

## 6<sup>th</sup> Grade TEKS Year-at-a-Glance

*This year-at-a-glance is designed to cover 150 school days. Use your local guidelines to determine how to address the standards in the time you have.*

### **Unit 0: Back-to-School (5 days)**

### **Unit 1: Properties of Matter (16 days)**

- 6.6B - Pure Substances & Mixtures
- 6.6A - Matter & Kinetic Energy
- 6.6D - Comparing Density

### **Unit 2: Periodic Table & Chemical Changes (12 days)**

- 6.6C - Classify Elements
- 6.6E - Evidence of Chemical Changes

### **Unit 3: Force & Motion (16 days)**

- 6.7A - Forces in the Real-World
- 6.7B - Calculating Net Force
- 6.7C - Newton's Third Law of Motion

### **Unit 4: Energy (13 days)**

- 6.8A - Compare & Contrast Energies
- 6.8B - Energy Transformation in Systems

### **Unit 5: Waves (7 days)**

- 6.8C - Energy of Waves

### **Unit 6: Seasons & Tides (13 days)**

- 6.9A - Modeling Earth's Tilt & Seasons
- 6.9B - Predicting Tides

### **Unit 7: Earth Science (15 days)**

- 6.10A - Differentiate Between Earth's Spheres
- 6.10B - Modeling Layers of the Earth
- 6.10C - Processes in the Rock Cycle

### **Unit 8: Energy Resources (12 days)**

- 6.11A - Resource Management
- 6.11B - Managing Energy Resources

### **Unit 9: Organisms (10 days)**

- 6.13A - Development of Cell Theory
- 6.13B - Comparing Organisms

### **Unit 10: Ecosystems (21 days)**

- 6.12C - Hierarchy of Ecosystems
- 6.12A - Biotic & Abiotic Competition
- 6.12B - Ecological Relationships
- 6.13C - Variations & Survival

### **Unit 11: STEM Challenges (10 days)**

**Unit 0: Back-to-School**

We have several resources that can be used during the first week of class to engage students and build strong foundation skills. You can find these resources in the Beginning of the Year lesson collection.

- Back to School Escape Room
- Lab Safety Station Lab
- Lab Safety Escape Room
- Graphing Station Lab
- Graphing Escape Room
- Measurement Station Lab
- Measurement Escape Room
- Scientific Method Station Lab
- Scientific Method Escape Room
- Engineering Design Station Lab
- Engineering Design Escape Room

## Unit 1: Properties of Matter

### Content Standards:

- TEKS.6.6A - compare solids, liquids, and gases in terms of their structure, shape, volume, and kinetic energy of atoms and molecules
- TEKS.6.6B - investigate the physical properties of matter to distinguish between pure substances, homogeneous mixtures (solutions), and heterogeneous mixtures
- TEKS.6.6D - compare the density of substances relative to various fluids

### Suggested Recurring Themes:

- TEKS.6.5E - analyze and explain how energy flows and matter cycles through systems and how energy and matter are conserved through a variety of systems

### Suggested Science and Engineering Practices:

- TEKS.6.1B - use scientific practices to plan and conduct descriptive, comparative, and experimental investigations and use engineering practices to design solutions to problems
- TEKS.6.1G - develop and use models to represent phenomena, systems, processes, or solutions to engineering problems
- TEKS.6.2B - analyze data by identifying any significant descriptive statistical features, patterns, sources of error, or limitations
- TEKS.6.2D - evaluate experimental and engineering designs
- TEKS.6.3B - communicate explanations and solutions individually and collaboratively in a variety of settings and formats

### Key Vocabulary

- |                         |                  |
|-------------------------|------------------|
| • pure substance        | • kinetic energy |
| • element               | • solid          |
| • compound              | • liquid         |
| • homogeneous mixture   | • gas            |
| • heterogeneous mixture | • shape          |
| • solution              | • structure      |
| • solute                | • volume         |
| • solvent               | • density        |
| • atoms                 | • mass           |
| • molecules             | • volume         |

### Unit 1: Properties of Matter

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

Day 1	Day 2	Day 3	Day 4	Day 5
TEKS.6.6A Matter & Kinetic Energy Engagement  TEKS.6.6A - Matter & Kinetic Energy Station Lab - Input Stations	TEKS.6.6A Matter & Kinetic Energy Station Lab - Output Stations  TEKS.6.6A - Matter & Kinetic Energy Presentation and Paper INB	TEKS.6.6A Matter & Kinetic Energy Presentation and Paper INB	TEKS.6.6A Matter & Kinetic Energy Assessment	TEKS.6.6B Pure Substances & Mixtures Engagement  TEKS.6.6B - Pure Substances & Mixtures Station Lab - Input Stations
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.6.6B Pure Substances & Mixtures Station Lab - Output Stations	TEKS.6.6B Pure Substances & Mixtures Presentation and Paper INB	TEKS.6.6B - Pure Substances & Mixtures Student Choice	TEKS.6.6B Pure Substances & Mixtures Student Choice	TEKS.6.6B - Pure Substances & Mixtures Assessment
Day 11	Day 12	Day 13	Day 14	Day 15
TEKS.6.6D Density Amazing Anchors Part 1  TEKS.6.6D - Density Inquiry Lab	TEKS.6.6D Density Inquiry Lab  TEKS.6.6D - Comparing Density Presentation and Paper INB	TEKS.6.6D Comparing Density Presentation and Paper INB  TEKS.6.6D - Comparing Density WIKI Ticket	TEKS.6.6D Comparing Density Writing Prompt  TEKS.6.6D - Density Amazing Anchors Part 2	TEKS.6.6D Density Escape Room
Day 16				
TEKS.6.6D Comparing Density Assessment				

## Unit 2: Periodic Table & Chemical Changes

### Content Standards:

- TEKS.6.6C - identify elements on the periodic table as metals, nonmetals, metalloids, and rare Earth elements based on their physical properties and importance to modern life
- TEKS.6.6E - identify the formation of a new substance by using the evidence of a possible chemical change, including production of a gas, change in thermal energy, production of a precipitate, and color change

### Suggested Recurring Themes:

- TEKS.6.5E - analyze and explain how energy flows and matter cycles through systems and how energy and matter are conserved through a variety of systems
- TEKS.6.5G - analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems

### Suggested Science and Engineering Practices:

- TEKS.6.3A - develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories
- TEKS.6.3C - engage respectfully in scientific argumentation using applied scientific explanations and empirical evidence
- TEKS.6.4C - research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers

### Key Vocabulary

- metal
- nonmetal
- metalloid
- periodic table
- chemical reaction
- chemical change
- reactants
- products
- precipitate

## Unit 2: Periodic Table & Chemical Changes

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

Day 1	Day 2	Day 3	Day 4	Day 5
TEKS.6.6C Metals, Nonmetals, & Metalloids Amazing Anchors Part 1  TEKS.6.6C - Metals, Nonmetals, & Metalloids Inquiry Lab	TEKS.6.6C Metals, Nonmetals, & Metalloids Inquiry Lab	TEKS.6.6C Metals, Nonmetals, & Metalloids Inquiry Lab  TEKS.6.6C - Classify Elements Presentation and Paper INB	TEKS.6.6C Classify Elements Presentation and Paper INB  TEKS.6.6C - Metals, Nonmetals, & Metalloids WIKI Ticket	TEKS.6.6C Metals, Nonmetals, & Metalloids Science Reading Comprehension Passage  TEKS.6.6C Metals, Nonmetals, & Metalloids Amazing Anchors Part 2
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.6.6C Classify Elements Assessment	TEKS.6.6E Evidence of Chemical Changes Engagement  TEKS.6.6E - Evidence of Chemical Changes Station Lab - Input Stations	TEKS.6.6E Evidence of Chemical Changes Station Lab - Output Stations	TEKS.6.6E Evidence of Chemical Changes Inquiry Lab	TEKS.6.6E Evidence of Chemical Changes Presentation and IMB  TEKS.6.6E Chemical Changes WIKI Ticket
Day 11	Day 12			
TEKS.6.6E Chemical Changes Escape Room	TEKS.6.6E Evidence of Chemical Changes Assessment			

### Unit 3: Force & Motion

#### Content Standards:

- TEKS.6.7A - identify and explain how forces act on objects, including gravity, friction, magnetism, applied forces, and normal forces, using real-world applications
- TEKS.6.7B - calculate the net force on an object in a horizontal or vertical direction using diagrams and determine if the forces are balanced or unbalanced
- TEKS.6.7C - identify simultaneous force pairs that are equal in magnitude and opposite in direction that result from the interactions between objects using Newton's Third Law of Motion

#### Suggested Recurring Themes:

- TEKS.6.5B - identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems
- TEKS.6.5C - analyze how differences in scale, proportion, or quantity affect a system's structure or performance
- TEKS.6.5E - analyze and explain how energy flows and matter cycles through systems and how energy and matter are conserved through a variety of systems

#### Suggested Science and Engineering Practices:

- TEKS.6.1H - distinguish between scientific hypotheses, theories, and laws
- TEKS.6.2B - analyze data by identifying any significant descriptive statistical features, patterns, sources of error, or limitations
- TEKS.6.3A - develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories

#### Key Vocabulary

- force
- magnetism
- gravity
- friction
- applied force
- normal force
- balanced force
- unbalanced force
- net force
- vector
- motion
- magnitude
- Newton's third law of motion
- reaction
- action

**Unit 3: Force & Motion**

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>	<b>Day 4</b>	<b>Day 5</b>
TEKS.6.7A Forces in the Real-World Engagement  TEKS.6.7A Forces in the Real-World Station Lab - Input Stations	TEKS.6.7A Forces in the Real-World Station Lab - Output Stations	TEKS.6.7A Forces in the Real-World Presentation and Paper INB	TEKS.6.7A Forces in the Real-World Presentation and Paper INB	TEKS.6.7A Forces in the Real-World Assessment  TEKS.6.7B Net Force Amazing Anchors Part 1
<b>Day 6</b>	<b>Day 7</b>	<b>Day 8</b>	<b>Day 9</b>	<b>Day 10</b>
TEKS.6.7B Net Force Inquiry Lab	TEKS.6.7B Calculating Net Force Presentation and Paper INB  TEKS.6.7B Net Force WIKI Ticket	TEKS.6.7B Net Force Writing Prompt  TEKS.6.7B Net Force Amazing Anchors Part 2	TEKS.6.7B Net Force Escape Room	TEKS.6.7B Calculating Net Force Assessment
<b>Day 11</b>	<b>Day 12</b>	<b>Day 13</b>	<b>Day 14</b>	<b>Day 15</b>
TEKS.6.7C Newton's Third Law of Motion Engagement  TEKS.6.7C Newton's Third Law of Motion Station Lab - Input Stations	TEKS.6.7C Newton's Third Law of Motion Station Lab - Output Stations	TEKS.6.7C Newton's Third Law Inquiry Lab	TEKS.6.7C Newton's Third Law of Motion Presentation and Paper INB  TEKS.6.7C Newton's Third Law WIKI Ticket	TEKS.6.7C Newton's Third Law Science Reading Comprehension Passage
<b>Day 16</b>				
TEKS.6.7C Newton's Third Law of Motion Assessment				



## Unit 4: Energy

### Content Standards:

- TEKS.6.8A - compare and contrast gravitational, elastic, and chemical potential energies with kinetic energy
- TEKS.6.8B - describe how energy is conserved through transfers and transformations in systems such as electrical circuits, food webs, amusement park rides, or photosynthesis

### Suggested Recurring Themes:

- TEKS.6.5E - analyze and explain how energy flows and matter cycles through systems and how energy and matter are conserved through a variety of systems

### Suggested Science and Engineering Practices:

- TEKS.6.2D - evaluate experimental and engineering designs
- TEKS.6.3A - develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories

### Key Vocabulary

- energy
- kinetic energy
- potential energy
- gravitational potential energy
- elastic potential energy
- chemical potential energy
- energy transformation
- law of conservation of energy
- photosynthesis

**Unit 4: Energy**

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>	<b>Day 4</b>	<b>Day 5</b>
TEKS.6.8A Compare & Contrast Energies Engagement  TEKS.6.8A Compare & Contrast Energies Station Lab - Input Stations	TEKS.6.8A Compare & Contrast Energies Station Lab - Output Stations	TEKS.6.8A Compare & Contrast Energies Presentation and Paper INB  TEKS.6.8A Potential & Kinetic Energy WIKI Ticket	TEKS.6.8A Compare & Contrast Energies Student Choice	TEKS.6.8A Compare & Contrast Energies Student Choice
<b>Day 6</b>	<b>Day 7</b>	<b>Day 8</b>	<b>Day 9</b>	<b>Day 10</b>
TEKS.6.8A Compare & Contrast Energies Student Choice	TEKS.6.8A Compare & Contrast Energies Assessment  TEKS.6.8B Energy Transformations Amazing Anchors Part 1	TEKS.6.8B Energy Transformations Inquiry Lab	TEKS.6.8B Energy Transformations Inquiry Lab	TEKS.6.8B Energy Transformations in Systems Presentation and Paper INB
<b>Day 11</b>	<b>Day 12</b>	<b>Day 13</b>		
TEKS.6.8B Energy Transformations in Systems Presentation and Paper INB  TEKS.6.8B Energy Transformations WIKI Ticket	TEKS.6.8B Energy Transformations Science Reading Comprehension Passage  TEKS.6.8B Energy Transformations Amazing Anchors Part 2	TEKS.6.8B Energy Transformations Assessment		

## Unit 5: Waves

### Content Standards:

- TEKS.6.8C - explain how energy is transferred through transverse and longitudinal waves

### Suggested Recurring Themes:

- TEKS.6.5E - analyze and explain how energy flows and matter cycles through systems and how energy and matter are conserved through a variety of systems

### Suggested Science and Engineering Practices:

- TEKS.6.1G - develop and use models to represent phenomena, systems, processes, or solutions to engineering problems
- TEKS.6.2C - use mathematical calculations to assess quantitative relationships in data

### Key Vocabulary

- wave
- energy
- medium
- longitudinal waves
- transverse waves
- crest
- trough
- amplitude
- wavelength
- compression
- rarefaction
- frequency

**Unit 5: Waves**

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>	<b>Day 4</b>	<b>Day 5</b>
TEKS.6.8C Waves & Energy Amazing Anchors Part 1  TEKS.6.8C - Energy of Waves Station Lab - Input Stations	TEKS.6.8C Energy of Waves Station Lab - Output Stations	TEKS.6.8C Waves & Energy Inquiry Lab	TEKS.6.8C Energy of Waves Presentation and Paper INB	TEKS.6.8C Energy of Waves Presentation and Paper INB  TEKS.6.8C Waves & Energy WIKI Ticket
<b>Day 6</b>	<b>Day 7</b>			
TEKS.6.8C Waves & Energy Writing Prompt  TEKS.6.8C Energy of Waves Amazing Anchors Part 2	TEKS.6.8C Energy of Waves Assessment			

## Unit 6: Seasons & Tides

### Content Standards:

- TEKS.6.9A - model and illustrate how the tilted Earth revolves around the Sun, causing changes in seasons
- TEKS.6.9B - describe and predict how the positions of the Earth, Sun, and Moon cause daily, spring, and neap cycles of ocean tides due to gravitational forces

### Suggested Recurring Themes:

- TEKS.6.5A - identify and apply patterns to understand and connect scientific phenomena or to design solutions

### Suggested Science and Engineering Practices:

- TEKS.6.1A - ask questions and define problems based on observations or information from text, phenomena, models, or investigations
- TEKS.6.1G - develop and use models to represent phenomena, systems, processes, or solutions to engineering problems

### Key Vocabulary

- seasons
- revolves
- tilt
- equinox
- solstice
- tides
- low tide
- high tide
- neap tide
- spring tide

**Unit 6: Seasons & Tides**

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>	<b>Day 4</b>	<b>Day 5</b>
TEKS.6.9A Seasons Amazing Anchors Part 1  TEKS.6.9A Model Earth's Tilt & Seasons Station Lab - Input Stations	TEKS.6.9A Model Earth's Tilt & Seasons Station Lab - Output Stations	TEKS.6.9A Seasons Inquiry Lab	TEKS.6.9A Model Earth's Tilt & Seasons Presentation and Paper INB  TEKS.6.9A Seasons WIKI Ticket	TEKS.6.9A Model Earth's Tilt & Seasons Writing Prompt  TEKS.6.9A Seasons Amazing Anchors Part 2
<b>Day 6</b>	<b>Day 7</b>	<b>Day 8</b>	<b>Day 9</b>	<b>Day 10</b>
TEKS.6.9A Model Earth's Tilt & Seasons Assessment  TEKS.6.9B Tides Amazing Anchors Part 1	TEKS.6.9B Tides Inquiry Lab	TEKS.6.9B Predicting Tides Presentation and Paper INB  TEKS.6.9B Predicting Tides WIKI Ticket	TEKS.6.9B Tides Science Reading Comprehension Passage	TEKS.6.9B Predicting Tides Student Choice
<b>Day 11</b>	<b>Day 12</b>	<b>Day 13</b>		
TEKS.6.9B Predicting Tides Student Choice	TEKS.6.9B Predicting Tides Student Choice  TEKS.6.9B Tides Amazing Anchors Part 2	TEKS.6.9B Predicting Tides Assessment		

## Unit 7: Earth Science

### Content Standards:

- TEKS.6.10A - differentiate between the biosphere, hydrosphere, atmosphere, and geosphere and identify components of each system
- TEKS.6.10B - model and describe the layers of Earth, including the inner core, outer core, mantle, and crust
- TEKS.6.10C - describe how metamorphic, igneous, and sedimentary rocks form and change through geologic processes in the rock cycle

### Suggested Recurring Themes:

- TEKS.6.5A - identify and apply patterns to understand and connect scientific phenomena or to design solutions
- TEKS.6.5D - examine and model the parts of a system and their interdependence in the function of the system

### Suggested Science and Engineering Practices:

- TEKS.6.1G - develop and use models to represent phenomena, systems, processes, or solutions to engineering problems
- TEKS.6.3C - engage respectfully in scientific argumentation using applied scientific explanations and empirical evidence
- TEKS.6.4A - relate the impact of past and current research on scientific thought and society, including the process of science, cost-benefit analysis, and contributions of diverse scientists as related to the content
- TEKS.6.4B - make informed decisions by evaluating evidence from multiple appropriate sources to assess the credibility, accuracy, cost-effectiveness, and methods used
- TEKS.6.4C - research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers

### Key Vocabulary

- biosphere
- hydrosphere
- atmosphere
- geosphere
- crust
- mantle
- inner core
- outer core
- metamorphic rock
- igneous rock
- sedimentary rock
- rock cycle
- erosion
- weathering
- deposition

### Unit 7: Earth Science

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

Day 1	Day 2	Day 3	Day 4	Day 5
TEKS.6.10A Differentiate Between Earth's Spheres Engagement  TEKS.6.10A Differentiate Between Earth's Spheres Station Lab - Input Stations	TEKS.6.10A Differentiate Between Earth's Spheres Station Lab - Output Stations	TEKS.6.10A Differentiate Between Earth's Spheres Presentation and Paper INB  TEKS.6.10A Earth's Spheres WIKI Ticket	TEKS.6.10A Earth's Spheres Writing Prompt	TEKS.6.10A Differentiate Between Earth's Spheres Assessment  TEKS.6.10B Earth's Layers Amazing Anchors Part 1
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.6.10B Earth's Layers Inquiry Lab	TEKS.6.10B Modeling Layers of Earth Presentation and Paper INB	TEKS.6.10B Modeling Layers of Earth Presentation and Paper INB  TEKS.6.10B Earth's Layers WIKI Ticket	TEKS.6.10B Earth's Layers Science Reading Comprehension Passage  TEKS.6.10B Earth's Layers Amazing Anchors Part 2	TEKS.6.10B Modeling Layers of Earth Assessment  TEKS.6.10C Processes in Rock Cycle Engagement
Day 11	Day 12	Day 13	Day 14	Day 15
TEKS.6.10C Rock Cycle Inquiry Lab	TEKS.6.10C Processes in Rock Cycle Presentation and Paper INB	TEKS.6.10C Processes in Rock Cycle Presentation and Paper INB  TEKS.6.10C Rock Cycle WIKI Ticket	TEKS.6.10C Rock Cycle Escape Room	TEKS.6.10C Processes in Rock Cycle Assessment



## Unit 8: Energy Resources

### Content Standards:

- TEKS.6.11A - research and describe why resource management is important in reducing global energy poverty, malnutrition, and air and water pollution
- TEKS.6.11B - explain how conservation, increased efficiency, and technology can help manage air, water, soil, and energy resources

### Suggested Recurring Themes:

- TEKS.6.5B - identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems
- TEKS.6.5G - analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems

### Suggested Science and Engineering Practices:

- TEKS.6.1D - use appropriate tools
- TEKS.6.1G - develop and use models to represent phenomena, systems, processes, or solutions to engineering problems
- TEKS.6.2B - communicate explanations and solutions individually and collaboratively in a variety of settings and formats
- TEKS.6.3C - engage respectfully in scientific argumentation using applied scientific explanations and empirical evidence

### Key Vocabulary

- resource
- global energy poverty
- malnutrition
- air pollution
- water pollution
- resource management
- sustainable
- runoff
- conservation
- renewable energy
- nonrenewable energy

### Unit 8: Energy Resources

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

Day 1	Day 2	Day 3	Day 4	Day 5
TEKS.6.11A Resource Management Engagement  TEKS.6.11A Resource Management Station Lab - Input Stations	TEKS.6.11A Resource Management Station Lab - Output Stations	TEKS.6.11A Resource Management Presentation and Paper INB	TEKS.6.11A Resource Management Presentation and Paper INB	TEKS.6.11A Resource Management Assessment
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.6.11B Managing Energy Resources Engagement  TEKS.6.11B Managing Energy Resources Station Lab - Input Stations	TEKS.6.11B Managing Energy Resources Station Lab - Output Stations	TEKS.6.11B Managing Energy Resources Presentation and Paper INB	TEKS.6.11B Managing Energy Resources Presentation and Paper INB  TEKS.6.11B Managing Energy Resources Student Choice Project	TEKS.6.11B Managing Energy Resources Student Choice Project
Day 11	Day 12			
TEKS.6.11B Managing Energy Resources Student Choice Project	TEKS.6.11B Managing Energy Resources Assessment			

## Unit 9: Organisms

### Content Standards:

- TEKS.6.13A - describe the historical development of cell theory and explain how organisms are composed of one or more cells, which come from pre-existing cells and are the basic unit of structure and function
- TEKS.6.13B - identify and compare the basic characteristics of organisms, including prokaryotic and eukaryotic, unicellular and multicellular, and autotrophic and heterotrophic

### Suggested Recurring Themes:

- TEKS.6.5C - analyze how differences in scale, proportion, or quantity affect a system's structure or performance
- TEKS.6.5F - analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems

### Suggested Science and Engineering Practices:

- TEKS.6.1B - use scientific practices to plan and conduct descriptive, comparative, and experimental investigations and use engineering practices to design solutions to problems
- TEKS.6.2A - identify advantages and limitations of models such as their size, scale, properties, and materials
- TEKS.6.4A - relate the impact of past and current research on scientific thought and society, including the process of science, cost-benefit analysis, and contributions of diverse scientists as related to the content
- TEKS.6.4C - research and explore resources such as museums, libraries, professional organizations, private companies, online platforms, and mentors employed in a science, technology, engineering, and mathematics (STEM) field to investigate STEM careers

### Key Vocabulary

- cell theory
- cells
- prokaryotic
- eukaryotic
- nucleus
- unicellular
- multicellular
- autotroph
- heterotroph

**Unit 9: Organisms**

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>	<b>Day 4</b>	<b>Day 5</b>
TEKS.6.13A Cell Theory Amazing Anchors Part 1  TEKS.6.13A Development of Cell Theory Station Lab - Input Stations	TEKS.6.13A Development of Cell Theory Station Lab - Output Stations	TEKS.6.13A Development of Cell Theory Presentation and Paper INB  TEKS.6.13A Cell Theory WIKI Ticket	TEKS.6.13A Cell Theory Writing Prompt  TEKS.6.13A Cell Theory Amazing Anchors Part 2	TEKS.6.13A Development of Cell Theory Assessment  TEKS.6.13B Comparing Organisms Engagement
<b>Day 6</b>	<b>Day 7</b>	<b>Day 8</b>	<b>Day 9</b>	<b>Day 10</b>
TEKS.6.13B Prokaryotic & Eukaryotic Cells Inquiry Lab	TEKS.6.13B Comparing Organisms Presentation and Paper INB	TEKS.6.13B Comparing Organisms Presentation and Paper INB  TEKS.6.13B Comparing Organisms WIKI Ticket	TEKS.6.13B Characteristics of Organisms Science Reading Comprehension Passage	TEKS.6.13B Comparing Organisms Assessment

## Unit 10: Ecosystems

### Content Standards:

- TEKS.6.12C - describe the hierarchical organization of organism, population, and community within an ecosystem
- TEKS.6.12A - investigate how organisms and populations in an ecosystem depend on and may compete for biotic factors such as food and abiotic factors such as availability of light and water, range of temperatures, or soil composition
- TEKS.6.12B - describe and give examples of predatory, competitive, and symbiotic relationships between organisms, including mutualism, parasitism, and commensalism
- TEKS.6.13C - describe how variations within a population can be an advantage or disadvantage to the survival of a population as environments change

### Suggested Recurring Themes:

- TEKS.6.5D - examine and model the parts of a system and their interdependence in the function of the system
- TEKS.6.5F - analyze and explain the complementary relationship between the structure and function of objects, organisms, and systems

### Suggested Science and Engineering Practices:

- TEKS.6.3A - develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories
- TEKS.6.2C - use mathematical calculations to assess quantitative relationships in data
- TEKS.6.2B - analyze data by identifying any significant descriptive statistical features, patterns, sources of error, or limitations
- TEKS.6.2A - identify advantages and limitations of models such as their size, scale, properties, and materials

### Key Vocabulary

- organism
- population
- community
- ecosystem
- population
- variation
- biotic
- abiotic
- mutualism
- parasitism
- commensalism
- predator
- prey

**Unit 10: Ecosystems**

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

<b>Day 1</b>	<b>Day 2</b>	<b>Day 3</b>	<b>Day 4</b>	<b>Day 5</b>
TEKS.6.12C Organization of Ecosystems Amazing Anchors Part 1  TEKS.6.12C Organization of Ecosystems Inquiry Lab	TEKS.6.12C Organization of Ecosystems Inquiry Lab	TEKS.6.12C Organization of Ecosystems Amazing Anchors Part 2  TEKS.6.12C Organization of Ecosystems WIKI Ticket	TEKS.6.12A Competition for Resources Amazing Anchors Part 1  TEKS.6.12A Competition for Resources Inquiry Lab	TEKS.6.12A Competition for Resources Inquiry Lab
<b>Day 6</b>	<b>Day 7</b>	<b>Day 8</b>	<b>Day 9</b>	<b>Day 10</b>
TEKS.6.12A Biotic & Abiotic Competition Presentation and Paper INB	TEKS.6.12A Biotic & Abiotic Competition Presentation and Paper INB  TEKS.6.12A Competition for Resources WIKI Ticket	TEKS.6.12E Biotic & Abiotic Factors Escape Room	TEKS.6.12A Competition for Resources Amazing Anchors Part 2  TEKS.6.12A Biotic & Abiotic Competition Assessment	TEKS.6.12B Ecological Relationships Engagement  TEKS.6.12B Ecological Relationships Station Lab - Input Stations
<b>Day 11</b>	<b>Day 12</b>	<b>Day 13</b>	<b>Day 14</b>	<b>Day 15</b>
TEKS.6.12B Ecological Relationships Station Lab - Output Stations	TEKS.6.12B Ecological Relationships Presentation and Paper INB	TEKS.6.12B Ecological Relationships Presentation and Paper INB  TEKS.6.12B Interactions in Ecosystems WIKI Ticket	TEKS.6.12B Interactions in Ecosystems Science Reading Comprehension Passage	TEKS.6.12B Ecological Relationships Assessment

**Unit 10: Ecosystems**

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

<b>Day 16</b>	<b>Day 17</b>	<b>Day 18</b>	<b>Day 19</b>	<b>Day 20</b>
TEKS.6.13C Variation in Populations Amazing Anchors Part 1  TEKS.6.13C Variations & Survival Station Lab - Input Stations	TEKS.6.13C Variations & Survival Station Lab - Output Stations	TEKS.6.13C Variations & Survival Presentation and Paper INB	TEKS.6.13C Variations & Survival Presentation and Paper INB  TEKS.6.13C Variation in Populations WIKI Ticket	TEKS.6.13C Variation in Populations Writing Prompt
<b>Day 21</b>				
TEKS.6.13C Variation in Populations Amazing Anchors Part 2  TEKS.6.13C Variations & Survival Assessment				

### Unit 11: Engineering Design

The unit plan below is a suggestion. Each day is based on a typical 45-minute class period.

Day 1	Day 2	Day 3	Day 4	Day 5
Project Mystery Powder	Project Mystery Powder	Project Mystery Powder	Project Mystery Powder	Project Mystery Powder
Day 6	Day 7	Day 8	Day 9	Day 10
Project Thrills	Project Thrills	Project Thrills	Project Thrills	Project Thrills

Additional STEM Challenges include:

- Project Wind and Sky
- Project Electric
- Project Big, Bigger, Biggest
- Project Last Dance