Course Name:	Third Grade Science		
Credits:	N/A		
Prerequisites:	N/A		
Description:	General Education 3rd Grade Science Curriculum		
Academic Standards:	Next Generation Science Standards		
Units:	**Unit Length:**	**Unit Standards:**	**Unit Outcomes:**
Motion and Matter	12 weeks	* I can understand the effects of balanced and unbalanced forces on motion. * I can understand motion and the factors that affect motion. * I can show cause and effect relationships of magnetism. * I can engineer an effective cart design.	Motion is caused by force but it can be affected by variables.
Water and Climate	12 weeks	*I can discuss typical weather conditions expected during a particular season. *I can read about and understand information to describe climates in different regions of the world. *I can state how the design of building/structure reduces the impact of a weather-related hazard.	The Earth's water plays many important roles in people's lives as well as can cause damage.
Structures of Life	12 weeks	*I can draw and label models of lifecycles. *I can explain how an organism's behaviors help them grow, and reproduce. *I can understand how an animal and its traits are influenced by its environment. *I can examine how adaptations help plants and animals survive. *I can examine how fossils teach us about animals and their environments from long ago.	Organism's structures help them grow, survive, and reproduce. Organisms are affected by their environment.

Unit Name: **Motion and Matter**	**Length:** 12 weeks
Standards: * I can understand the effects of balanced and unbalanced forces on motion. * I can understand motion and the factors that affect motion. * I can show cause and effect relationships of magnetism. * I can engineer an effective cart design.	**Outcome:** Motion is caused by force but it can be affected by variables.
Essential Questions: How does force and gravity affect the movement and how can force be changed?	**Learning Targets:** *Students learn motion of an object is determined by force (pushes and pulls). *Students make predictions of outcomes based on knowledge of gravity and magnetism. *Students describe matter including its states and properties.
Topic 1: **Forces**	**Length:** 4 weeks
Standard(s): I can understand the effects of balanced and unbalanced motion.	**Academic Vocabulary:** magnetic force, push, pull, attract, repel, gravity, balanced and unbalanced motion
Lesson Frame: Two Forces	I can: -describe how magnetism and gravity are alike and different. -explore what happens when magnets interact with other magnets.
Lesson Frame: Magnetic-Force Investigation	I can -collect data on what affects magnetic force.
Lesson Frame: More about Forces	I can -describe what causes a change in motion.
Performance Tasks: interactive notebook Foss videos, graphic organizers, and student resource book completion of rubric	Notes: Hands on lessons include: Magnet exploration How magnets interact with other objects: desks, paper, wood etc. Magnet Magic Trick
Topic 2: **Patterns of Motion**	**Length:** 4 weeks
Standard(s): I can understand motion and the factors that affect motion.	**Academic Vocabulary:** system, axle, friction, variable
Lesson Frame: Wheel and Axle Systems	I can -make a system using trial and error to learn what works best. -describe how friction causes and object to stop.
Lesson Frame: Predicting Motion of New Systems	I can -observe and measure patterns in motion to predict what will happen next.
Lesson Frame: Twirly Birds	I can -apply variable to affect how gravity works on object's motion.

Performance tasks: interactive notebook Foss videos, graphic organizers, and student resource book completion of rubric	Notes: Hands on activities: Use discs and shafts to make a wheel and axle system Use cups and ramps with weights to see how different designs affect motion Use different variables such as weight and length of wings to see how it changes how gravity affects flight
Topic 3: **Engineering**	**Length:** 4 weeks
Standard(s): I can show a cause and effect relationship related to motion	**Academic Vocabulary:** system, axle, friction, variable, magnetic force, push, pull, attract, repel, gravity, balanced and unbalanced motion
Lesson Frame: From Here to There	I can: -use what I have learned about motion to design a working cart
Lesson Frame: Distance Challenge	I can: -improve on an original design by asking how it can work even better. -collect data.
Lesson Frame: Cart Tricks	I can: -combine my knowledge of magnetism, gravity, and wheels and axles(motion) to create a cart trick.
Performance Tasks: interactive notebook Foss videos, graphic organizers, and student resource book completion of rubric	Notes: design of a successful cart with limited supplies testing carts for best design designing a cart trick
End of Unit Engineering and Design tied into cart building and magic trick.	

Unit Name: **Water and Climate**	**Length:** 12 weeks
Standards: *I can discuss typical weather conditions expected during a particular season. *I can read about and understand information to describe climates in different regions of the world. *I can sate how the design of building/structure reduces the impact of a weather-related hazard.	**Outcomes:** Earth's water impacts weather, climate, and people including causing hazards.
Essential Questions: How does the Earth's water affect climate, weather, and the people who live in certain areas?	**Learning Targets:** Students will understand the Earth's water and its forms. Students will understand the water cycle and its importance to weather and climate. Students will learn the difference between weather and climate as well as track weather info. Students will use what they know about severe weather and its effect on people to design a system against floods.
Topic 1: **Water Observations**	**Length:** 4 weeks
Standard(s): *I can sate how the design of building/structure reduces the impact of a weather-related hazard.	**Academic Vocabulary:** absorb, repel, interact, properties, slope, surface tension
Lesson Frame: Drops of Water	I can -understand the different properties of water. -observe how water acts on different surfaces. -relate what I have learned to water flow in nature.
Lesson Frame: Water on a Slope	I can -observe how water acts on a slope. -relate what I have learned to water flow in nature. -predict the shape of water as it flows after noticing patterns in water movement.
Lesson Frame: Water in Nature	I can -collect samples and record action of water on natural surfaces.
Performance Tasks: interactive notebook Foss videos, graphic organizers, and student resource book completion of rubric	Notes: Hands on learning: Water actions on Diff. Surfaces Water domes and the shape of water Water on slopes Outdoor Observation of water in nature
Topic 2: **Hot Water, Cold Water** (section 3,4,5)	**Length:** 4 weeks
Standard(s): *I can read about and understand information to describe climates in different regions of the world.	**Academic Vocabulary:** sink, float, liquid, solid, gas, density
Lesson Frame: Sinking and Floating	I can -explain why things sink and float.

Lesson Frame: Water as Ice	I can -name the 3 states of water (matter) and describe how/why water turns to a solid (ice).
Lesson Frame: Ice Outdoors	I can -describe how temperature affects water and animals. -reason how animals can stall alive in cold climates.
Performance Tasks: interactive notebook Foss videos, graphic organizers, and student resource book completion of rubric	Notes: Hands on Activities include: Using colored water of diff temps to see how it affects sinking and floating Compare the density of water and ice Explore putting ice in diff places outdoors(including burying it) to see how it is affected.
Topic 3: **Weather and Water** (parts 2,5, and supplemental materials on water cycle)	**Length:** 4 weeks
Standard(s): *I can discuss typical weather conditions expected during a particular season. *I can read about and understand information to describe climates in different regions of the world.	**Academic Vocabulary:** evaporate, condensation, precipitation, water vapor
Lesson Frame: Evaporation	I can -explain the process of evaporation. -record the effects of variables like temp. on speed of evap.
Lesson Frame: Condensation	I can -define condensation and the conditions needed to make it happen.
Lesson Frame: Water Cycle	I can -draw and label a diagram of the water cycle as well as explain it.
Performance Tasks: interactive notebook Foss videos, graphic organizers, and student resource book completion of rubric	Notes: Hands on Activities Include: Paper towel evaporation activity Making condensation on beverages of diff temps. Make a water cycle in a bag
Topic 4: **Seasons and Climate** (Foss kit and supplemental activities from Weather Unit Purchased)	**Length:** 3 weeks
Standard(s): *I can discuss typical weather conditions expected during a particular season. *I can read about and understand information to describe climates in different regions of the world.	**Academic Vocabulary:** climate, weather, season, typical, embankment, sluice
Lesson Frame: Seasonal Weather	I can -describe the role of the sun in weather. -review data on historical weather in our area and notice patterns.
Lesson Frame: Describing Climate	I can -describe the difference between climate and weather. -name different climates and the regions they are located in relation to the equator.

Lesson Frame: Weather Related Hazards	I can -describe some damage that weather can cause. -show ways that people currently deal with weather damage.
Performance Tasks: supplemental unit materials Unit on Weather from TPT interactive notebook Foss videos, graphic organizers, and student resource book completion of rubric	Notes: Hands on Activities include: Group data analysis Design a way to help stop flooding of a Lego house with limited materials using knowledge of water
*End of Unit Engineering and Design: Create a boat that floats from limited materials, design, improve your design, and restructure a boat that shows you have knowledge of sinking, floating, and density.	

Unit Name: **Structures of Life**	**Length:** 12 weeks
Standards(s): *I can draw and label models of lifecycles. *I can explain how an organism's behaviors help them grow, and reproduce. *I can understand how an animal and its traits are influenced by its environment. *I can examine how adaptations help plants and animals survive. *I can examine how fossils teach us about animals and their environments from long ago.	**Outcomes:** All living things are affected by their environment which changes over time.
Essential Questions: How does an organism's environment affect how it grows, reproduces, and survives?	**Learning Targets:** *Students note living things have needs and they grow and change. *Living things change due to their environment. *Students can describe how characteristics or living things help it mate, reproduce, and survive.
Topic 1: **Origin of Seeds**	**Length:** 4 weeks
Standard(s): *I can draw and label models of lifecycles. *I can explain how an organism's behaviors help them grow and reproduce. *I can explain how adaptations help plants and animals survive.	**Academic Vocabulary:** germinate, reproduce, embryo, disperse, seedling
Lesson Frame: Seed Search	I can -name the parts of a bean seed and see what happens when water is added to a seed. -look at and compare different kinds of seeds and their characteristics. -define what parts of a plant help it reproduce.
Lesson Frame:Seed soak/sprout (combined)	I can -describe what a plant needs from its environment to reproduce.
Lesson Frame: Seed Dispersal	I can -I can explain how a plants adaptations help it disperse in order to reproduce.
Performance Tasks: interactive notebook Foss videos, graphic organizers, and student resource book completion of rubric seed hunt outdoors	Notes: Hands on activities: seed exploration of different seeds and outdoor search seed soak and sprout
Topic 2: **Meet the Crayfish**	**Length:** 4 weeks
Standard(s): *I can explain how an organism's behaviors help them grow, and reproduce. *I can understand how an animal and its traits are influenced by its environment. *I can examine how adaptations help plants and animals survive.	**Academic Vocabulary:** adaptation, behavior, territory, structure, function

Lesson Frame: Crayfish Structures	I can -I can describe and label crayfish structures and talk about their purpose.
Lesson Frame: Adaptation/Behavior combined	I can -describe and define adaptation as associated with crayfish. -find and apply knowledge of crayfish adaptations to other species. -describe and view how a crayfish's behavior helps it survive in its territory.
Lesson Frame: Compare crayfish and other animals	I can -compare what I have learned about crayfish structures and apply it to other animals.
Performance Tasks: interactive notebook Foss videos, graphic organizers, and student resource book completion of rubric seed hunt outdoors	Notes: Hands on activities: seed hunt walk outdoors handling live crayfish sprouting and taking apart bean seeds online games "Crayfish vs. Snail vs. Mantis ***FIELD TRIP TO CENTRAL WISCONSIN ENVIR. STATION FOR: ANIMAL ADAPTATIONS EXPLORATION
Topic 3: **Human and Dino bodies**	Length: 4 weeks
Standard(s): *I can examine how fossils teach us about animals and their environments from long ago.	**Academic Vocabulary:** function, inherit, skeleton
Lesson Frame: Counting Bones	I can -describe the function of a skeleton and some are in the inside and some outside. -be familiar with human and animal bones.
Lesson Frame: Joints and Muscles	I can -describe how our skeleton supports us but we need joints and muscles to help us move.
Lesson Frame: Dino Bones see TE pg 301 and SB pg 81 **supplemental materials also needed	I can -list what dinosaur bones can tell us about them.
Performance Tasks: interactive notebook Foss videos, graphic organizers, and student resource book completion of rubric	Notes: Fossil exploration taping joints leg model Mr. Bones puzzle
* End of unit Engineering and Design Project: Make an imaginary animal and describe its environment. Use your knowledge of adaptations and growth, survival etc. to create a realistic critter that has structures to help it grow, reproduce, and survive in its environment.	