

7th 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: Chemical Formulas (11 days)

- 7.6A Compare Elements & Compounds
- 7.6B Atoms & Chemical Formulas

Unit 2: Chemical Changes (6 days)

- 7.6C Changes in Matter

Unit 3: Aqueous Solutions (11 days)

- 7.6D Aqueous Solutions
- 7.6E Rate of Dissolution

Unit 4: Speed & Motion (12 days)

- 7.7A Calculating Average Speed
- 7.7B Speed & Velocity
- 7.7C Distance-Time Graphs

Unit 5: Newton's First Law (6 days)

- 7.7D Newton's First Law of Motion

Unit 6: Thermal Energy (13 days)

- 7.8A Thermal Energy in Systems
- 7.8B Thermal Equilibrium
- 7.8C Temperature & Kinetic Energy

Unit 7: Space (13 days)

- 7.9A Objects in the Solar System
- 7.9B Gravity & Motion in Space
- 7.9C Life on Earth

Unit 8: Plate Tectonics (10 days)

- 7.10A Evidence of Changes Over Time
- 7.10B Tectonics & Geological Events

Unit 9: Taxonomy (9 days)

- 7.14A Taxonomy
- 7.14B Characteristics of Kingdoms

Unit 10: Ecosystems (10 days)

- 7.12A Diagram Tropic Levels
- 7.12B Matter in the Biosphere

Unit 11: Human Impact (10 days)

- 7.11A Human Activity & Water
- 7.11B Humans & Ocean Systems

Unit 12: Reproduction & Traits (9 days)

- 7.13C Reproduction & Offspring Diversity
- 7.13D Natural & Artificial Selection

Unit 13: Body Systems (20 days)

- 7.13B Hierarchy of Organisms
- 7.13A Integumentary System Functions
- 7.13A Skeletal System Functions
- 7.13A Muscular System Functions
- 7.13A Nervous System Functions
- 7.13A Circulatory System Functions
- 7.13A Respiratory System Functions
- 7.13A Digestive System Functions
- 7.13A Urinary System Functions
- 7.13A Endocrine System Functions
- 7.13A Immune System Functions

Unit 14: STEM Challenge (5 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: Chemical Formulas

Content Standards:

- TEKS.7.6A - compare and contrast elements and compounds in terms of atoms and molecules, chemical symbols, and chemical formulas
- TEKS.7.6B - use the periodic table to identify the atoms and the number of each kind within a chemical formula

Suggested Recurring Themes:

- TEKS.7.5C - analyze how differences in scale, proportion, or quantity affect a system's structure or performance
- TEKS.7.5E - 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.7.1G - develop and use models to represent phenomena, systems, processes, or solutions to engineering problems
- TEKS.7.2A - identify advantages and limitations of models such as their size, scale, properties, and materials
- TEKS.7.4B - make informed decisions by evaluating evidence from multiple appropriate sources to assess the credibility, accuracy, cost-effectiveness, and methods used

Key Vocabulary

- matter
- elements
- chemical symbol
- periodic table
- compounds
- chemical formulas
- molecules
- atom
- coefficients
- subscripts

Unit 1: Chemical Formulas

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.7.6A Elements & Compounds Amazing Anchors Part 1 TEKS.7.6A Elements & Compounds Inquiry Lab	TEKS.7.6A Elements & Compounds Inquiry Lab	TEKS.7.6A Compare Elements & Compounds Presentation and Paper INB TEKS.7.6A Elements & Compounds WIKI Ticket	TEKS.7.6A Elements & Compounds Writing Prompt TEKS.7.6A Elements & Compounds Amazing Anchors Part 2	TEKS.7.6A Compare Elements & Compounds Assessment
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.7.6B Atoms & Chemical Formulas Engagement TEKS.7.6B Atoms & Chemical Formulas Station Lab - Input Stations	TEKS.7.6B Atoms & Chemical Formulas Station Lab - Output Stations	TEKS.7.6B Atoms & Chemical Formulas Presentation and Paper INB	TEKS.7.6B Atoms & Chemical Formulas Presentation and Paper INB TEKS.7.6B Counting Atoms & Elements WIKI Ticket	TEKS.7.6B Counting Atoms & Elements Science Reading Comprehension Passage
Day 11				
TEKS.7.6B Atoms & Chemical Formulas Assessment				

Unit 2: Chemical Changes

Content Standards:

- TEKS.7.6C - distinguish between physical and chemical changes in matter

Suggested Recurring Themes:

- TEKS.7.5E - 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.7.3C - engage respectfully in scientific argumentation using applied scientific explanations and empirical evidence

Key Vocabulary

- physical change
- chemical change
- precipitate

Unit 2: 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.7.6C Physical & Chemical Changes Amazing Anchors Part 1 TEKS.7.6C Changes in Matter Station Lab - Input Stations	TEKS.7.6C Changes in Matter Station Lab - Output Stations	TEKS.7.6C Changes in Matter Presentation and Paper INB TEKS.7.6C Physical & Chemical Changes WIKI Ticket	TEKS.7.6C Changes in Matter Inquiry Lab	TEKS.7.6C Changes in Matter Inquiry Lab TEKS.7.6C Physical & Chemical Changes Amazing Anchors Part 2
Day 6				
TEKS.7.6C Changes in Matter Assessment				

Unit 3: Aqueous Solutions

Content Standards:

- TEKS.7.6D - describe aqueous solutions in terms of solute and solvent, concentration, and dilution
- TEKS.7.6E - investigate and model how temperature, surface area, and agitation affect the rate of dissolution of solid solutes in aqueous solutions

Suggested Recurring Themes:

- TEKS.7.5A - identify and apply patterns to understand and connect scientific phenomena or to design solutions
- TEKS.7.5C - analyze how differences in scale, proportion, or quantity affect a system's structure or performance

Suggested Science and Engineering Practices:

- TEKS.7.2D - evaluate experimental and engineering designs
- TEKS.7.3A - develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories

Key Vocabulary

- aqueous solution
- solute
- solvent
- dissolve
- concentration
- saturation
- dilution
- surface area
- temperature
- agitation

Unit 3: Aqueous Solutions

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.7.6D Aqueous Solutions Engagement TEKS.7.6D Aqueous Solutions Station Lab - Input Stations	TEKS.7.6D Aqueous Solutions Station Lab - Output Stations	TEKS.7.6D Aqueous Solutions Presentation and Paper INB	TEKS.7.6D Aqueous Solutions Student Choice	TEKS.7.6D Aqueous Solutions Student Choice
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.7.6D Aqueous Solutions Student Choice	TEKS.7.6D Aqueous Solutions Assessment TEKS.7.6E Rate of Dissolution Engagement	TEKS.7.6E Rate of Dissolution Station Lab - Input Stations	TEKS.7.6E Rate of Dissolution Station Lab - Output Stations	TEKS.7.6E Rate of Dissolution Presentation and Paper INB
Day 11				
TEKS.7.6E Rate of Dissolution Assessment				

Unit 4: Speed & Motion

Content Standards:

- TEKS.7.7A - calculate average speed using distance and time measurements from investigations
- TEKS.7.7B - distinguish between speed and velocity in linear motion in terms of distance, displacement, and direction
- TEKS.7.7C - measure, record, and interpret an object's motion using distance-time graphs

Suggested Recurring Themes:

- TEKS.7.5G - analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems
- TEKS.7.5C - analyze how differences in scale, proportion, or quantity affect a system's structure or performance

Suggested Science and Engineering Practices:

- TEKS.7.1E - collect quantitative data using the International System of Units (SI) and qualitative data as evidence
- TEKS.7.2B - analyze data by identifying any significant descriptive statistical features, patterns, sources of error, or limitation
- TEKS.7.2C - use mathematical calculations to assess quantitative relationships in data

Key Vocabulary

- average speed
- speed
- distance
- time
- motion
- direction
- displacement
- velocity
- dependent variable
- independent variable
- x-axis
- y-axis
- accelerate

Unit 4: Speed & Motion

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.7.7A Average Speed Amazing Anchors Part 1 TEKS.7.7A Calculating Average Speed Inquiry Lab	TEKS.7.7A Calculating Average Speed Inquiry Lab TEKS.7.7A Calculating Average Speed Presentation and Paper INB	TEKS.7.7A Calculating Average Speed Presentation and Paper INB TEKS.7.7A Average Speed WIKI Ticket	TEKS.7.7A Average Speed Amazing Anchors Part 2 TEKS.7.7A Calculating Average Speed Assessment	TEKS.7.7B Speed & Velocity Engagement TEKS.7.7B Speed & Velocity Station Lab - Input Stations
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.7.7B Speed & Velocity Station Lab - Output Stations	TEKS.7.7B Speed & Velocity Presentation and Paper INB	TEKS.7.7B Speed & Velocity Assessment TEKS.7.7C Motion Graphing Amazing Anchors Part 1	TEKS.7.7C Distance-Time Graphs Inquiry Lab	TEKS.7.7C Distance-Time Graphs Presentation and Paper INB TEKS.7.7C Motion Graphing WIKI Ticket
Day 11	Day 12			
TEKS.7.7C - Motion Graphing Writing Prompt TEKS.7.7C Motion Graphing Amazing Anchors Part 2	TEKS.7.7C Distance-Time Graphs Assessment			

Unit 5: Newton's First Law

Content Standards:

- TEKS.7.7D - analyze the effect of balanced and unbalanced forces on the state of motion of an object using Newton's First Law of Motion

Suggested Recurring Themes:

- TEKS.7.5G - analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems

Suggested Science and Engineering Practices:

- TEKS.7.2G - develop and use models to represent phenomena, systems, processes, or solutions to engineering problems
- TEKS.7.3C - engage respectfully in scientific argumentation using applied scientific explanations and empirical evidence

Key Vocabulary

- motion
- force
- net force
- vector
- balanced
- unbalanced
- equilibrium
- Newton's first law of motion
- inertia

Unit 5: Newton’s First Law

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.7.7D Newton's First Law of Motion Engagement TEKS.7.7D Newton's First Law Inquiry Lab	TEKS.7.7D Newton's First Law Inquiry Lab	TEKS.7.7D Newton's First Law of Motion Presentation and Paper INB	TEKS.7.7D Newton's First Law of Motion Presentation and Paper INB TEKS.7.7D Newton's First Law WIKI Ticket	TEKS.7.7D Newton's First Law Science Reading Comprehension Passage
Day 6				
TEKS.7.7D Newton's First Law of Motion Assessment				

Unit 6: Thermal Energy

Content Standards:

- TEKS.7.8A - investigate methods of thermal energy transfer into and out of systems, including conduction, convection, and radiation
- TEKS.7.8B - investigate how thermal energy moves in a predictable pattern from warmer to cooler until all substances within the system reach thermal equilibrium
- TEKS.7.8C - explain the relationship between temperature and the kinetic energy of the particles within a substance

Suggested Recurring Themes:

- TEKS.7.5A - identify and apply patterns to understand and connect scientific phenomena or to design solutions
- TEKS.7.5E - 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.7.1B - use scientific practices to plan and conduct descriptive, comparative, and experimental investigations and use engineering practices to design solutions to problems
- TEKS.7.2G - develop and use models to represent phenomena, systems, processes, or solutions to engineering problems
- TEKS.7.3A - develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories

Key Vocabulary

- thermal energy
- conduction
- convection
- radiation
- heat
- thermal equilibrium
- thermometer
- kinetic energy
- particles
- absolute zero
- temperature
- expand
- contract

Unit 6: Thermal Energy

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.7.8A Thermal Energy in Systems Engagement TEKS.7.8A Conduction, Convection, & Radiation Inquiry Lab	TEKS.7.8A Conduction, Convection, & Radiation Inquiry Lab	TEKS.7.8A Thermal Energy in Systems Presentation and Paper INB	TEKS.7.8C Conduction, Convection, & Radiation Escape Room	TEKS.7.8A Thermal Energy in Systems Assessment TEKS.7.8B Investigating Thermal Energy Amazing Anchors Part 1
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.7.8B Investigating Thermal Energy Inquiry Lab	TEKS.7.8B Thermal Equilibrium Presentation and Paper INB TEKS.7.8B Investigating Thermal Energy WIKI Ticket	TEKS.7.8B Investigating Thermal Energy Amazing Anchors Part 2	TEKS.7.8B Investigating Thermal Energy Writing Prompt TEKS.7.8B Thermal Equilibrium Assessment	TEKS.7.8C Temperature & Kinetic Energy Engagement TEKS.7.8C Temperature & Kinetic Energy Station Lab - Input Stations
Day 11	Day 12	Day 13		
TEKS.7.8C Temperature & Kinetic Energy Station Lab - Output Stations	TEKS.7.8C Temperature & Kinetic Energy Presentation and Paper INB	TEKS.7.8C Temperature & Kinetic Energy Assessment		

Unit 7: Space

Content Standards:

- TEKS.7.9A - describe the physical properties, locations, and movements of the Sun, planets, moons, meteors, asteroids, comets, Kuiper belt, and Oort cloud;
- TEKS.7.9B - describe how gravity governs motion within Earth's solar system
- TEKS.7.9C - analyze the characteristics of Earth that allow life to exist such as the proximity of the Sun, presence of water, and composition of the atmosphere

Suggested Recurring Themes:

- TEKS.7.5C - analyze how differences in scale, proportion, or quantity affect a system's structure or performance
- TEKS.7.5C - identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems

Suggested Science and Engineering Practices:

- TEKS.7.1A - ask questions and define problems based on observations or information from text, phenomena, models, or investigations
- TEKS.7.2B - analyze data by identifying any significant descriptive statistical features, patterns, sources of error, or limitation
- TEKS.7.3A - develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories

Key Vocabulary

- solar system
- planet
- astronomical unit
- asteroid
- comet
- meteor
- Kuiper belt
- Oort cloud
- gravity
- mass
- law of universal gravitation
- weight
- inertia
- orbit
- rotate
- habitable zone
- atmosphere
- insulate
- proximity

Unit 7: Space

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.7.9A Objects in the Solar System Engagement TEKS.7.9A Objects in the Solar System Station Lab - Input Stations	TEKS.7.9A Objects in the Solar System Station Lab - Output Stations	TEKS.7.9A Objects in the Solar System Presentation and Paper INB	TEKS.7.9A Objects in the Solar System Presentation and Paper INB TEKS.7.9A Objects in Space WIKI Ticket	TEKS.7.9A Planets Escape Room
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.7.9A Objects in the Solar System Assessment TEKS.7.9B - Gravity & Motion in Space Engagement	TEKS.7.9B - Gravity Inquiry Lab	TEKS.7.9B Gravity & Motion in Space Presentation and Paper INB TEKS.7.9B - Gravity WIKI Ticket	TEKS.7.9B Gravity & Motion in Space Assessment	TEKS.7.9C Conditions for Life to Exist Amazing Anchors Part 1 TEKS.7.9C Conditions for Life to Exist Inquiry Lab
Day 11	Day 12	Day 13		
TEKS.7.9C Conditions for Life to Exist Inquiry Lab	TEKS.7.9C Life on Earth Presentation and Paper INB	TEKS.7.9C Conditions for Life to Exist Amazing Anchors Part 2 TEKS.7.9C Conditions for Life to Exist WIKI Ticket		

Unit 8: Plate Tectonics

Content Standards:

- TEKS.7.10A - describe the evidence that supports that Earth has changed over time, including fossil evidence, plate tectonics, and superposition
- TEKS.7.10B - describe how plate tectonics causes ocean basin formation, earthquakes, mountain building, and volcanic eruptions, including supervolcanoes and hot spots

Suggested Recurring Themes:

- TEKS.7.5G - analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems

Suggested Science and Engineering Practices:

- TEKS.7.1A - ask questions and define problems based on observations or information from text, phenomena, models, or investigations
- TEKS.7.2B - analyze data by identifying any significant descriptive statistical features, patterns, sources of error, or limitation
- TEKS.7.3C - engage respectfully in scientific argumentation using applied scientific explanations and empirical evidence

Key Vocabulary

- Pangea
- tectonic plates
- divergent boundary
- convergent boundary
- transform boundary
- continental crust
- oceanic crust
- subduction zone
- seafloor spreading
- mid-ocean ridges
- ocean basin (trench)
- fossil record
- law of superposition
- relative dating
- index fossils

Unit 8: Plate Tectonics

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.7.10A Evidence of Changes Over Time Engagement TEKS.7.10A Evidence of Changes Over Time Station Lab - Input Stations	TEKS.7.10A Evidence of Changes Over Time Station Lab - Output Stations	TEKS.7.10A Evidence of Changes Over Time Presentation and Paper INB	TEKS.7.10A Evidence of Changes Over Time Presentation and Paper INB TEKS.7.10A Continental Drift WIKI Ticket	TEKS.7.10A Evidence of Changes Over Time Assessment
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.7.10B Formation of Crustal Features Amazing Anchors Part 1 TEKS.7.10B Tectonics & Geological Events Presentation and Paper INB	TEKS.7.10B Tectonics & Geological Events Presentation and Paper INB	TEKS.7.10B Formation of Crustal Features Inquiry Lab TEKS.7.10B Formation of Crustal Features WIKI Ticket	TEKS.7.10B Formation of Crustal Features Writing Prompt TEKS.7.10B Formation of Crustal Features Amazing Anchors Part 2	TEKS.7.10B Tectonics & Geological Events Assessment

Unit 9: Taxonomy

Content Standards:

- TEKS.7.14A - describe the taxonomic system that categorizes organisms based on similarities and differences shared among groups
- TEKS.7.14B - describe the characteristics of the recognized kingdoms and their importance in ecosystems such as bacteria aiding digestion or fungi decomposing organic matter

Suggested Recurring Themes:

- TEKS.7.5F - analyze and explain the complementary relationship between structure and function of objects, organisms, and systems

Suggested Science and Engineering Practices:

- TEKS.7.4A - 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.7.4C - 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

- Bacteria
- Archaea
- Eukarya
- taxonomy
- domain
- kingdom
- phylum
- class
- order
- family
- genus
- species
- binomial nomenclature
- unicellular
- multicellular
- prokaryotic
- eukaryotic
- autotrophic
- heterotrophic
- Animalia
- Plantae
- Fungi
- Protista
- Eubacteria
- Archaeobacteria

Unit 9: Taxonomy

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.7.14A Taxonomy Engagement TEKS.7.14A Taxonomy Station Lab - Input Stations	TEKS.7.14A Taxonomy Station Lab - Output Stations	TEKS.7.14A Taxonomy Presentation and Paper INB	TEKS.7.14A Taxonomy Presentation and Paper INB TEKS.7.14B Characteristics of Organisms Inquiry Lab	TEKS.7.14B Characteristics of Organisms Inquiry Lab
Day 6	Day 7	Day 8	Day 9	
TEKS.7.14B Characteristics of Kingdoms Presentation and Paper INB	TEKS.7.14B Characteristics of Kingdoms Presentation and Paper INB TEKS.7.14B Classification WIKI Ticket	TEKS.7.14B Classification Escape Room	TEKS.7.14A Taxonomy Assessment TEKS.7.14B Characteristics of Kingdoms Assessment <i>can combine questions from both files</i>	

Unit 10: Ecosystems

Content Standards:

- TEKS.7.12A - diagram the flow of energy within trophic levels and describe how the available energy decreases in successive trophic levels in energy pyramids
- TEKS.7.12B - describe how ecosystems are sustained by the continuous flow of energy and the recycling of matter and nutrients within the biosphere

Suggested Recurring Themes:

- TEKS.7.5A - identify and apply patterns to understand and connect scientific phenomena or to design solutions
- TEKS.7.5E - 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.7.2A - identify advantages and limitations of models such as their size, scale, properties, and materials
- TEKS.7.2C - use mathematical calculations to assess quantitative relationships in data

Key Vocabulary

- energy pyramid
- trophic level
- producers
- autotroph
- heterotroph
- primary consumer
- secondary consumer
- tertiary consumer
- apex predators
- biosphere
- ecosystem
- food web
- sustained
- matter

Unit 10: Ecosystems

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.7.12A Diagram Trophic Levels Engagement TEKS.7.12A Food Webs & Energy Pyramids Inquiry Lab	TEKS.7.12A Food Webs & Energy Pyramids Inquiry Lab	TEKS.7.12A Diagram Trophic Levels Presentation and Paper INB TEKS.7.12A Food Webs & Energy Pyramids WIKI Ticket	TEKS.7.12A Food Webs & Energy Pyramids Science Reading Comprehension Passage	TEKS.7.12A Food Webs & Energy Pyramids Escape Room
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.7.12A Diagram Trophic Levels Assessment TEKS.7.12B Matter & Energy in Ecosystems Amazing Anchors Part 1	TEKS.7.12B Matter & Energy in Ecosystems Inquiry Lab	TEKS.7.12B Matter in the Biosphere Presentation and Paper INB TEKS.7.12B Matter & Energy in Ecosystems WIKI Ticket	TEKS.7.12B Matter & Energy in Ecosystems Writing Prompt TEKS.7.12B Matter & Energy in Ecosystems Amazing Anchors Part 2	TEKS.7.12B Matter in the Biosphere Assessment

Unit 11: Human Impact

Content Standards:

- TEKS.7.11A - analyze the beneficial and harmful influences of human activity on groundwater and surface water in a watershed
- TEKS.7.11B - describe human dependence and influence on ocean systems and explain how human activities impact these systems

Suggested Recurring Themes:

- TEKS.7.5B - identify and investigate cause-and-effect relationships to explain scientific phenomena or analyze problems
- TEKS.7.5D - examine and model the parts of a system and their interdependence in the function of the system

Suggested Science and Engineering Practices:

- TEKS.7.2A - identify advantages and limitations of models such as their size, scale, properties, and materials
- TEKS.7.3A - develop explanations and propose solutions supported by data and models and consistent with scientific ideas, principles, and theories
- TEKS.7.3B - communicate explanations and solutions individually and collaboratively in a variety of settings and formats
- TEKS.7.4B - make informed decisions by evaluating evidence from multiple appropriate sources to assess the credibility, accuracy, cost-effectiveness, and methods used

Key Vocabulary

- watershed
- groundwater
- surface water
- percolation
- aquifer
- pollution
- phytoplankton
- evaporate
- precipitation
- runoff
- ocean currents

Unit 11: Human Impact

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.7.11A Human Activity & Water Engagement TEKS.7.11A Human Activity & Water Station Lab - Input Stations	TEKS.7.11A Human Activity & Water Station Lab - Output Stations	TEKS.7.11A Human Activity & Water Presentation and Paper INB	TEKS.7.11A Human Activity & Water Presentation and Paper INB TEKS.7.11A Watersheds WIKI Ticket	TEKS.7.11A Human Activity & Water Assessment
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.7.11B Humans & Ocean Systems Engagement TEKS.7.11B Oceans Inquiry Lab	TEKS.7.11B Oceans Inquiry Lab	TEKS.7.11B Humans & Ocean Systems Presentation and Paper INB	TEKS.7.11B Humans & Ocean Systems Presentation and Paper INB TEKS.7.11B Oceans WIKI Ticket	TEKS.7.11B Humans & Ocean Systems Assessment

Unit 12: Reproduction & Traits

Content Standards:

- TEKS.7.13C - compare the results of asexual and sexual reproduction of plants and animals in relation to the diversity of offspring and the changes in the population over time
- TEKS.7.13D - describe and give examples of how natural and artificial selection change the occurrence of traits in a population over generations

Suggested Recurring Themes:

- TEKS.7.5A - identify and apply patterns to understand and connect scientific phenomena or to design solutions
- TEKS.7.5G - analyze and explain how factors or conditions impact stability and change in objects, organisms, and systems

Suggested Science and Engineering Practices:

- TEKS.7.1A - ask questions and define problems based on observations or information from text, phenomena, models, or investigations
- TEKS.7.2C - use mathematical calculations to assess quantitative relationships in data
- TEKS.7.3B - communicate explanations and solutions individually and collaboratively in a variety of settings and formats

Key Vocabulary

- | | |
|--------------------------|------------------------|
| • asexual reproduction | • population |
| • sexual reproduction | • generation |
| • binary fission | • traits |
| • budding | • variations |
| • spore formation | • adaptations |
| • fragmentation | • natural selection |
| • vegetative propagation | • artificial selection |
| • offspring | |

Unit 12: Reproduction & Traits

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.7.13C Reproduction & Offspring Diversity Engagement TEKS.7.13C Reproduction & Offspring Diversity Station Lab - Input Stations	TEKS.7.13C Reproduction & Offspring Diversity Station Lab - Output Stations	TEKS.7.13C Reproduction & Offspring Diversity Presentation and Paper INB	TEKS.7.13C Reproduction & Offspring Diversity Presentation and Paper INB TEKS.7.13C Sexual & Asexual Reproduction WIKI Ticket	TEKS.7.13C Reproduction & Offspring Diversity Assessment TEKS.7.13D Natural Selection Amazing Anchors Part 1
Day 6	Day 7	Day 8	Day 9	
TEKS.7.13D Natural Selection Inquiry Lab	TEKS.7.13D Natural & Artificial Selection Presentation and Paper INB TEKS.7.13D - Natural Selection WIKI Ticket	TEKS.7.13D Natural Selection Writing Prompt TEKS.7.13D Natural Selection Amazing Anchors Part 2	TEKS.7.13D Natural & Artificial Selection Assessment	

Unit 13: Body Systems

Content Standards:

- TEKS.7.13A - identify and model the main functions of the systems of the human organism, including the circulatory, respiratory, skeletal, muscular, digestive, urinary, reproductive, integumentary, nervous, immune, and endocrine systems
- TEKS.7.13B - describe the hierarchical organization of cells, tissues, organs, and organ systems within plants and animals

Suggested Recurring Themes:

- TEKS.7.5D - examine and model the parts of a system and their interdependence in the function of the system
- TEKS.7.5F - analyze and explain the complementary relationship between structure and function of objects, organisms, and systems

Suggested Science and Engineering Practices:

- TEKS.7.3B - communicate explanations and solutions individually and collaboratively in a variety of settings and formats
- TEKS.7.1G - develop and use models to represent phenomena, systems, processes, or solutions to engineering problems
- TEKS.7.2B - analyze data by identifying any significant descriptive statistical features, patterns, sources of error, or limitations

Key Vocabulary

- cells
- tissues
- organ
- organ system
- organism
- circulatory system
- muscular system
- skeletal system
- nervous system
- endocrine system
- respiratory system
- digestive system
- urinary system
- immune system
- integumentary system

Unit 13: Body Systems

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.7.13A Integumentary System Stations	TEKS.7.13A Skeletal System Inquiry Lab	TEKS.7.13A Muscular System Inquiry Lab	TEKS.7.13A Muscular System Science Reading Comprehension Passage	TEKS.7.13A Nervous System Inquiry Lab
Day 6	Day 7	Day 8	Day 9	Day 10
TEKS.7.13A Nervous System Functions Writing Prompt	TEKS.7.13A Circulatory System Stations	TEKS.7.13A Circulatory System Science Reading Comprehension Passage	TEKS.7.13A Respiratory System Inquiry Lab TEKS.7.13A Respiratory System WIKI Ticket	TEKS.7.13A Respiratory System Science Reading Comprehension Passage
Day 11	Day 12	Day 13	Day 14	Day 15
TEKS.7.13A Digestive System Functions Station Lab	TEKS.7.13A Digestive System Writing Prompt	TEKS.7.13A Urinary System Inquiry Lab TEKS.7.13A Excretory System WIKI Ticket	TEKS.7.13A Endocrine System Functions Inquiry Lab TEKS.7.13A Endocrine System WIKI Ticket	TEKS.7.13A Endocrine System Science Reading Comprehension Passage
Day 16	Day 17	Day 18	Day 19	Day 20
TEKS.7.13A Immune System Functions Station Lab	TEKS.7.13B Hierarchy of Organisms Amazing Anchors Part 1 TEKS.7.13B Hierarchy of Organisms Station Lab Input Stations	TEKS.7.13B Hierarchy of Organisms Station Lab Output Stations	TEKS.7.13B Hierarchy of Organisms Amazing Anchors Part 2 TEKS.7.13B Organization of Organisms WIKI Ticket	TEKS.7.13B Body Systems Escape Room

Unit 14: 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 All Hands on Deck	Project All Hands on Deck	Project All Hands on Deck	Project All Hands on Deck	Project All Hands on Deck

Additional STEM Challenges include:

- Project Save the Oceans
- Project Birdman
- Project Solar System Explorer
- Project Drift Away
- Project Far Out