance tasks: ○ Create a model that shows how gravity and mass are related. ○ Observe how gravity affects the motion of objects in the real world. ○ Research the different ways that humans are using gravity to their advantage.
29	I can explain how the greater the mass of the object being acted on, the less the effect of the (same) force. **(5.P.1.4)**	● Why does a bowling ball roll more slowly than a tennis ball if they are both pushed with the same force? ● What happens to the motion of an object when its mass is increased? ● What happens to the motion of an object when the force acting on it is increased? ● How can you use the concepts of mass and force to explain why a car can stop more quickly than a train? ● Can you design an experiment to test the effect of mass on the motion of an object? ● Short answer questions: You could ask students to write short answers to questions about how the mass of an object affects its motion. For example, you could ask them to explain why a bowling ball will roll more slowly than a tennis ball if they are both pushed with the same force. ● Diagrams: You could ask students to draw diagrams to illustrate how the mass of an object affects its motion. For example, you could ask them to draw a diagram of a bowling ball and a tennis ball being pushed with the same force and label the diagrams to show how the mass of the objects affects their motion. ● Force and motion activities: You could give students objects of different masses and have them experiment with how the mass of the objects affects their motion. For example, you could give them a bowling ball, a tennis ball, and a ping pong ball and have them push each object with the same force and observe how the objects move. ● Reflection questions: You could ask students to reflect on their learning about how the mass of an object affects its motion. For example, you could ask them to write about what they learned in the lesson or to identify one thing they still need to learn.

		● Group discussion: You could have students discuss how the mass of an object affects its motion. This would allow them to share their understanding of the concepts with each other and to receive feedback from their classmates. ● Presentations: You could have students give presentations about how the mass of an object affects its motion. This would allow them to share their understanding of the concepts with a wider audience and to receive feedback from their teacher and classmates.
30	Review and Assessment of 5.P.1.4	
31	I can compare the weight of objects to the sum of their parts.(5.P.2.2)	● Short-answer questions: ○ What is the difference between weight and density? ○ How does the weight of an object change when its mass changes? ○ What is the weight of a 10-pound bag of feathers? ● Essay questions: ○ Write an essay that explains how the weight of objects can be compared to the sum of their parts and the limitations of this method. ○ Discuss the different ways that the weight of objects can be measured and how these interactions can be studied. ○ Compare and contrast the different methods of studying the relationship between weight and the sum of parts. ● Performance tasks: ○ Create a model that shows how the weight of objects can be compared to the sum of their parts. ○ Observe how the weight of objects changes when their parts are added or removed.
32	I can weigh an object and record the data.(5.P.2.2)	● Short-answer questions: ○ What is weight? ○ What is a balance? ○ How do you use a balance to weigh an object? ○ How do you record the data from a balance? ● Essay questions: ○ Write an essay that explains how to weigh an object and record the data. ○ Discuss the different types of balances and how they work. ○ Compare and contrast the different methods of weighing objects. ● Performance tasks: ○ Weigh an object using a balance and record the data. ○ Observe how the weight of an object changes over time. ○ Research the different ways that humans are using balances to measure weight.

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33	I can divide an object into fractional parts(5.P.2.2)	● Performance assessment: You can have students perform a task that requires them to divide an object into fractional parts. For example, you could have students divide a piece of paper into halves, thirds, quarters, or fifths. You could then ask students to explain how they divided the object and to show their work. ● Lab activity: You can have students conduct a lab activity that involves dividing an object into fractional parts. For example, you could have students divide a cake into equal parts or a pizza into different slices. You could then ask students to explain how they divided the object and to show their work. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in dividing an object into fractional parts. The quiz could include questions about the definition of fractions, how to divide an object into fractional parts, and examples of fractional parts. ● Discussion: You can have a class discussion about the concepts involved in dividing an object into fractional parts. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in dividing an object into fractional parts. For example, students could create a model of a fraction and label the different parts or write a report about the different ways that fractions are used in everyday life. ● What is a fraction? ● How do you divide an object into fractional parts? ● What are some examples of fractional parts? ● How are fractions used in everyday life?
34	I can weigh all parts of an object together and record the data.(5.P.2.2)	● Short-answer questions: ○ What is weight? ○ What is a balance? ○ How do you use a balance to weigh an object? ○ How do you record the data from a balance? ● Essay questions: ○ Write an essay that explains how to weigh all parts of an object together and record the data. ○ Discuss the different types of balances and how they work. ○ Compare and contrast the different methods of weighing objects. ● Performance tasks: ○ Weigh all parts of an object together using a balance and record the data. ○ Observe how the weight of an object changes when its parts are added or removed. ○ Research the different ways that humans are using balances to measure weight.
35	I can compare and analyze the weight of the two objects and point out that the weight of an object does not change.(5.P.2.2)	● Short-answer questions: ○ What is the difference between weight and gravity?

		○ How does the weight of an object change when its mass changes? ○ What is the weight of a 10-pound bag of feathers? ● Essay questions: ○ Write an essay that explains how to compare the weight of two objects and point out that the weight of an object does not change and the limitations of this method. ○ Discuss the different ways that the weight of objects can be measured and how these interactions can be studied. ○ Compare and contrast the different methods of studying the weight of objects. ● Performance tasks: ○ Weigh two objects and compare their weights. ○ Observe how the weight of an object changes when its mass changes. ○ Research the different ways that humans are using the weight of objects to their advantage.
36	I can apply the concepts of weight and the sum of parts to solve real-world problems. **(5.P.2.2)**	● How can the concepts of weight and the sum of parts be applied to solve real-world problems? ● What are some examples of real-world problems that can be solved using the concepts of weight and the sum of parts? ● How can you design an experiment to test the effect of changing the parts of an object on its weight? ● Can you explain how the concepts of weight and the sum of parts were used to design a new type of packaging that would be more efficient in terms of weight? ● Can you give an example of a real-world problem that you have solved using the concepts of weight and the sum of parts?
37	Review and Assessment of 5.P.2.2	
38	I can explain the differences between chemical and physical changes of matter. (5.P.2.3)	● Short-answer questions: ○ What is the difference between a chemical change and a physical change? ○ Can a physical change be reversed? ○ Can a chemical change be reversed? ● Essay questions: ○ Write an essay that explains the differences between chemical and physical changes of matter and the limitations of this method. ○ Discuss the different ways that chemical and physical changes can be identified and how these interactions can be studied. ○ Compare and contrast the different methods of studying chemical and physical changes. ● Performance tasks: ○ Conduct an experiment to demonstrate a chemical change. ○ Conduct an experiment to demonstrate a physical change.

		○ Research the different ways that humans are using chemical and physical changes to their advantage.
39	I can observe and describe a solid object based on some of its qualitative properties(color, texture, smell, taste and appearance).(5.P.2.3)	● Performance assessment: You can have students perform a task that requires them to observe and describe a solid object based on its qualitative properties. For example, you could have students observe and describe a rock, a piece of fruit, or a piece of clothing. You could then ask students to write a short description of the object, including its color, texture, smell, taste, and appearance. ● Lab activity: You can have students conduct a lab activity that involves observing and describing a solid object based on its qualitative properties. For example, you could have students observe and describe a variety of rocks, fruits, or clothes. You could then ask students to create a chart or table to organize their observations. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in observing and describing a solid object based on its qualitative properties. The quiz could include questions about the different qualitative properties of objects, how to observe and describe objects, and how to organize observations. ● Discussion: You can have a class discussion about the concepts involved in observing and describing a solid object based on its qualitative properties. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in observing and describing a solid object based on its qualitative properties. For example, students could create a presentation about the different ways that qualitative properties are used to describe objects in everyday life or write a report about the different ways that qualitative properties are used in science. ● What are the different qualitative properties of objects? ● How do you observe and describe the qualitative properties of objects? ● How do you organize your observations of the qualitative properties of objects? ● What are some examples of how qualitative properties are used to describe objects in everyday life? ● What are some examples of how qualitative properties are used in science?
40	I can measure(temperature, weight, volume) of objects and record the data.(5.P.2.3)	● Short-answer questions: ○ What is temperature? ○ What is weight? ○ What is volume? ○ What are the different units of measurement for temperature, weight, and volume? ○ How do you measure temperature, weight, and volume? ○ How do you record data?
41	I can explain how molecules behave in the 3 different states of matter. (5.P.2.3)	● Short-answer questions: ○ What are the three states of matter?

		○ What are the characteristics of each state of matter? ○ How do molecules behave in each state of matter? ○ What are some examples of objects that exist in each state of matter? ● Essay questions: ○ Write an essay that explains how molecules behave in the three states of matter. ○ Discuss the different ways that molecules can be arranged in each state of matter. ○ Compare and contrast the different methods of studying the behavior of molecules in different states of matter. ○ Explain the importance of the behavior of molecules in different states of matter in everyday life. ● Performance tasks: ○ Conduct an experiment to demonstrate the behavior of molecules in different states of matter. ○ Observe how the behavior of molecules in different states of matter changes with temperature. ○ Research the different ways that humans are using the behavior of molecules in different states of matter to their advantage.
42	I can use the properties of original materials and the new materials formed to explain why a particular change occurred. **(5.P.2.3)**	● How can the properties of original materials and the new materials formed be used to explain why a particular change occurred? ● What happens to the properties of materials when they are combined? ● How can you use the properties of materials to predict what will happen when they are combined? ● Can you design an experiment to test the effect of combining different materials? ● Can you explain why a particular change occurred in terms of the properties of the original materials and the new materials formed?
43	Review and Assessment for 5.P.2.3	

Unit/Module Pacing: Earth/Life/Physical Science - 4th Nine Weeks/Quarter 4

Number of Days	Name of Unit/Module	Pre-Requisites	Standards	Academic Vocabulary	Instructional Resources
9 Days	**Energy: Conservation and Transfer**	3.P.3.2 Recognize that energy can be transferred from a warmer object to a cooler one by contact or	5.P.3 Explain how the properties of some materials change as a result of heating and cooling.	Conduction, Convection, Radiation, Electromagnetic Waves, Thermal	Example Lesson Plan Heat Transfer Slides Study Jams Heat

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		at a distance and the cooler object gets warmer.	5.P.3.1 Explain the effects of the transfer of heat (either by direct contact or at a distance) that occurs between objects at different temperatures. (conduction, convection or radiation).	energy, Convection Cell/current, Transfer, Thermometer Temperature	Bill Nye the Science Guy Heat Youtube-Conduction, Convection & Radiation Heat and Particle Movement Convection Investigations Conduction, Convection & Radiation Activity Conduction/Convection/Radiation Worksheet
11 Days	**Energy: Conservation and Transfer**	3.P.3 Recognize how energy can be transferred from one object to another.	5.P.3.2 Explain how heating and cooling affect some materials and how this relates to their purpose and practical applications.	Thermal energy, Transfer, Expand, Contract, Conductor Insulator	Slides on Conductors and Insulators Thermal Expansion and Contraction

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10 days	EOG Review	Weather vs. Climate https://create.kahoot.it/details/3cd316e5-3317-4601-a8c2-8b820b316e3e Jet Stream vs Gulf Stream https://create.kahoot.it/details/0a147f2c-1835-46ac-a42d-dc6ea302d3ba Body Systems https://create.kahoot.it/details/dacda238-dfe1-4c05-96c2-b13157e47f3c Inherited vs Learned Traits https://create.kahoot.it/details/5014a8a0-ca0c-4ea3-adec-a3ab68529652 Ecosystems and Food Chains https://create.kahoot.it/details/555f51be-18c4-42f7-bf78-7214a2e3c5c9 Force and Motion https://create.kahoot.it/details/d5323115-d5ab-4ec2-a7d1-16d3ceb6ab21 Water Cycle https://create.kahoot.it/details/4885a24c-23fb-4444-a8ab-833c1e8f07eb Force and Motion https://create.kahoot.it/details/d5323115-d5ab-4ec2-a7d1-16d3ceb6ab21 Water Cycle https://create.kahoot.it/details/4885a24c-23fb-4444-a8ab-833c1e8f07eb Heat Transfer https://create.kahoot.it/details/1c4ebbc6-b240-4c5d-bdc4-28312fa20410
EOG Testing Window (typically reserved for the last 10 days of the school year)		

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4th Nine Weeks/Quarter 4 Learning Targets

Day #	Daily Learning Target	How will the daily learning target be assessed?
1	I can recognize that thermal energy moves. (5.P.3.1)	● Short-answer questions: ○ What is thermal energy? ○ How does thermal energy move? ○ What are some examples of how thermal energy moves? ○ What are some ways to prevent thermal energy from moving? ● Essay questions: ○ Write an essay that explains how thermal energy moves. ○ Discuss the different ways that thermal energy can be transferred. ○ Compare and contrast the different methods of studying thermal energy transfer. ○ Explain the importance of thermal energy transfer in everyday life. ● Performance tasks: ○ Conduct an experiment to demonstrate how thermal energy moves. ○ Observe how thermal energy moves in the natural world. ○ Research the different ways that humans are using thermal energy transfer to their advantage.
2	I can explain the three ways that heat can be transferred: conduction, convection, and radiation. (5.P.3.1)	● What are the three ways that heat can be transferred? ● How do conduction, convection, and radiation differ from each other? ● Can you give an example of each of the three ways that heat can be transferred? ● Can you explain how the three ways that heat can be transferred are related to the properties of matter? ● Can you apply the concepts of heat transfer to solve a real-world problem? ● Short answer questions: You could ask students to write short answers to questions about the three ways that heat can be transferred. For example, you could ask them to explain how conduction, convection, and radiation differ from each other. ● Diagrams: You could ask students to draw diagrams to illustrate the three ways that heat can be transferred. For example, you could ask them to draw a diagram of a metal spoon being heated in a pot of boiling water and label the diagram to show how conduction is occurring. ● Experiments: You could have students conduct experiments to test the three ways that heat can be transferred. For example, the students could design an experiment to test how the temperature of a cup of water changes when it is placed in a hot oven. ● Reflection questions: You could ask students to reflect on their learning about the three ways that heat can be transferred. For example, you could ask them to write about what they learned in the lesson or to identify one thing they still need to learn. ● Group discussion: You could have students discuss the three ways that heat can be transferred. This would allow them to share their understanding of the concepts with each other and to

		receive feedback from their classmates. ● Presentations: You could have students give presentations about the three ways that heat can be transferred. This would allow them to share their understanding of the concepts with a wider audience and to receive feedback from their teacher and classmates.
3	I can identify the process of convection as the heating and cooling of the atmosphere. (5.P.3.1)	● Performance assessment: You can have students perform a task that requires them to identify the process of convection as the heating and cooling of the atmosphere. For example, you could have students observe a pot of boiling water and explain how the convection currents are transferring heat throughout the water. You could then ask students to draw a diagram of the convection currents in the pot of water. ● Lab activity: You can have students conduct a lab activity that involves the process of convection. For example, you could have students heat up a cup of water and observe how the convection currents cause the water to circulate. You could then ask students to explain how the convection currents are transferring heat throughout the water. ● Quiz: You can give students a quiz that tests their understanding of the concepts involved in the process of convection. The quiz could include questions about the definition of convection, how convection currents work, and examples of how convection currents are used in everyday life. ● Discussion: You can have a class discussion about the concepts involved in the process of convection. This would give you a chance to assess students' understanding of the concepts and to answer any questions they may have. ● Project: You can have students complete a project that involves the concepts involved in the process of convection. For example, students could create a presentation about the different ways that convection currents are used to heat and cool the atmosphere or write a report about the different ways that convection currents are used in everyday life. ● What is convection? ● How do convection currents work? ● What are some examples of how convection currents are used in everyday life? ● How does convection affect the heating and cooling of the atmosphere?
4	I can examine and explain how convection influences weather and climate by moving air around the world (updrafts and downdrafts) (5.P.3.1)	● Short-answer questions: ○ What is convection? ○ What are updrafts and downdrafts? ○ How do updrafts and downdrafts influence weather and climate? ○ What are some examples of how updrafts and downdrafts affect our everyday lives? ● Essay questions: ○ Write an essay that explains how convection influences weather and climate by moving air around the world. ○ Discuss the different ways that updrafts and downdrafts can be observed in the natural world. ○ Compare and contrast the different methods of studying convection.

		○ Explain the importance of convection in weather and climate. ● Performance tasks: ○ Conduct an experiment to demonstrate how convection can move air around. ○ Observe how updrafts and downdrafts affect the weather. ○ Research the different ways that humans are using convection to their advantage.
5	I can identify the sun as the main source of electromagnetic energy on earth. (5.P.3.1)	● Short-answer questions: ○ What is electromagnetic energy? ○ What is the sun? ○ What are the different types of electromagnetic energy? ○ How does the sun emit electromagnetic energy? ○ How does electromagnetic energy from the sun reach Earth? ● Essay questions: ○ Write an essay that explains how the sun is the main source of electromagnetic energy on Earth. ○ Discuss the different types of electromagnetic energy that the sun emits. ○ Compare and contrast the different methods of studying electromagnetic energy from the sun. ○ Explain the importance of electromagnetic energy from the sun to life on Earth. ● Performance tasks: ○ Conduct an experiment to demonstrate how the sun emits electromagnetic energy. ○ Observe how electromagnetic energy from the sun affects the Earth's atmosphere. ○ Research the different ways that humans are using electromagnetic energy from the sun to their advantage.
6	I can explain how electromagnetic waves can carry energy through places with or without any matter. (5.P.3.1)	● Short-answer questions: ○ What are electromagnetic waves? ○ What is the difference between a wave and a particle? ○ How do electromagnetic waves carry energy? ○ What are some examples of electromagnetic waves? ○ Can electromagnetic waves travel through a vacuum? ● Essay questions: ○ Write an essay that explains how electromagnetic waves can carry energy through places with or without any matter. ○ Discuss the different properties of electromagnetic waves. ○ Compare and contrast the different methods of studying electromagnetic waves. ○ Explain the importance of electromagnetic waves in everyday life. ● Performance tasks: ○ Conduct an experiment to demonstrate how electromagnetic waves can travel through a vacuum. ○ Observe how electromagnetic waves interact with matter.

		○ Research the different ways that humans are using electromagnetic waves to their advantage.
7	I can describe the role of the sun as the source of energy that producers use to make food (5.P.3.1)	Short-answer questions: ● What is the difference between a producer and a consumer? ● What are the different types of producers? ● How do producers get their energy? Essay questions: ● Write an essay that describes the role of the sun as the source of energy that producers use to make food and the limitations of this method.
8	I can identify examples of heat transfer in everyday life. (5.P.3.1)	Short answer questions: ● List three examples of conduction, three examples of convection, and three examples of radiation. ● Describe how conduction, convection, and radiation are related to the three ways that heat can be transferred. ● Explain how the examples of heat transfer you listed are related to the three ways that heat can be transferred. ● Can you apply the concepts of heat transfer to explain a real-world phenomenon? Essay questions: ● Write an essay about the different ways that heat can be transferred. ● Write an essay about how heat transfer is used in everyday life. ● Write an essay about how the concepts of heat transfer can be applied to solve real-world problems. Performance tasks: ● Create a poster that illustrates the different ways that heat can be transferred. ● Create a presentation that explains how heat transfer is used in everyday life. ● Design an experiment to test how the temperature of a cup of water changes when it is placed in a hot oven.
9	Review and Assessment for 5.P.3.1	

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10	I can explain how heating and cooling changes the properties of materials. (5.P.3.2)	• What are some of the properties of materials that can be changed by heating and cooling? • How does heating and cooling affect the physical properties of materials? • How does heating and cooling affect the chemical properties of materials?
11	I can examine the process of conduction.(5.P.3.2)	• What are some examples of conduction in everyday life?
12	I can investigate the process of convection.(5.P.3.2)	• What are some examples of convection in everyday life?
13	I can compare and contrast conduction, convection and radiation.(5.P.3.2)	• How do conduction, convection, and radiation transfer heat? • What are some examples of conduction, convection, and radiation?
14	I can recognize that energy can be gained or lost depending on the temperature. (5.P.3.2)	• What is the relationship between temperature and heat? • How can energy be gained or lost depending on temperature?
15	I can explain some natural examples of each type of heat transfer.(5.P.3.2)	• What are the three types of heat transfer? • What are some natural examples of conduction? • What are some natural examples of convection? • What are some natural examples of radiation?
16	I can recognize that some materials conduct heat better than others.(5.P.3.2)	• What are some materials that conduct heat well? • What are some materials that conduct heat poorly?
17	I can identify materials that conduct heat well and materials that conduct heat poorly.(5.P.3.2)	Short answer questions: • List three materials that conduct heat well. • List three materials that conduct heat poorly. • Explain how the properties of a material can affect its ability to conduct heat. • Can you identify materials that conduct heat well and materials that conduct heat poorly in a real-world setting?

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		Essay questions: ● Write an essay about the different materials that conduct heat well and poorly. ● Write an essay about how the properties of materials can be used to reduce heat loss. ● Write an essay about how the properties of materials can be used to solve real-world problems.
18	I can explain the effects of combining warmer objects and cooler objects.(5.P.3.2)	● What happens when you combine a warmer object and a cooler object? ● What are the factors that affect the rate of heat transfer between two objects? ● What are some examples of how the effects of combining warmer objects and cooler objects are observed in everyday life?
19	I can explain how heat transfer relates to the purposes and practical applications of various materials.(5.P.3.2)	● What are some examples of how heat transfer is used in the design of materials?
20	Review and Assessment for 5.P.3.2	
Learning targets for review days may vary depending upon student needs. It is best practice to personalize learning targets for student groups based on data. A bank of learning targets has been included below so teachers can choose which is the best for their students.		
21-30	*Earth Science Targets* ● I can describe weather and factors that influence it around the world. ● I can describe different instruments that are used to predict the weather. ● I can describe weather patterns and forecasting. ● I can compare and contrast air and water currents. ● I can describe how the air and water currents affect the weather. ● I can determine how air and water currents affect the local weather. ● I can compare North Carolina's weather to different parts of the world. ● I can compare and contrast weather and climate.	Teachers may also find some jeopardy games to play with their students as a review. Weather Jeopardy 5th Grade Science Weather Quizizz Water Cycle Jeopardy 5th Grade EOG Review On Weather and Climate

	• I can compare North Carolina's climate to different parts of the world. • I can compare daily and seasonal changes in the weather. • I can compare the different types of clouds. • I can describe how the clouds affect the weather. • I can describe different types of precipitation. • I can read and describe weather graphs over time. • I can predict upcoming weather events from weather data collected through observation and measurements. 5.E.1 5.E.1.1 5.E.1.2 5.E.1.3 5.P.2.1	
21-30	*Life Science Targets* • I can identify and describe unicellular organisms. • I can identify and describe multicellular organisms. • I can identify and compare inherited and learned traits. • I can identify the major functions of the skeletal system. • I can identify the major functions of the muscular system. • I can identify the major functions of the respiratory system. • I can identify the major functions of the circulatory system. • I can identify the major functions of the digestive system. • I can identify the major functions of the nervous system. • I can identify and describe food chains and food webs. • I can compare and contrast producers	Teachers may also find some jeopardy games to play with their students as a review. ***Human Body Systems Jeopardy*** ***Jeopardy Human Body Systems*** ***Genetics Jeopardy***

	and consumers. ● I can identify and describe freshwater ecosystems. ● I can identify and describe saltwater ecosystems. ● I can compare and contrast abiotic and biotic factors in an ecosystem. ● I can identify and describe different biomes of the world. 5.L.1 5.L.1.1 5.L.1.2 5.L.3 5.L.3.1 5.L.3.2 5.L.2 5.L.2.1 5.L.2.2 5.L.2.3	
21-30	*Physical Science Targets* ● I can identify and describe different types of forces. ● I can identify and describe factors that affect motion of objects. ● I can observe and graph changes in motion of time. ● I can identify and describe thermal energy. ● I can identify and describe the ways heat travels. ● I can describe how heat can change objects. ● I can identify and describe electromagnetic energy. ● I can identify and describe the water cycle. ● I can compare and contrast conduction, convection, and radiation. ● I can describe matter and where it is found. ● I can identify and describe the different states of matter. ● I can identify different properties of matter. ● I can identify and describe chemical	Teachers may also find some jeopardy games to play with their students as a review. Force and Motion Jeopardy Force and Motion SUper Teachers Jeopardy Chemical and Physical Change Jeopardy Heat Transfer Jeopardy Matter and Energy Quizizz

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	changes in matter. ● I can identify and describe physical changes in matter. ● I can compare and contrast insulators and conductors. 5.P.2. 5.P.2.2 5.P.2.3 5.P.3 5.P.3.1 5.P.3.2 5.P.1.1 5.P.1.2 5.P.1.3 5.P.1.4	
EOG Testing Window (typically reserved for the last 10 days of school year)		