

Advanced Science: Grade 5

UNIT/Weeks	Timeline/Topics	Essential Questions
1	<p><u>Structures and Properties of Matter</u></p> <ul style="list-style-type: none"> • Matter's Structure • Matter's Properties • Metals and Nonmetals 	<ul style="list-style-type: none"> • How are the particles in matter organized? • How do the particles in matter affect its properties? • What are some properties of metals and nonmetals?
2	<p><u>Physical and Chemical Changes</u></p> <ul style="list-style-type: none"> • Physical Changes • Mixtures and Solutions • Chemical Changes 	<ul style="list-style-type: none"> • What happens to the amount of matter when it changes state? • What happens when different types of matter are mixed? • How does matter change when it interacts with other matter?
3	<p><u>Plant and Animal Needs</u></p> <ul style="list-style-type: none"> • Plants and Photosynthesis • Animals and Cellular Respiration • Plants and Cellular Respiration 	<ul style="list-style-type: none"> • What do plants need to survive? • How do animals get energy from food? • How do plants use energy?
4	<p><u>Matter in Ecosystems</u></p> <ul style="list-style-type: none"> • Interactions of Living Things • Balance in Ecosystems • Cycles in Ecosystems 	<ul style="list-style-type: none"> • How does energy flow in an ecosystem? • How do changes affect ecosystems? • How is matter cycled through ecosystems?
5	<p><u>Interactions of Earth's Major Systems</u></p> <ul style="list-style-type: none"> • Earth's Major System • Effects of the Geosphere • Effects of the Hydrosphere • Effects of the Atmosphere • Effects of the Biosphere 	<ul style="list-style-type: none"> • How do scientists define Earth's major systems? • How does the geosphere affect other systems? • How does the hydrosphere affect other systems? • How does the atmosphere affect other systems? • How does the biosphere affect other systems?

6	<p><u>GEF Green Packaging</u></p> <ul style="list-style-type: none"> • Waste Reduction • Recycling • Reusing 	<ul style="list-style-type: none"> • What affect does trash have on the environment? • What does it mean to "be green" and "shop green"? • How can I reduce the amount of trash I create?
7	<p><u>The Solar System and Beyond</u></p> <ul style="list-style-type: none"> • Movements of the Sun, Earth, and the Moon • Patterns of the Moon • Objects in Space • Stars and Star Patterns 	<ul style="list-style-type: none"> • How do the Sun, Earth, and the Moon interact? • What causes the repeating patterns of the Moon's appearance? • What other objects can be found in space? • What are stars, and why are some stars brighter than others?