

Mendham Township Elementary School Science Curriculum

Units & Essential Questions

L= Life Science E= Earth Science
P= Physical Science

MTES= Mendham Twp. Elementary Developed Unit
MTMS= Mendham Twp. Middle Developed Unit

FOSS= Full Option Science
DSM= Delta Science Module
STC= Science & Tech Concepts

<i>Kindergarten</i>	<i>Grade 1</i>	<i>Grade 2</i>
<p>Trees (E,L- FOSS, throughout year, 3-4 lessons per quarter, Oct, Feb, April, June)</p> <ul style="list-style-type: none"> • What are the identifiable structures of trees and what are the functions of these structures? • What are the basic needs of trees? • How do trees serve as resources for humans and other animals? • How do trees change through the seasons? <p>Healthy Bodies (L-MTES, 6-8 lessons)</p> <ul style="list-style-type: none"> • How do healthy bodies grow and change over time? • Which foods are needed for healthy body growth and development? • How does exercise and rest affect healthy body growth and development? • How does good hygiene help body growth and development? <p>Sunshine and Shadows (P,E-DSM, 7 lessons)</p> <ul style="list-style-type: none"> • How can shadows be produced? • How can shadows change their physical properties? • How do shadows change position during the course of a day? <p>Wood/Paper (P-FOSS, 8-10 weeks)</p> <ul style="list-style-type: none"> • What are the observable properties of wood and paper? • How do the properties of different types of wood compare? • How do a material's properties determine its use? • How can wood and paper be altered to change its use? 	<p>Balance and Motion (P-FOSS, 8-10 weeks)</p> <ul style="list-style-type: none"> • How can balanced systems be created? • What variables influence and/or determine motion? • How can rotational motion be produced? <p>Pebbles/Sand/Silt (E-FOSS, 8-10 weeks)</p> <ul style="list-style-type: none"> • How do rocks vary? • How can the properties of rocks be used to sort and categorize them? • How do the properties of rocks determine their usage? • How does the composition of soil affect its ability to support plant growth? <p>Staying Healthy (L-MTES, 6-8 lessons)</p> <ul style="list-style-type: none"> • What are germs? • How are germs spread? • How can we prevent germs from spreading? • Why do we want to prevent germs from spreading? <p>Organisms (L-STC, DSM 8-10 weeks)</p> <ul style="list-style-type: none"> • What characteristics determine if something is living or nonliving? • What characteristics are shared by most living things? • What are the basic needs of all living things? • How are the needs of plants and animals similar and how are they different? • How do organisms meet their needs in different environments and/or habitats? • How do offspring resemble their parents? 	<p>Human Body (L-FOSS, 8-10 weeks)</p> <ul style="list-style-type: none"> • How does the human body move? • How do the shape and position of bones and muscles enhance movement? • How do the skeletal and muscular systems work together to create coordinated movement? • How do the bones and muscles of humans compare to those of other mammals? <p>Solids, Liquids (P-FOSS, 8-10 weeks)</p> <ul style="list-style-type: none"> • What are the identifying properties of solids and liquids? • How do solids and liquids behave when they interact with one another? • How can solid and liquid material be separated? <p>Air and Weather (E-FOSS, 8-10 weeks)</p> <ul style="list-style-type: none"> • What are the properties of air? • How does air affect weather? • What are the components of weather? • How can weather patterns be predicted? • How do weather patterns vary seasonally? • How does the bright appearance of the moon change over time? • How do the sun and moon appear to move in the sky? <p>Fossils: Evidence of Extinct Organisms (E,L-MTES, 2-3 weeks)</p> <ul style="list-style-type: none"> • How do we know organisms that no longer live on Earth once existed? • What information can we learn from fossils?

Grade 3

Forms of Energy; Heat, Light & Sound (P-DSM, 6-8 weeks)

- In what familiar forms does energy present itself?
- How do heat, light, and sound travel?
- How does the medium in which energy passes through affect the characteristics of heat, light, and sound?

Digestive System (L-MTES, 4 weeks)

- How is food broken down and used by the body?
- Which foods are needed for healthy body growth and development?

Solar System (E- DSM, 8 weeks)

- What objects make up the solar system?
- How do bodies move within the solar system?
- What causes day, night, and seasonal changes?
- How does the apparent size of the body related to distance?

Earth Materials (E-FOSS, 8-10 weeks)

- How can rocks be broken down into their mineral components?
- How can the properties of minerals be used to sort and classify earth minerals?

Plant and Animal Life Cycles (L-DSM, 8 weeks)

- What are the basic needs for survival for living organisms?
- How do plants and animals change during their life cycles?
- How does an organism's structure help it adapt to its environment?

Food Chains and Webs (L-DSM, 8 weeks)

- How do living things interact in an ecosystem?
- How is energy transferred to organisms in an ecosystem?
- What role do plants and animals play in a food web?
- How do ecosystems change?

Grade 4

Landforms (E-FOSS, 8-10 weeks)

- How do slow processes such as erosion and deposition, shape and reshape the Earth's surface?
- How do rapid processes such as landslides, volcanic eruptions, and earthquakes shape and reshape the Earth's surface?
- How can two-dimensional maps be used to represent three-dimensional earth features

Respiratory and Circulatory Systems

(L-MTES, 2-3 weeks)

- How do the respiratory and circulatory function interdependently?
- What are the main organs and tissues involved in the circulatory and respiratory systems?

Space Science (E-Carolina, 3-4 weeks, 9 lessons)

- How does the earth move throughout the day?
- How does the earth move throughout the year?
- Why do we see different phases of the moon?
- What causes solar and lunar eclipses?

Water (E-FOSS, 8-10 weeks)

- What are the properties of water and how do these properties affect water's interaction with other materials?
- How does heat affect water?
- How can water be used to do work?
- How do human requirements affect water quality?

Magnetism and Electricity (P-FOSS, 8-10 weeks)

- What variables influence the force of attraction or repulsion between two magnets?
- How can the presence of a magnet be detected?
- How does electricity flow through a system?
- What materials permit the flow of electricity?
- How can electricity be used to produce heat, light, sound and magnetic effects?