Take A Walk on the Wildside
Outdoor Science Program
7th Grade
Curriculum Standards/Activity

Lessons: Earth Science Life Science Physical Science ETS	**Grade**	**State ID** **NGSS** **TASS**	**Description**	**Standard**
Global	7	7.ESS3	A study of human impact and potential solutions	*Graphically represent the composition of the atmosphere as a mixture of gases and discuss the potential for atmospheric change. * Engage in a scientific argument through graphing and translating data regarding human activity and climate
Weather, footprints of choice?	7	7.ESS3	Discovering the difference between weather/climate and human impact	*Graphically represent the composition of the atmosphere as a mixture of gases and discuss the potential for atmospheric change. * Engage in a scientific argument through graphing and translating data regarding human activity and climate
Forestry	7	7.LS1	Observation of the natural elements while hiking a trail	* Develop and construct models that identify and explain the structure and function of major cell organelles as they contribute to the life activities of the cell and organism. * Investigate to demonstrate how the cell membrane maintains homeostasis through the process of passive transport. *Evaluate evidence that cells have structural similarities and differences in organisms across kingdoms. * Diagram the hierarchical organization of multicellular organisms from cells to organism. *Explain that the body is a system comprised of subsystems that maintain equilibrium and support life through digestion, respiration, excretion, circulation, sensation (nervous and integumentary), and locomotion (musculoskeletal). *Develop an argument based on empirical evidence and scientific reasoning to explain how behavioral and structural adaptations in animals and plants affect the probability of survival and reproductive success. * Evaluate and communicate evidence that compares and contrasts the advantages and disadvantages of sexual and asexual reproduction. *Construct an explanation demonstrating that the function of mitosis for multicellular organisms is for

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				growth and repair through the production of genetically identical daughter cells. *Construct a scientific explanation based on compiled evidence for the processes of photosynthesis, cellular respiration, and anaerobic respiration in the cycling of matter and flow of energy into and out of organisms.
Virtual Animals	7	7.LS2	Using craft items, students will create a virtual animal- explain the functions and habitat, survival skills	* Develop and construct models that identify and explain the structure and function of major cell organelles as they contribute to the life activities of the cell and organism. * Investigate to demonstrate how the cell membrane maintains homeostasis through the process of passive transport. *Evaluate evidence that cells have structural similarities and differences in organisms across kingdoms. * Diagram the hierarchical organization of multicellular organisms from cells to organism. *Explain that the body is a system comprised of subsystems that maintain equilibrium and support life through digestion, respiration, excretion, circulation, sensation (nervous and integumentary), and locomotion (musculoskeletal). *Develop an argument based on empirical evidence and scientific reasoning to explain how behavioral and structural adaptations in animals and plants affect the probability of survival and reproductive success. * Evaluate and communicate evidence that compares and contrasts the advantages and disadvantages of sexual and asexual reproduction. *Construct an explanation demonstrating that the function of mitosis for multicellular organisms is for growth and repair through the production of genetically identical daughter cells. *Construct a scientific explanation based on compiled evidence for the processes of photosynthesis, cellular respiration, and anaerobic respiration in the cycling of matter and flow of energy into and out of organism
Entomology	7	7.LS2	Study and comparison of	* Develop and construct models that identify and explain the structure and function of major cell

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			bugs/insects	organelles as they contribute to the life activities of the cell and organism. * Investigate to demonstrate how the cell membrane maintains homeostasis through the process of passive transport. *Evaluate evidence that cells have structural similarities and differences in organisms across kingdoms. * Diagram the hierarchical organization of multicellular organisms from cells to organism. *Explain that the body is a system comprised of subsystems that maintain equilibrium and support life through digestion, respiration, excretion, circulation, sensation (nervous and integumentary), and locomotion (musculoskeletal). *Develop an argument based on empirical evidence and scientific reasoning to explain how behavioral and structural adaptations in animals and plants affect the probability of survival and reproductive success. * Evaluate and communicate evidence that compares and contrasts the advantages and disadvantages of sexual and asexual reproduction. *Construct an explanation demonstrating that the function of mitosis for multicellular organisms is for growth and repair through the production of genetically identical daughter cells. *Construct a scientific explanation based on compiled evidence for the processes of photosynthesis, cellular respiration, and anaerobic respiration in the cycling of matter and flow of energy into and out of organism
Lichens	7	7.LS2	Using observation and experiments to study and compare	Develop a model to depict the cycling of matter, including carbon and oxygen, including the flow of energy among biotic and abiotic parts of an ecosystem
Food Chain	7	7.LS1	Through the experience of an active game, students recreate surviving in a food chain dominoes.	* Develop and construct models that identify and explain the structure and function of major cell organelles as they contribute to the life activities of the cell and organism. * Investigate to demonstrate how the cell

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				membrane maintains homeostasis through the process of passive transport. *Evaluate evidence that cells have structural similarities and differences in organisms across kingdoms. * Diagram the hierarchical organization of multicellular organisms from cells to organism. *Explain that the body is a system comprised of subsystems that maintain equilibrium and support life through digestion, respiration, excretion, circulation, sensation (nervous and integumentary), and locomotion (musculoskeletal). *Develop an argument based on empirical evidence and scientific reasoning to explain how behavioral and structural adaptations in animals and plants affect the probability of survival and reproductive success. * Evaluate and communicate evidence that compares and contrasts the advantages and disadvantages of sexual and asexual reproduction. *Construct an explanation demonstrating that the function of mitosis for multicellular organisms is for growth and repair through the production of genetically identical daughter cells. *Construct a scientific explanation based on compiled evidence for the processes of photosynthesis, cellular respiration, and anaerobic respiration in the cycling of matter and flow of energy into and out of organism
Owl Pellets Crayfish	7	7.LS1		* Develop and construct models that identify and explain the structure and function of major cell organelles as they contribute to the life activities of the cell and organism. * Investigate to demonstrate how the cell membrane maintains homeostasis through the process of passive transport. *Evaluate evidence that cells have structural similarities and differences in organisms across kingdoms. * Diagram the hierarchical organization of multicellular organisms from cells to organism.

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				*Explain that the body is a system comprised of subsystems that maintain equilibrium and support life through digestion, respiration, excretion, circulation, sensation (nervous and integumentary), and locomotion (musculoskeletal). *Develop an argument based on empirical evidence and scientific reasoning to explain how behavioral and structural adaptations in animals and plants affect the probability of survival and reproductive success. * Evaluate and communicate evidence that compares and contrasts the advantages and disadvantages of sexual and asexual reproduction. *Construct an explanation demonstrating that the function of mitosis for multicellular organisms is for growth and repair through the production of genetically identical daughter cells. *Construct a scientific explanation based on compiled evidence for the processes of photosynthesis, cellular respiration, and anaerobic respiration in the cycling of matter and flow of energy into and out of organism
Aquatic Studies	7	7.LS1	Studying samples from the local creek to learn about macros and a healthy environment	* Develop and construct models that identify and explain the structure and function of major cell organelles as they contribute to the life activities of the cell and organism. * Investigate to demonstrate how the cell membrane maintains homeostasis through the process of passive transport. *Evaluate evidence that cells have structural similarities and differences in organisms across kingdoms. * Diagram the hierarchical organization of multicellular organisms from cells to organism. *Explain that the body is a system comprised of subsystems that maintain equilibrium and support life through digestion, respiration, excretion, circulation, sensation (nervous and integumentary), and locomotion (musculoskeletal). *Develop an argument based on empirical evidence and scientific reasoning to explain how behavioral and structural adaptations in animals and plants affect the probability of survival and

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				reproductive success. * Evaluate and communicate evidence that compares and contrasts the advantages and disadvantages of sexual and asexual reproduction. *Construct an explanation demonstrating that the function of mitosis for multicellular organisms is for growth and repair through the production of genetically identical daughter cells. *Construct a scientific explanation based on compiled evidence for the processes of photosynthesis, cellular respiration, and anaerobic respiration in the cycling of matter and flow of energy into and out of organism
Chemistry in the Kitchen *Crayons Matter *Ice Balloons *Water fireworks *Invisible lemons	7	7.PS1	Using household items students will experiment to study various properties of matter	*Classify matter as pure substances or mixtures based on composition. *Analyze and interpret chemical reactions to determine if the total number of atoms in the reactants and products support the Law of Conservation of Mass. *Use the periodic table as a model to analyze and interpret evidence relating to physical and chemical properties to identify a sample of matter. *Create and interpret models of substances whose atoms represent the states of matter with respect to temperature and pressure.
Mineral testing Rock Investigator Erosion Plates Simple Machines GPS	7	AIT 1, 2, 6, 7	Various activities and engineering projects to solve a problem	Identify, develop, collect, organize, interpret, infer, propose information