

FSSD Syllabus for Science FMS

Freedom Middle School

8th Grade

Instructional pacing guides for English Language Arts, Mathematics, Science, and Social Studies are available online at the FSSD website, which conveys detailed information by quarter. Please access these instructional resources at fssd.org/teacher-information/curriculum/

1st Quarter

Standards/Objectives: https://www.tn.gov/assets/entities/education/attachments/std_sci_gr_8.pdf

SPI 0808.Inq.1	Inquiry	Design a simple experimental procedure with an identified control and appropriate variables.
SPI 0808.Inq.2	Inquiry	Select tools and procedures needed to conduct a moderately complex experiment.
GLE 0807.9.1	Properties of Matter	Understand that all matter is made up of atoms.
GLE 0807.9.2	Properties of Matter	Explain that matter has properties that are explained by the structure and arrangement of its atoms.
GLE 0807.9.3	Properties of Matter	Interpret data from an investigation to differentiate between physical and chemical changes.
GLE 0807.9.6	Properties of Matter	Use the periodic table to determine the characteristics of an element.
GLE 0807.9.4	Interactions of Matter	Distinguish among elements, compounds, and mixtures.

Topics covered: {bullet topics here}

1. Science Processes (embedded standards)
 - a. Scientific Method
 - b. Engineering Design
 - c. Measurement
2. Properties of Matter
 - a. Atomic Structure
 - b. Physical and Chemical Properties/Changes
 - c. Elements/ Compounds/ Mixtures

Major assignments:

- 1) Unit Common Assessments
- 2) Extended Activity or Projects
- 3) Additional reading and/ or projects may be assigned for honors classes.

Field trips (if applicable): N/A

2nd Quarter

Standards/Objectives: https://www.tn.gov/assets/entities/education/attachments/std_sci_gr_8.pdf

GLE 0807.9.5	Interactions of Matter	Apply the chemical properties of the atmosphere to illustrate a mixture of gases.
GLE 0807.9.7	Interactions of Matter	Explain the Law of Conservation of Mass.
GLE 0807.9.8	Interactions of Matter	Interpret the events represented by a chemical equation.
GLE 0807.9.9	Interactions of Matter	Explain the basic difference between acids and bases.
GLE 0807.9.3	Properties of Matter	Interpret data from an investigation to differentiate between physical and chemical changes.
GLE 0807.9.6	Properties of Matter	Use the periodic table to determine the characteristics of an element.

Topics covered: {bullet topics here}

1. Periodic Table
 - a. Characteristics of Elements
 - b. Organization of Periodic Table
2. Chemistry
 - a. Parts of a Chemical Equation
 - b. Law of Conservation of mass
 - c. Chemical Changes
 - d. Acids/ Bases

Major assignments:

- 1) Unit Common Assessments
- 2) Extended Activity or Projects
- 3) Additional reading and/ or projects may be assigned for honors classes.

Field trips (if applicable): N/A

3rd Quarter

Standards/Objectives: https://www.tn.gov/assets/entities/education/attachments/std_sci_gr_8.pdf

GLE 0807.12.1	Magnetism	Investigate the relationship between magnetism and electricity.
GLE 0807.12.2	Magnetism	Design an investigation to change the strength of an electromagnet.
GLE 0807.12.3	Magnetism	Compare and contrast the Earth's magnetic field to that of a magnet and an electromagnet.
GLE 0807.12.4	Gravity	Identify factors that influence the amount of gravitational force between objects.
GLE 0807.12.5	Gravity	Recognize that gravity is the force that controls the motion of objects in the solar system.

Topics covered: {bullet topics here}

1. Gravity
 - a. Gravitational Force
 - b. Role of Gravity in Solar System
2. Magnetism
 - a. Magnetic Properties
 - b. Electromagnetism
 - c. Magnetic Fields

Major assignments:

- 1) Unit Common Assessments
- 2) Extended Activity or Projects
- 3) Additional reading and/ or projects may be assigned for honors classes.

Field trips (if applicable): N/A

4th Quarter

Standards/Objectives: https://www.tn.gov/assets/entities/education/attachments/std_sci_gr_8.pdf

GLE 0807.5.6	Evidence of Change	Investigate fossils in sedimentary rock layers to gather evidence of changing life forms.
GLE 0807.5.3	Adaptation	Analyze how structural, behavioral, and physiological adaptations affect an organism's ability to survive in a particular environment.
GLE 0807.5.4	Adaptation	Explain why variation within a population can enhance the chances for group survival.
GLE 0807.5.1	Diversity	Identify various criteria used to classify organisms into groups.
GLE 0807.5.2	Diversity	Use a simple classification key to identify a specific organism.
GLE 0807.5.5	Diversity	Describe the importance of maintaining the earth's biodiversity.

Topics covered: {bullet topics here}

1. Biodiversity
 - a. Classification
 - b. Classification Keys
 - c. Maintaining Biodiversity
2. Adaptation
 - a. Types of Adaptation
 - b. Adaptation for survival
3. Relative Dating

Major assignments:

- 1) Unit Common Assessments
- 2) Extended Activity or Projects
- 3) Additional reading and/ or projects may be assigned for honors classes.

Field trips (if applicable): N/A

* For students who have IEPs, please refer to their specific goals.

Procedures for Parental Access for Instructional Materials:

1) Many instructional materials can be accessed digitally via the FSSD website (fssd.org) using your student's unique username and password.

a. [Student Resources](#): FSSD website > Parents & Students > Parent Information > Online Resources > Student

b. [Parent Resources](#): FSSD website > Parents & Students > Parent Information > Online Resources > Parent

2) If additional information is needed regarding instructional materials, a written request may be submitted to your child's teacher. Instructional material review is included in [Board Policy 4.400](#).