

Science: Grade 6 Advanced

UNIT/Weeks	Timeline/Topics	Essential Questions
5	<p><u>Growth, Development, & Reproduction of Organisms</u></p> <ul style="list-style-type: none"> • Growth of Organisms • Development of Organisms • Reproduction of Organisms • Cause-and-Effect Relationships 	<ul style="list-style-type: none"> • What influences the growth and development of an organism? • How do characteristic animal behaviors and specialized plant structures affect the probability of successful reproduction of animals and plants, respectively? • How do environmental and genetic factors influence the growth of organisms?
5	<p><u>Selection and Adaptation</u></p> <ul style="list-style-type: none"> • Genetic Variation • Natural Selection • Artificial Selection / Selective Breeding • GMOs 	<ul style="list-style-type: none"> • How can changes to the genetic code increase or decrease an individual's chances of survival? • How can the environment affect natural selection? • Are Genetically Modified Organisms (GMO) safe to eat?
5	<p><u>Matter and Energy in Organisms and Ecosystems</u></p> <ul style="list-style-type: none"> • Ecosystems • Biotic & Abiotic Factors • Food Webs • Producers, Consumers, and Decomposers 	<ul style="list-style-type: none"> • How and why do organisms interact with their environment and what are the effects of these interactions?
5	<p><u>Interdependent Relationships in Ecosystems</u></p> <ul style="list-style-type: none"> • Interdependent Relationships • Endangered Species • Biodiversity 	<ul style="list-style-type: none"> • What happens to ecosystems when the environment changes?
4	<p><u>Human Impact</u></p> <ul style="list-style-type: none"> • Recycling • Fossil Fuel • Renewable Fuel 	<ul style="list-style-type: none"> • How do we monitor the health of the environment (our life support system)? • Is it possible to predict and protect ourselves from natural hazards?

		<ul style="list-style-type: none"> • How does the biosphere affect other systems?
5	<p><u>Interactions of Matter</u></p> <ul style="list-style-type: none"> • States of Matter • Substance Properties • Thermal Reactions • Synthetic Materials 	<ul style="list-style-type: none"> • How can we tell what molecules are doing in a substance? • How can we trace synthetic materials back to natural ingredients?
5	<p><u>Types of Interactions</u></p> <ul style="list-style-type: none"> • Types of Interactions • Electric Forces • Magnetic Forces • Gravitational Forces 	<ul style="list-style-type: none"> • Can you apply a force on something without touching it? • How does a Maglev train work? • If I were able to eliminate air resistance and dropped a feather and a hammer at the same time, which would land first?
1	<p><u>GEF Water Quality</u></p> <ul style="list-style-type: none"> • Water Quality Tests • pH Test • Nitrates • Temperature • Turbidity 	<ul style="list-style-type: none"> • How do I know if water is safe to drink, clean dishes and cook, or use to wash clothes? • How does a water system maintain balance?
1	<p><u>GEF Waste Reduction</u></p> <ul style="list-style-type: none"> • Recycling • Importance and Uses of Composting • Value of Paper, Metals and Glass Recycling 	<ul style="list-style-type: none"> • How do our choices today impact tomorrow? • Why is recycling important?