Take A Walk on the Wildside
Outdoor Science Program
6th Grade
Curriculum Standards/Activity

Lessons: Earth Science Life Science Physical Science ETS	**Grade**	**State ID** **NGSS** **TASS**	**Description**	**Standard**
Weather	6	6.ESS2	Acting as a meteorologist, students will explore appropriate tools, record and predict weather patterns	* Analyze and interpret data from weather conditions, weather maps, satellites, and radar to predict probable local weather patterns and conditions. *Explain how relationships between the movement and interactions of air masses, high- and low-pressure systems, and frontal boundaries result in weather conditions and severe storms
Renewable vs non-renewable	6	6.ESS3	Study of various elements and human impact on the biosphere and energy	*Differentiate between renewable and nonrenewable resources by asking questions about their availability and sustainability. * Investigate and compare existing and developing technologies that utilize renewable and alternative energy resources. * Assess the impacts of human activities on the biosphere including conservation, habitat management, species endangerment, and extinction
Forestry Habitat Management	6	6.ESS3	While hiking, gain an understanding of human impact on habitats and various species.	Differentiate between renewable and nonrenewable resources by asking questions about their availability and sustainability. 2) Investigate and compare existing and developing technologies that utilize renewable and alternative energy resources. 3) Assess the impacts of human activities on the biosphere including conservation, habitat management, species endangerment, and extinction
Aquatic Studies	6	6.ESS3	Learning about the water cycle, its impact/necessity for life and various aquatic species.	Differentiate between renewable and nonrenewable resources by asking questions about their availability and sustainability. 2) Investigate and compare existing and developing technologies that utilize renewable and alternative energy resources. 3) Assess the impacts of human activities on the biosphere including conservation, habitat management, species endangerment, and extinction
Native Bee map	6	6.ESS3	Study of the bee map	* Assess the impacts of human activities on the biosphere including conservation, habitat management, species endangerment, and extinction
Forestry	6	5.LS2	Observation of the natural elements while hiking a trail	* Evaluate and communicate the impact of environmental variables on population size. *Determine the impact of competitive, symbiotic,

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		5.LS4		and predatory interactions in an ecosystem. * Draw conclusions about the transfer of energy through a food web and energy pyramid in an ecosystem. * Using evidence from climate data, draw conclusions about the patterns of abiotic and biotic factors in different biomes, specifically the tundra, taiga, deciduous forest, desert, grasslands, rainforest, marine, and freshwater ecosystems. *Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its impact. *Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes. *Compare and contrast auditory and visual methods of communication among organisms in relation to survival strategies of a population. *Explain how changes in biodiversity would impact ecosystem stability and natural resources *Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting environmental equilibrium
Lichens	6	6.LS2 6.LS4	Using observation and experiments to study and compare	* Evaluate and communicate the impact of environmental variables on population size. *Determine the impact of competitive, symbiotic, and predatory interactions in an ecosystem. * Draw conclusions about the transfer of energy through a food web and energy pyramid in an ecosystem. * Using evidence from climate data, draw conclusions about the patterns of abiotic and biotic factors in different biomes, specifically the tundra, taiga, deciduous forest, desert, grasslands, rainforest, marine, and freshwater ecosystems. *Analyze existing evidence about the effect of a specific invasive species on native populations in

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				Tennessee and design a solution to mitigate its impact. *Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes. *Compare and contrast auditory and visual methods of communication among organisms in relation to survival strategies of a population. *Explain how changes in biodiversity would impact ecosystem stability and natural resources *Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting environmental equilibrium
Flower Dissection	6	6.LS2	Studying the parts of various parts of a plant to understand human impact of species around us	*Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its impact. *Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes. *Explain how changes in biodiversity would impact ecosystem stability and natural resources *Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting environmental equilibrium
Model of Pollination Garden Buffett	6	6.LS2	Using various craft items, students will replicate the model of pollination to learn how various species survive and potential ideas to help protect their survival	*Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its impact. *Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes. *Explain how changes in biodiversity would impact ecosystem stability and natural resources

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				*Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting environmental equilibrium
Food Web	6	6.LS2 6.LS4	Students through various activities and observations will learn more about the food web	* Evaluate and communicate the impact of environmental variables on population size. *Determine the impact of competitive, symbiotic, and predatory interactions in an ecosystem. * Draw conclusions about the transfer of energy through a food web and energy pyramid in an ecosystem. * Using evidence from climate data, draw conclusions about the patterns of abiotic and biotic factors in different biomes, specifically the tundra, taiga, deciduous forest, desert, grasslands, rainforest, marine, and freshwater ecosystems. *Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its impact. *Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes. *Compare and contrast auditory and visual methods of communication among organisms in relation to survival strategies of a population. *Explain how changes in biodiversity would impact ecosystem stability and natural resources *Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting environmental equilibrium
Thicket	6	6.LS2	A simple game of hide/seek explains a great deal about adaptations, camouflage, and survival of an ecosystem.	* Evaluate and communicate the impact of environmental variables on population size. *Determine the impact of competitive, symbiotic, and predatory interactions in an ecosystem. * Draw conclusions about the transfer of energy

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		6.LS4		through a food web and energy pyramid in an ecosystem. * Using evidence from climate data, draw conclusions about the patterns of abiotic and biotic factors in different biomes, specifically the tundra, taiga, deciduous forest, desert, grasslands, rainforest, marine, and freshwater ecosystems. *Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its impact. *Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes. *Compare and contrast auditory and visual methods of communication among organisms in relation to survival strategies of a population. *Explain how changes in biodiversity would impact ecosystem stability and natural resources *Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting environmental equilibrium
Food Chain	6	6.LS2 6.LS4	Through the experience of an active game, students recreate surviving in a food chain dominoes.	* Evaluate and communicate the impact of environmental variables on population size. *Determine the impact of competitive, symbiotic, and predatory interactions in an ecosystem. * Draw conclusions about the transfer of energy through a food web and energy pyramid in an ecosystem. * Using evidence from climate data, draw conclusions about the patterns of abiotic and biotic factors in different biomes, specifically the tundra, taiga, deciduous forest, desert, grasslands, rainforest, marine, and freshwater ecosystems. *Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its

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Oh Turkey	6	6.LS2 6.LS4	Parenting to be turkeys in a prey/predator game, students gain an understand of population control.	* Evaluate and communicate the impact of environmental variables on population size. *Determine the impact of competitive, symbiotic, and predatory interactions in an ecosystem. * Draw conclusions about the transfer of energy through a food web and energy pyramid in an ecosystem. * Using evidence from climate data, draw conclusions about the patterns of abiotic and biotic factors in different biomes, specifically the tundra, taiga, deciduous forest, desert, grasslands, rainforest, marine, and freshwater ecosystems. *Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its impact. *Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes. *Compare and contrast auditory and visual methods of communication among organisms in relation to survival strategies of a population. *Explain how changes in biodiversity would impact ecosystem stability and natural resources

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Aquatic Studies	6	6.LS2 6.LS4	Studying samples from the local creek to learn about macros and a healthy environment	* Evaluate and communicate the impact of environmental variables on population size. *Determine the impact of competitive, symbiotic, and predatory interactions in an ecosystem. * Draw conclusions about the transfer of energy through a food web and energy pyramid in an ecosystem. * Using evidence from climate data, draw conclusions about the patterns of abiotic and biotic factors in different biomes, specifically the tundra, taiga, deciduous forest, desert, grasslands, rainforest, marine, and freshwater ecosystems. *Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its impact. *Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes. *Compare and contrast auditory and visual methods of communication among organisms in relation to survival strategies of a population. *Explain how changes in biodiversity would impact ecosystem stability and natural resources Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting

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				environmental equilibrium
Quick Frozen Critters	6	6.LS2 6.LS4	Understanding first hand a prey/predator lifestyle and survival	* Evaluate and communicate the impact of environmental variables on population size. *Determine the impact of competitive, symbiotic, and predatory interactions in an ecosystem. * Draw conclusions about the transfer of energy through a food web and energy pyramid in an ecosystem. * Using evidence from climate data, draw conclusions about the patterns of abiotic and biotic factors in different biomes, specifically the tundra, taiga, deciduous forest, desert, grasslands, rainforest, marine, and freshwater ecosystems. *Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its impact. *Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes. *Compare and contrast auditory and visual methods of communication among organisms in relation to survival strategies of a population. *Explain how changes in biodiversity would impact ecosystem stability and natural resources Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting

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Chocolate covered Crickets	6	6.LS2 6.LS4		* Evaluate and communicate the impact of environmental variables on population size. *Determine the impact of competitive, symbiotic, and predatory interactions in an ecosystem. * Draw conclusions about the transfer of energy through a food web and energy pyramid in an ecosystem. * Using evidence from climate data, draw conclusions about the patterns of abiotic and biotic factors in different biomes, specifically the tundra, taiga, deciduous forest, desert, grasslands, rainforest, marine, and freshwater ecosystems. *Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its impact. *Research the ways in which an ecosystem has changed over time in response to changes in physical conditions, population balances, human interactions, and natural catastrophes. *Compare and contrast auditory and visual methods of communication among organisms in relation to survival strategies of a population. *Explain how changes in biodiversity would impact ecosystem stability and natural resources. Design a possible solution for maintaining biodiversity of ecosystems while still providing necessary human resources without disrupting

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Carmelita Hunting	6	6.LS	Hunting native Carmelita's, students learn about self-preservation, competitive, symbiotic, prey/predator interactions	*Analyze existing evidence about the effect of a specific invasive species on native populations in Tennessee and design a solution to mitigate its impact.
Nosy Neighbors	6	6.LS2	Using their senses, students discover methods of animal communication	*Compare and contrast auditory and visual methods of communication among organisms in relation to survival strategies of a population
*gravitational zipline *Elastic Archery * Angry Birds *Flight & Design Rockets *Junk Drawer cars *Team Building- (nitro, grinder, whale watch, wire woozy, balance boards, trolleys) *Roller Coasters * Balloon Launchers	6	6.PS3	Chosen activity will example transfer of energy and the balance of energy exists	*Analyze the properties and compare sources of kinetic, elastic potential, gravitational potential, electric potential, chemical, and thermal energy. *Construct a scientific explanation of the transformations between potential and kinetic energy. * Analyze and interpret data to show the relationship between kinetic energy and the mass of an object in motion and its speed. * Investigate to demonstrate the way that heat (thermal energy) moves among objects through radiation, conduction, or convection.

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Circuits		6.ETS1	Various STEM activities to learn about energy transfer	*Evaluate design constraints on solutions for maintaining ecosystems and biodiversity. * Design and test different solutions that impact energy transfer
Humpty Dumpty II	6	6.ETS1	A revised version of an egg drop	*Evaluate design constraints on solutions for maintaining ecosystems and biodiversity. * Design and test different solutions that impact energy transfer
Jenga Tower	6	6.ETS1	Using massive wood blocks, students play the game Jenga	*Evaluate design constraints on solutions for maintaining ecosystems and biodiversity. * Design and test different solutions that impact energy transfer
The Birds	6	6.ETS1	Using binoculars, students play bingo and discuss/create other options to binoculars	*Evaluate design constraints on solutions for maintaining ecosystems and biodiversity. * Design and test different solutions that impact energy transfer
Rockets	6	6.ETS1	Using paper/pvc pipes, students will create a functionable rocket that will be launched with an air compressor	*Evaluate design constraints on solutions for maintaining ecosystems and biodiversity. * Design and test different solutions that impact energy transfer
Global Trash monsters/Human footprints	6	6.ETS1	Using clean trash students will design a replica of a tool to solve a world problem	*Evaluate design constraints on solutions for maintaining ecosystems and biodiversity. * Design and test different solutions that impact energy transfer
GPS	6	6.ETS1	Learn how GPS is used in maintaining ecosystem	*Evaluate design constraints on solutions for maintaining ecosystems and biodiversity