

Science Year at a Glance 2023-2024

Grade 4

Scientific Explanations		
Duration	Big Ideas	Possible Learning Checkpoints
2 Learning Cycles 2 Days 60 minutes	<ul style="list-style-type: none"> Claim: a statement that answers the question Evidence: data, observations and text evidence that support your claim. 2-3 pieces of evidence make a stronger written response. Reasoning: explanation of how your evidence proves your claim is correct. Responses should include science concepts and may include vocabulary. 	<ul style="list-style-type: none"> LC1 – create an explanation using the CER format LC2 – create an explanation using the CER format

Turtle Trouble					
Duration	Assessed Standards	Essential Question	Big Ideas	Possible Learning Checkpoints	End of Unit Assessment
9 Learning Cycles 18 Days 1,080 minutes	4-PS4-2 4-LS1-1 4-LS1-2 4-PS4-3	How does an injury to a plant or animal impact survival, growth, behavior, and/or reproduction?	<ul style="list-style-type: none"> Plants need water to survive. They have internal structures to help draw water from the soil to their leaves. External structures provide for the growth, behavior, and survival of an organism. Students learn about external structures of a loggerhead turtle. The internal structures of animals work together as systems for survival, growth, behavior, and/or reproduction. When an organism uses its senses, it can then use the acquired sensory information to adapt or respond to its environment. When light reflects off an object, it enters the eye, allowing the object to be seen. Students will learn the structures of an eye. 	<ul style="list-style-type: none"> LC2 – Identify ways in which a plant's internal structures help it to survive and grow LC3 – Explain external features turtles use to get food LC4 – Describe how internal structures work together as a system LC5 – Describe how loss of sight may impact a turtle LC6 - Describe how the pupil and iris work together to help us to see LC8 – Explain challenges of using morse code as a communication system LC9 – Explain the communication system that would best be used to track turtles. 	<ul style="list-style-type: none"> Create a poster to explain how an injury to a turtle may occur, how the injury may affect the turtle, and ways people can protect turtles. Turtle Trouble digital post-assessment

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Soccket Solution

Duration	Assessed Standards	Essential Question	Big Ideas	Possible Learning Checkpoints	End of Unit Assessment
9 Learning Cycles 19 Days (1,140 minutes)	4-PS3-1 4-PS3-2 4-PS3-3 4-PS3-4 4-PS4-1 4-ESS3-1	How can energy help to solve problems?	<ul style="list-style-type: none"> • Energy is in use all around us, even in the schoolhouse! Energy is often converted from one form to another. Energy sources can either be renewable or non-renewable. • Energy and motion are inextricably linked; more energy usually results in greater motion. When objects collide, energy is passed from one object to one or more other objects. • Sound travels in waves and can send messages via patterns. • Heat transfers by way of conduction, convection, or radiation. 	<ul style="list-style-type: none"> • LC2 – Examine renewable and nonrenewable resources and their impact. • LC3 – Label forms of energy • LC4 – Label initial and final forms of energy • LC5 – Explain energy transfer in a device • LC6 – Explain energy transfer when objects collide • LC7 – Describe the relationship between speed and energy • LC8 – Explain characteristics of waves and how waves affect motion 	<ul style="list-style-type: none"> • Design and/or build a energy-harnessing device • Soccket Solution digital post-assessment

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Geologic Journeys

Duration	Assessed Standards	Essential Question	Big Ideas	Possible Learning Checkpoints	End of Unit Assessment
8 Learning Cycles 13 Days 780 minutes	4-ESS1-1 4-ESS2-1 4-ESS2-2 4-ESS3-2	How can we prevent or reduce the effects of Earth's changes over time?	<ul style="list-style-type: none"> • Water erosion's destructive forces are affected by the slope of land and speed of water. Erosion and weathering are caused by several different forces. • Volcanoes and earthquakes appear most often at tectonic plate boundaries around the world. 	<ul style="list-style-type: none"> • LC2 – Explain how rock layers may have changed over time • LC3 – Use fossil evidence to describe rock layers • LC4 – Explain how weathering may impact monuments in Egypt • LC5 – Describe water erosion • LC6 – Draw conclusions about patterns in the location of volcanoes • LC7 – Draw conclusions about patterns in the location of earthquakes 	<ul style="list-style-type: none"> • Research and test flood mitigation strategies to reduce flooding around the Nile River • Geologic Journeys digital post-assessment