



Zoo Miami Field Trips

Next Generation State Science Standards



Programs Overview

Grade	Animals Live!		Eco-Investigations		
	Creature Feature	Sensational Senses	Water, Wetlands, and Watersheds	Behavior Analysis Team	Enriching Science
K	SC.K.L.14.3	SC.K.L.14.1, SC.K.L.14.3	SC.K.N.1.4, SC.K.N.1.5, SC.K.P.12.1	SC.K.N.1.1, SC.K.N.1.2, SC.K.N.1.3, SC.K.N.1.5	SC.K.L.14.3
1	SC.1.L.17.1	SC.1.L.14.1	SC.1.E.6.1, SC.1.E.6.2, SC.1.L.17.1	SC.1.N.1.1, SC.1.N.1.2, SC.1.N.1.3, SC.1.N.1.4, SC.1.L.14.1, SC.1.L.17.1	SC.1.L.14.1
2	SC.2.L.17.1, SC.2.L.17.2	SC.2.L.17.2	SC.1.E.6.1, SC.1.E.6.2, SC.1.L.17.1,	SC.2.N.1.1, SC.2.N.1.3, SC.2.N.1.5, SC.2.L.17.2, SC.2.N.1.2	SC.2.L.17.1
3	SC.3.L.15.1	N/A	SC.3.N.3.2, SC.3.N.3.3, SC.3.P.9.1	SC.3.N.1.1, SC.3.N.1.3, SC.3.N.1.4, SC.3.N.1.6	SC.3.N.1.1 SC.3.N.1.6
4	SC.4.L.16.2, SC.4.L.17.4	SC.4.L.16.2	SC.4.E.6.4, SC.4.L.17.1, SC.4.L.17.4	SC.4.N.1.1, SC.4.N.1.2, SC.4.N.1.3, SC.4.N.1.7, SC.4.L.16.3, SC.4.L.17.4	SC.4.L.16.3
5	SC.5.L.17.1	SC.5.L.17.1	SC.5.E.7.1	SC.5.N.1.1, SC.5.N.2.1, SC.5.N.1.6, SC.5.N.2.2	SC.5.L.17.1
6	N/A	N/A	SC.6.E.6.1	SC.6.N.1.1, SC.6.N.1.2	SC.6.N.1.1
7	SC.7.E.6.6	N/A	SC.7.E.6.6, SC.7.L.17.3	SC.7.N.1.1, SC.7.N.1.7	SC.7.N.1.1
8	N/A	N/A	SC.8.N.3.1, SC.8.N.4.2	SC.8.N.1.1, SC.8.N.1.4, SC.8.N.4.1	SC.8.N.1.1 SC.8.N.1.6
9-12	SC.912.L.17.8	N/A	SC.912.L.17.8, SC.912.L.17.14, SC.912.L.17.16, SC.912.L.17.20,	SC.912.N.4.1, SC.912.N.1.6	SC.912.N.1.1



Field Trip Supported NGSS Standards



Animals Live! (Outdoor presentation with up to 6 animals)

Grade	Creature Feature	Sensational Senses	Water, Wetlands and Watersheds	Behavior Analysis Team	Enriching Science
Kindergarten	<ul style="list-style-type: none"> Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do. (SC.K.L.14.3) 	<ul style="list-style-type: none"> Recognize the five senses and related body parts. (SC.K.L.14.1) Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do. (SC.K.L.14.3) 	<ul style="list-style-type: none"> Observe and create a visual representation of an object which includes its major features. (SC.K.N.1.4) Recognize that learning can come from careful observation. (SC.K.N.1.5) Investigate that things move in different ways, such as fast, slow, etc. (SC.K.P.12.1) 	<ul style="list-style-type: none"> Collaborate with a partner to collect information. (SC.K.N.1.1) Make observations of the natural world and know that they are descriptors collected using the five senses. (SC.K.N.1.2) Keep records as appropriate -- such as pictorial records -- of investigations conducted. (SC.K.N.1.3) Recognize that learning can come from careful observation. (SC.K.N.1.5) 	<ul style="list-style-type: none"> Observe plants and animals, describe how they are alike and how they are different in the way they look and in the things they do. (SC.K.L.14.3)
Grade 1	<ul style="list-style-type: none"> Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space. (SC.1.L.17.1) 	<ul style="list-style-type: none"> Make observations of living things and their environment using the five senses (SC.1.L.14.1) 	<ul style="list-style-type: none"> Recognize that water, rocks, soil, and living organisms are found on Earth's surface. (SC.1.E.6.1) Describe the need for water and how to be safe around water. (SC.1.E.6.2) Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space. (SC.1.L.17.1) 	<ul style="list-style-type: none"> Raise questions about the natural world, investigate them in teams through free exploration, and generate appropriate explanations based on those explorations. (SC.1.N.1.1) Using the five senses as tools, make careful observations, describe objects in terms of number, shape, texture, size, weight, color, and motion, and 	<ul style="list-style-type: none"> Make observations of living things and their environment using the five senses (SC.1.L.14.1)

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				<p>compare their observations with others. (SC.1.N.1.2)</p> <ul style="list-style-type: none"> Keep records as appropriate - such as pictorial and written records - of investigations conducted. (SC.1.N.1.3) Ask "how do you know?" in appropriate situations. (SC.1.N.1.4) Make observations of living things and their environment using the five senses. (SC.1.L.14.1) Through observation, recognize that all plants and animals, including humans, need the basic necessities of air, water, food, and space. (SC.1.L.17.1) 	
Grade 2	<ul style="list-style-type: none"> Compare and contrast the basic needs that all living things, including humans, have for survival. (SC.2.L.17.1) Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs. (SC.2.L.17.2) 	<ul style="list-style-type: none"> Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs. (SC.2.L.17.2) 	<ul style="list-style-type: none"> Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations. (SC.2.N.1.1) Compare the observations made by different groups using the same tools. (SC.2.N.1.2) 	<ul style="list-style-type: none"> Raise questions about the natural world, investigate them in teams through free exploration and systematic observations, and generate appropriate explanations based on those explorations. (SC.2.N.1.1) Ask "how do you know?" in appropriate situations and attempt reasonable answers when asked the same 	<ul style="list-style-type: none"> Compare and contrast the basic needs that all living things, including humans, have for survival. (SC.2.L.17.1)

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			<ul style="list-style-type: none"> Compare and describe changing patterns in nature that repeat themselves, such as weather conditions including temperature and precipitation, day to day and season to season. (SC.2.E.7.1) Observe and describe water in its solid, liquid, and gaseous states. (SC.2.P.8.4) Compare and contrast the basic needs that all living things, including humans, have for survival. (SC.2.L.17.1) 	<p>question by others. (SC.2.N.1.3)</p> <ul style="list-style-type: none"> Distinguish between empirical observation (what you see, hear, feel, smell, or taste) and ideas or inferences (what you think). (SC.2.N.1.5) Recognize and explain that living things are found all over Earth, but each is only able to live in habitats that meet its basic needs. (SC.2.L.17.2) Compare the observations made by different groups using the same tools. (SC.2.N.1.2) 	
Grade 3	<ul style="list-style-type: none"> Classify animals into major groups (mammals, birds, reptiles, amphibians, fish, arthropods, vertebrates and invertebrates, those having live births and those which lay eggs) according to their physical characteristics and behaviors. (SC.3.L.15.1) 		<ul style="list-style-type: none"> Recognize that scientists use models to help understand and explain how things work. (SC.3.N.3.2) Recognize that all models are approximations of natural phenomena; as such, they do not perfectly account for all observations. (SC.3.N.3.3) Describe the changes water undergoes when it changes state through heating and cooling by using familiar scientific terms such as melting, freezing, boiling, 	<ul style="list-style-type: none"> Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations. (SC.3.N.1.1) Compare the observations made by different groups using the same tools and seek reasons to explain the differences across g Keep records as appropriate, such as 	<ul style="list-style-type: none"> Raise questions about the natural world, investigate them individually and in teams through free exploration and systematic investigations, and generate appropriate explanations based on those explorations. (SC.3.N.1.1) Infer based on observation. (SC.3.N.1.6)

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			evaporation, and condensation. (SC.3.P.9.1)	pictorial, written, or simple charts and graphs, of investigations conducted. (SC.3.N.1.3) <ul style="list-style-type: none"> Recognize the importance of communication among scientists. (SC.3.N.1.4) Infer based on observation. (SC.3.N.1.6) 	
Grade 4	<ul style="list-style-type: none"> Explain that although characteristics of plants and animals are inherited, some characteristics can be affected by the environment. (SC.4.L.16.2) Recognize ways plants and animals, including humans, can impact the environment. (SC.4.L.17.4) 	<ul style="list-style-type: none"> Explain that although characteristics of plants and animals are inherited, some characteristics can be affected by the environment. (SC.4.L.16.2) 	<ul style="list-style-type: none"> Describe the basic differences between physical weathering (breaking down of rock by wind, water, ice, temperature change, and plants) and erosion (movement of rock by gravity, wind, water, and ice). (SC.4.E.6.4) Compare the seasonal changes in Florida plants and animals to those in other regions of the country. (SC.4.L.17.1) Recognize ways plants and animals, including humans, can impact the environment. (SC.4.L.17.4) 	<ul style="list-style-type: none"> Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information (identifying the source), conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations. (SC.4.N.1.1) Compare the observations made by different groups using multiple tools and seek reasons to explain the differences across groups. (SC.4.N.1.2) Explain that science does not always follow a rigidly defined method ("the scientific method") but that 	<ul style="list-style-type: none"> Recognize that animal behaviors may be shaped by heredity and learning. (SC.4.L.16.3)

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				<p>science does involve the use of observations and empirical evidence. (SC.4.N.1.3)</p> <ul style="list-style-type: none"> Recognize and explain that scientists base their explanations on evidence. (SC.4.N.1.7) Recognize that animal behaviors may be shaped by heredity and learning. (SC.4.L.16.3) Recognize ways plants and animals, including humans, can impact the environment. (SC.4.L.17.4) 	
Grade 5	<ul style="list-style-type: none"> Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics. (SC.5.L.17.1) 	<ul style="list-style-type: none"> Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycles variations, animal behaviors and physical characteristics. (SC.5.L.17.1) 	<ul style="list-style-type: none"> Create a model to explain the parts of the water cycle. Water can be a gas, a liquid, or a solid and can go back and forth from one state to another. (SC.5.E.7.1) 	<ul style="list-style-type: none"> Define a problem, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types such as: systematic observations, experiments requiring the identification of variables, collecting and organizing data, interpreting data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions. (SC.5.N.1.1) Recognize and explain that science is grounded in empirical 	<ul style="list-style-type: none"> Compare and contrast adaptations displayed by animals and plants that enable them to survive in different environments such as life cycle variations, animal behaviors, and physical characteristics. (SC.5.L.17.1)

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				<p>observations that are testable; explanation must always be linked with evidence. (SC.5.N.2.1)</p> <ul style="list-style-type: none"> Recognize and explain the difference between personal opinion/interpretation and verified observation. (SC.5.N.1.6) Recognize and explain that when scientific investigations are carried out, the evidence produced by those investigations should be replicable by others. (SC.5.N.2.2) 	
Grade 6			<ul style="list-style-type: none"> Describe and give examples of ways in which Earth's surface is built up and torn down by physical and chemical weathering, erosion, and deposition. (SC.6.E.6.1) Recognize that there are a variety of different landforms on Earth's surface such as coastlines, dunes, rivers, mountains, glaciers, deltas, and lakes and relate these landforms as they apply to Florida. (SC.6.E.6.2) 	<ul style="list-style-type: none"> Define a problem from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions. (SC.6.N.1.1) 	<ul style="list-style-type: none"> Define a problem, from the sixth grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions. (SC.6.N.1.1)

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				<ul style="list-style-type: none"> Explain why scientific investigations should be replicable. (SC.6.N.1.2) 	
Grade 7	<ul style="list-style-type: none"> Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water. (SC.7.E.6.6) 		<ul style="list-style-type: none"> Identify the impact that humans have had on Earth, such as deforestation, urbanization, desertification, erosion, air and water quality, changing the flow of water. (SC.7.E.6.6) Describe and investigate various limiting factors in the local ecosystem and their impact on native populations, including food, shelter, water, space, disease, parasitism, predation, and nesting sites. (SC.7.L.17.3) 	<ul style="list-style-type: none"> Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions. (SC.7.N.1.1) Explain that scientific knowledge is the result of a great deal of debate and confirmation within the science community. (SC.7.N.1.7) 	<ul style="list-style-type: none"> Define a problem from the seventh grade curriculum, use appropriate reference materials to support scientific understanding, plan and carry out scientific investigation of various types such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions and defend conclusions. (SC.7.N.1.1)
Grade 8			<ul style="list-style-type: none"> Select models useful in relating the results of their own investigations. (SC.8.N.3.1) Explain how political, social, and economic concerns can affect science, and vice versa. (SC.8.N.4.2) 	<ul style="list-style-type: none"> Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of 	<ul style="list-style-type: none"> Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various

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				<p>various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions. (SC.8.N.1.1)</p> <ul style="list-style-type: none"> • Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data. (SC.8.N.1.4) • Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels. (SC.8.N.4.1) 	<p>types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions. (SC.8.N.1.1)</p> <ul style="list-style-type: none"> • Understand that scientific investigations involve the collection of relevant empirical evidence, the use of logical reasoning, and the application of imagination in devising hypotheses, predictions, explanations, and models to make sense of the collected evidence. (SC.8.N.1.6)
<p>Grades 9-12</p>	<ul style="list-style-type: none"> • Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species. (SC.912.L.17.8) 		<ul style="list-style-type: none"> • Recognize the consequences of the losses of biodiversity due to catastrophic events, climate changes, human activity, and the introduction of invasive, non-native species. (SC.912.L.17.8) • Assess the need for adequate waste management strategies. (SC.912.L.17.14) 	<ul style="list-style-type: none"> • Explain how scientific knowledge and reasoning provide an empirically-based perspective to inform society's decision making. (SC.912.N.4.1) • Describe how scientific inferences are drawn from scientific observations and provide examples from the content being studied. (SC.912.N.1.6) 	<ul style="list-style-type: none"> • Define problem based on a specific body of knowledge and do following: pose a questions, conduct observations, etc. (SC.912.N.1.1)

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			<ul style="list-style-type: none"> • Discuss the large-scale environmental impacts resulting from human activity, including waste spills, oil spills, runoff, greenhouse gases, ozone depletion, and surface and groundwater pollution. (SC.912.L.17.16) • Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability. (SC.912.L.17.20) 		