Take A Walk on the Wildside
Outdoor Science Program
8th Grade
Curriculum Standards/Activity

Lessons: Earth Science Life Science Physical Science ETS	**Grade**	**State ID** **NGSS** **TASS**	**Description**	**Standard**
Earth's system & Global impact	8	8.ESS2	activities/experiments to understand the characteristics of the earth and how the react and are impacted by humans	*Analyze and interpret data to support the assertion that rapid or gradual geographic changes lead to drastic population changes and extinction events. 2) Evaluate data collected from seismographs to create a model of Earth's structure. 3) Describe the relationship between the processes and forces that create igneous, sedimentary, and metamorphic rocks. 4) Gather and evaluate evidence that energy from the earth's interior drives convection cycles within the asthenosphere which creates changes within the lithosphere including plate movements, plate boundaries, and sea-floor spreading. 5) Construct a scientific explanation using data that explains the gradual process of plate tectonics accounting for A) the distribution of fossils on different continents, B) the occurrence of earthquakes, and C) continental and ocean floor features (including mountains, volcanoes, faults, and trenches).
Geology: *homemade volcano *earthquakes *plate interactions *excavating challenge	8	8.ESS3	(coming soon)	*Interpret data to explain that earth's mineral, fossil fuel, and groundwater resources are unevenly distributed as a result of geologic processes. *Collect data, map, and describe patterns in the locations of volcanoes and earthquakes related to tectonic plate boundaries, interactions, and hotspots.
Entomology	8	8.LS2	Study and comparison of bugs/insects	*Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change in life forms throughout Earth's history. * Construct an explanation addressing similarities and differences of the anatomical structures and genetic information between extinct and extant organisms using evidence of common ancestry and patterns between taxa. *Analyze evidence from geology, paleontology, and comparative anatomy to support that specific phenotypes within a population can increase the probability of survival of that species and lead to adaptation. * Develop a scientific explanation of how natural selection plays a role in determining the survival of

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				a species in a changing environment. * Obtain, evaluate, and communicate information about the technologies that have changed the way humans use artificial selection to influence the inheritance of desired traits in other organisms
Aquatic Studies	8	8.LS1	Studying samples from the local creek to learn about macros and a healthy environment	*Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change in life forms throughout Earth's history. * Construct an explanation addressing similarities and differences of the anatomical structures and genetic information between extinct and extant organisms using evidence of common ancestry and patterns between taxa. *Analyze evidence from geology, paleontology, and comparative anatomy to support that specific phenotypes within a population can increase the probability of survival of that species and lead to adaptation. * Develop a scientific explanation of how natural selection plays a role in determining the survival of a species in a changing environment. * Obtain, evaluate, and communicate information about the technologies that have changed the way humans use artificial selection to influence the inheritance of desired traits in other organisms
Build A Beaver	8.LS4	8	Using household items, students gain an understand of how species survive	*Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change in life forms throughout Earth's history. * Construct an explanation addressing similarities and differences of the anatomical structures and genetic information between extinct and extant organisms using evidence of common ancestry and patterns between taxa. *Analyze evidence from geology, paleontology, and comparative anatomy to support that specific phenotypes within a population can increase the probability of survival of that species and lead to adaptation. * Develop a scientific explanation of how natural selection plays a role in determining the survival of

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*Rockets *Catapults *Cars *Slinky *Archery *Zipline	8	8.PS2	The chosen activity will enable students to not only observe the standards but also work as a team to use engineering skills to solve a problem.	*Create a demonstration of an object in motion and describe the position, force, and direction of the object. * Plan and investigate to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. * Evaluate and interpret that for every force exerted on an object there is an equal force exerted in the opposite direction.
Team Building	8	8.PS2	Using a low ropes course to experience/observe force	*Investigate to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact
GPS	8	8.PS4	Using GPS units to study waves, frequency, speed	*Develop and use models to represent the basic properties of waves including frequency, amplitude, wavelength, and speed.
Boom whackers/Sound Waves	8	8.PS4	Students will gain an understanding of waves by using various tools	*Develop and use models to represent the basic properties of waves including frequency, amplitude, wavelength, and speed.