

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 <https://fssd.org/pacing-guides/>.

1st Quarter Standards/Objectives		
8.LS4.1	Biological Change	Analyze and interpret data for patterns in the fossil record that document the existence, diversity, extinction, and change in life forms throughout Earth’s history.
8.LS4.2	Biological Change	Construct an explanation addressing similarities and differences of the anatomical structures and genetic information between extinct and extant organisms using evidence of common ancestry and patterns between taxa.
7.LS1.6	From Molecules to Organisms: Structures and Processes	Develop an argument based on empirical evidence and scientific reasoning to explain how behavioral and structural adaptations in animals and plants affect the probability of survival and reproductive success.
7.LS3.1	Heredity	Hypothesize that the impact of structural changes to genes (i.e., mutations) located on chromosomes may result in harmful, beneficial, or neutral effects to the structure and function of the organism.
8.LS4.3	Biological Change	Analyze evidence from geology, paleontology, and comparative anatomy to support that specific phenotypes within a population can increase the probability of survival of that species and lead to adaptation.
8.LS4.4	Biological Change	Develop a scientific explanation of how natural selection plays a role in determining the survival of a species in a changing environment.
Topics covered: <i>{bullet topics here}</i> • •		Major assignments: 1) Unit Common Assessments 2) Extended Activity or Projects 3) Additional reading and/ or projects may be assigned for honors classes.

Second Quarter

**Franklin Special School District
2020-2021
Grade 8 Science**

8.ESS2.1	Earth's Systems	Analyze and interpret data to support the assertion that rapid or gradual geographic changes lead to drastic population changes and extinction events.
8.ESS2.3	Earth's Systems	Describe the relationship between the processes and forces that create igneous, sedimentary, and metamorphic rocks.
8.ESS2.2	Earth's Systems	Evaluate data collected from seismographs to create a model of Earth's structure.
8.ESS2.4	Earth's Systems	Gather and evaluate evidence that energy from the earth's interior drives convection cycles within the asthenosphere which creates changes within the lithosphere including plate movements, plate boundaries, and sea-floor spreading.
8.ESS2.5	Earth's Systems	Construct a scientific explanation using data that explains the gradual process of plate tectonics accounting for A) the distribution of fossils on different continents, B) the occurrence of earthquakes, and C) continental and ocean floor features (including mountains, volcanoes, faults, and trenches).
8.ESS3.1	Earth and Human Activity	Interpret data to explain that earth's mineral, fossil fuel, and groundwater resources are unevenly distributed as a result of geological processes.
8.ESS3.2	Earth and Human Activity	Collect data, map, and describe patterns in the locations of volcanoes and earthquakes related to tectonic plate boundaries, interactions, and hotspots.
Topics covered: <i>{bullet topics here}</i> <ul style="list-style-type: none"> ● ● 		Major assignments: 1) Unit Common Assessments 2) Extended Activity or Projects 3) Additional reading and/ or projects may be assigned for honors classes.

**Franklin Special School District
2020-2021
Grade 8 Science**

3rd Quarter Standards/Objectives: Standards/Objectives: https://www.tn.gov/assets/entities/education/attachments/std_sci_gr_8.pdf		
8.PS2.2	Motion and Stability: Forces and Interactions	Conduct an investigation to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.
8.PS2.3	Motion and Stability: Forces and Interactions	Create a demonstration of an object in motion and describe the position, force, and direction of the object.
8.PS2.4	Motion and Stability: Forces and Interactions	Plan and conduct an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object.
8.PS2.5	Motion and Stability: Forces and Interactions	Evaluate and interpret that for every force exerted on an object there is an equal force exerted in the opposite direction.
8.PS2.1	Motion and Stability: Forces and Interactions	Design and conduct investigations depicting the relationship between magnetism and electricity in electromagnets, generators, and electrical motors, emphasizing the factors that increase or diminish the electric current and the magnetic field strength.
8.PS2.2	Motion and Stability: Forces and Interactions	Conduct an investigation to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact.
8.PS4.1	Waves and their applications in Technology for Information Transfer	Develop and use models to represent the basic properties of waves including frequency, amplitude, wavelength, and speed.
8.PS4.2	Waves and their applications in Technology for Information Transfer	Compare and contrast mechanical waves and electromagnetic waves based on refraction, reflection, transmission, absorption, and their behavior through a vacuum and/or various media.
3rd Quarter Standards/Objectives: (continued) Standards/Objectives: https://www.tn.gov/assets/entities/education/attachments/std_sci_gr_8.pdf		

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8.PS4.3	Waves and their applications in Technology for Information Transfer	Evaluate the role that waves play in different communication systems.
8.ETS1.1	Engineering Design	Develop a model to generate data for ongoing testing and modification of an electromagnet, a generator, and a motor such that an optimal design can be achieved.
Topics covered: <i>{bullet topics here}</i>		Major assignments: 1) Unit Common Assessments 2) Extended Activity or Projects 3) Additional reading and/ or projects may be assigned for honors classes.

4th Quarter

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

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8.ESS1.1	Earth's place in the Universe	Research, analyze, and communicate that the universe began with a period of rapid expansion using evidence from the motion of galaxies and composition of stars.
8.ESS1.2	Earth's place in the Universe	Explain the role of gravity in the formation of our sun and planets. Extend this explanation to address gravity's effect on the motion of celestial objects in our solar system and Earth's ocean tides.
8.ETS1.2	Engineering Design	Research and communicate information to describe how data from technologies (telescopes, spectrosopes, satellites, and space probes) provide information about objects in the solar system and universe.
7.ETS2.1	Links Among Engineering, Technology, and Applications of Science	Examine a problem from the medical field pertaining to biomaterials and design a solution taking into consideration the criteria, constraints, and relevant scientific principles of the problem that may limit possible solutions.
7.LS3.3	Heredity: Inheritance and Variation of Traits	Predict the probability of individual dominant and recessive alleles to be transmitted from each parent to offspring during sexual reproduction and represent the phenotypic and genotypic patterns using ratios.
7.LS1.7	From Molecules to Organisms: Structures and Processes	Evaluate and communicate evidence that compares and contrasts the advantages and disadvantages of sexual and asexual reproduction.
7.LS3.2	Heredity: Inheritance and Variation of Traits	Distinguish between mitosis and meiosis and compare the resulting daughter cells.
Topics covered: <i>{bullet topics here}</i>		Major assignments: 1) Unit Common Assessments 2) Extended Activity or Projects 3) Additional reading and/ or projects may be assigned for honors classes.