

Science Year at a Glance 2023 – 2024

Grade 3

Scientific Explanations

Duration	Big Ideas	Possible Learning Checkpoints
3 Learning Cycles 3-4 Days 90 minutes	<ul style="list-style-type: none"> <u>Claim</u>: a statement that answers the question <u>Evidence</u>: data, observations and text evidence that support your claim. 2-3 pieces of evidence make a stronger written response. <u>Reasoning</u>: 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"> LC2 – create an explanation using the CER format LC3 – create an explanation using the CER format

Driving Forces

Duration	Assessed Standards	Essential Question	Big Ideas	Possible Learning Checkpoints	Major Assessments
10 Learning Cycles 35 days 1,050 minutes	3-PS2-1 3-PS2-2 3-PS2-3 3-PS2-4	How can we use forces and interactions to affect the movement of different objects?	<ul style="list-style-type: none"> Effects of balanced and unbalanced forces on the motion of an object. Cause and effect relationships of magnetic interactions between two objects not in contact with each other. Patterns in motion can be used to predict future motion. Design problems can be solved by applying scientific ideas about magnets. 	<ul style="list-style-type: none"> LC2 – Describe balanced forces LC3 – Describe unbalanced forces LC4 – Predict future motion of a coin in a wishing well LC5 – Analysis based on crash test LC6 – Make a suggestion on how to use magnets to solve a problem LC7 – Describe materials that are attracted to magnets LC8 – Describe magnetic force LC9 – Compare/contrast magnetic and electric forces 	<ul style="list-style-type: none"> Mid- and Post-Assessments: <ul style="list-style-type: none"> Mid-point Assessment as part of LC 5 End-of-Unit Assessment as part of LC 10 Performance Assessment: <ul style="list-style-type: none"> LC 5: Students independently complete analysis of the vehicle their group designed, built, and tested that travels the farthest distance. LC 10: Students independently complete analysis of the vehicle their group designed, built, and tested that keeps an uncooked egg safe in a crash test.

Survival of the Fittest (Formerly Let Us Grow)					
Duration	Assessed Standards	Essential Question	Big Ideas	Possible Learning Checkpoints	Major Assessments
7 Learning Cycles 22 days 660 minutes	3-LS1-1 3-LS3-1 3-LS3-2 3-LS4-2 3-5-ETS1-2	What traits best allow an organism to survive?	<ul style="list-style-type: none"> • Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death. • Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms. • Use evidence to support the explanation that traits can be influenced by the environment. • Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing. 	<ul style="list-style-type: none"> • LC2 – Describe animal life cycles • LC4 – Identify and describe patterns of similarities and variations in traits in organisms • LC5 – Support an explanation about environmental influences on inherited traits in organisms • LC6 – Describe that certain characteristics make it easier for some organisms to survive, find mates, and reproduce over other organisms of the same species that don't have those traits 	<ul style="list-style-type: none"> • Mid- and Post-Assessments: <ul style="list-style-type: none"> • Mid-point Assessment as part of LC 3 • End-of-Unit Assessment as part of LC 7 • Performance Assessment: <ul style="list-style-type: none"> • Students select an organism, research it, and then write a letter to next year's 5th grade students telling them what they learned and whether their organism is one the 5th graders should consider for their schoolyard habitat restoration project.

Mayfly Mayhem

Duration	Assessed Standards	Essential Question	Big Ideas	Possible Learning Checkpoints	Major Assessments
10 Learning Cycles 25 days 750 minutes	3-LS2-1 3-LS4-1 3-LS4-3 3-LS4-4	How can we help reduce the sedimentation in our streams to protect the organisms that live there?	<ul style="list-style-type: none"> • Some animals form groups to help members survive. • Fossils provide evidence of the organisms and the environments they lived in long ago. • In a particular habitat, some organisms live well, some less well, and some cannot survive at all. • When an environment changes, the types of plants and animals that live there may change. 	<ul style="list-style-type: none"> • LC2 - Describe environmental conditions needed to survive well, and how changing environmental conditions will affect survival. • LC3 – Explain benefits of living in a group • LC4 – Characterize insects • LC5 – Describe impact of environmental changes • LC6 – Explain problem in the stream, the cause, and the effect • LC7 – Evaluate filtration materials • LC8 – Evaluate filtration device 	<ul style="list-style-type: none"> • Post-Assessment: <ul style="list-style-type: none"> • Students complete the end-of-unit post-assessment as part of LC 10 • Performance Assessment: <ul style="list-style-type: none"> • Students work in groups to design, build, and test a device to filter sediment from water.

Extreme Weather (Optional)

Duration	Assessed Standards	Essential Question	Big Ideas	Possible Learning Checkpoints	End of Unit Assessment
<p>Taught during ELA</p> <p>15 Learning Cycles</p> <p>19-20 days</p> <p>1,800 minutes</p>	<p>3-ESS2-1 3-ESS2-2 3-ESS3-1</p>	<p>How do people adapt to weather and climate?</p>	<ul style="list-style-type: none"> • Cause and effect relationships are routinely identified, tested and used to explain change. • There are multiple ways to solve a problem. • Scientists engage in research to learn more about a problem and develop ways to solve it. • Nature has observable patterns, these patterns can be used to make predictions • Engineers improve existing technologies or develop new ones to increase their benefits (e.g., better artificial limbs), decrease known risks (e.g., seatbelts in cars), and meet societal demands (e.g., cell phones). 	<ul style="list-style-type: none"> • Interim assessment opportunities are found at the end of each learning cycle for ELA and Science. 	<ul style="list-style-type: none"> • Teams of students will create a presentation to advise the governor and community members about the best building design for withstanding a tornado. <p>In your presentation:</p> <ul style="list-style-type: none"> • Describe the problems that result from tornados. • Describe the design process you went through from your first build to your last. • Make a claim stating which design is most effective in addressing the problems caused by a tornado. • Use evidence from the tornado event that your design is the most effective. • Your presentation should be no more than five minutes long. It must be organized and easy for your audience to follow. Speakers must speak clearly, and at an appropriate pace and volume. • Periodic Assessment (Grade 3, Unit 3, Part I): The Periodic Assessment for this unit can be completed anytime within the testing window. The window will be open for approximately three weeks. Please refer to the 2022-2023 ELA Unit Pacing

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