FSSD Syllabus for Science FMS

Freedom Middle School
7th 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:
*SPI 0707.Inq.1 Design a simple experimental procedure with an identified control and appropriate variables.
*SPI 0707.Inq.2 Select tools and procedures needed to conduct a moderately complex experiment.
*SPI 0707.Inq.3 Interpret and translate data in a table, graph, or diagram.
*SPI 0707.Inq.4 Draw a conclusion that establishes a cause and effect relationship supported by evidence.
*SPI 0707.Inq.5 Identify a faulty interpretation of data that is due to bias or experimental error.
*SPI 0707.T/E.1 Identify the tools and procedures needed to test the design features of a prototype.
*SPI 0707.T/E.2 Evaluate a protocol to determine if the engineering design process was successfully applied.
*SPI 0707.T/E.3 Distinguish between the intended benefits and the unintended consequences of a new technology.
*SPI 0707.T/E.4 Differentiate between adaptive and assistive engineered products (e.g., food, biofuels, medicines, integrated pest management).
SPI 0707.7.1 Use a table of physical properties to classify minerals.
SPI 0707.7.2 Label a diagram that depicts the three different rock types.
SPI 0707.7.3 Identify the major processes that drive the rock cycle.

Topics covered:

- Processes of Science
- Rocks and Minerals

Major assignments:

1) Science Process Assessment
2) Extended Activity
3) Additional reading and/or projects may be assigned for honors classes

Field trips (if applicable):N/A

2nd Quarter

Standards/Objectives:
SPI 0707.7.4 Differentiate among the characteristics of the earth's three layers.
SPI 0707.7.5 Recognize that lithospheric plates on the scale of continents and oceans continually move at rates of centimeters per year.
SPI 0707.7.6 Describe the relationship between plate movements and earthquakes, mountain building, volcanoes, and seafloor spreading.
SPI 0707.7.7 Analyze and evaluate the impact of man's use of earth's land, water, and atmospheric resources.
SPI 0707.11.3 Apply proper equations to solve basic problems pertaining to distance, time, speed, and velocity.

Topics covered:

- Layers of the Earth
- Plate Tectonics
- Earth's Resources
- Calculating Speed and Velocity

Major assignments:

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

Field trips (if applicable):N/A

3rd Quarter

Standards/Objectives:
SPI 0707.11.4 Identify and explain how Newton's laws of motion relate to the movement of objects.
SPI 0707.11.1 Differentiate between the six simple machines.
SPI 0707.11.2 Determine the amount of force needed to do work using different simple machines.
SPI 0707.11.5 Compare and contrast the different parts of a wave.
SPI 0707.11.6 Differentiate between transverse and longitudinal waves in terms of how they are produced and transmitted.

Topics covered:

- Newton's Laws of Motion
- Simple Machines
- Types and Parts of a Wave

Major assignments:

1) Unit Common Assessment

2) Extended Activity
3) Additional reading and/or projects may be assigned for honors classes

Field trips (if applicable):N/A

4th Quarter

Standards/Objectives:
SPI 0707.1.2 Interpret a chart to explain the integrated relationships that exist among cells, tissues, organs, and organ systems.
SPI 0707.1.1 Identify and describe the function of the major plant and animal cell organelles.
SPI 0707.1.3 Explain the basic functions of a major organ system.
SPI 0707.1.5 Explain how materials move through simple diffusion.
SPI 0707.1.4 Sequence a series of diagrams that depict chromosome movement during plant cell division.
SPI 0707.3.1 Compare the chemical compounds that make up the reactants and products of photosynthesis and respiration.
SPI 0707.3.2 Interpret a diagram to explain how oxygen and carbon dioxide are exchanged between living things and the environment.
SPI 0707.4.1 Classify methods of reproduction as sexual or asexual.
SPI 0707.4.2 Match flower parts with their reproductive functions.
SPI 0707.4.3 Describe the relationship among genes, chromosomes, and inherited traits.
SPI 0707.4.4 Interpret a Punnett square to predict possible genetic combinations passed from parents to offspring during sexual reproduction.

Topics covered: {bullet topics here}
- Cells and organization of living things
- Processes of cells
- Reproduction and heredity

Major assignments:
1) Unit Common Assessment
2) Extended Activity
3) Additional reading and/or projects may be assigned for honors classes

Field trips (if applicable):N/A

*** indicates an Embedded Standard that will be readdressed throughout the year**

*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.