

# 8th Grade Science Scope & Sequence

150 school days • 11 units • 24 TEKS standards

<b>Back-to-School</b>	5 days	Unit 0
<b>Properties of Matter</b>	17 days	8.6A, 8.6C, 8.6D
<b>Chemical Reactions</b>	17 days	8.6B, 8.6E
<b>Newton's Laws</b>	15 days	8.7A, 8.7B
<b>Waves</b>	11 days	8.8A, 8.8B
<b>Space</b>	12 days	8.9A, 8.9B, 8.9C
<b>Weather</b>	15 days	8.10A, 8.10B, 8.10C
<b>Cells</b>	7 days	8.13A
<b>Genetics</b>	11 days	8.13B, 8.13C
<b>Ecosystems</b>	15 days	8.12A, 8.12B, 8.12C
<b>Climate</b>	15 days	8.11C, 8.11A, 8.11B
<b>Engineering Design</b>	10 days	Projects

### A Note from Chris

Before you jump into the calendar, a couple of things from me.

This guide is built around 150 instructional days, not the 175 sitting on your contract. You and I both know how many of those days quietly disappear. STAAR windows, benchmark testing, pep rallies, picture day, the fire drill that swallows your whole third period. I left that cushion on purpose, and since 8th grade is a STAAR science year, the physical science sits up front so you bank real review time before the test.

The order isn't random. We open with matter and chemical reactions while everybody's still fresh, roll into forces and waves, head out to space and weather, then finish the year with cells, genetics, ecosystems, and climate. Each unit gives the next one something to stand on.

And you know your kids and your campus calendar way better than I ever will. If your district teaches ecosystems in the fall, move it there. If weather fits better right after space, go for it. Treat this like a roadmap. You're still the one driving.

Let's go have a great year.

### ACTIVITY TYPE KEY (USED IN DAY-BY-DAY TABLES)

- Engagement
- Station Lab
- Presentation + INB
- Inquiry Lab
- Assessment
- Amazing Anchors
- Reading
- Writing Prompt
- WIKI Ticket
- Escape Room
- Student Choice
- Project



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**0**

# Back-to-School

5 days Foundation skills & classroom routines

Spend the first week building the habits that make the rest of the year run smoothly — lab safety, measurement, graphing, the scientific method, and the engineering design process. Pull any combination of the resources below from the Beginning of the Year collection to fit your campus schedule.

## BEGINNING-OF-THE-YEAR RESOURCES

**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**

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## 1

# Properties of Matter

17 days 3 standards: 8.6A, 8.6C, 8.6D

## CONTENT STANDARDS

### TEKS 8.6A

Explain by modeling how matter is classified as elements, compounds, homogeneous mixtures, or heterogeneous mixtures

### TEKS 8.6C

Describe the properties of cohesion, adhesion, and surface tension in water and relate to observable phenomena such as the formation of droplets, transport in plants, and insects walking on water

### TEKS 8.6D

Compare and contrast the properties of acids and bases, including pH relative to water

## KEY VOCABULARY

matter	element
compound	molecule
pure substance	heterogeneous mixture
homogenous mixture	solution
cohesion	adhesion
surface tension	capillary action
pH scale	indicator
acid	base

## SUGGESTED RECURRING THEMES

**8.5A** Identify and apply patterns to explain phenomena or design solutions

**8.5E** Analyze how energy flows and matter cycles through systems

## SUGGESTED SCIENCE & ENGINEERING PRACTICES

**8.1B** Plan and conduct descriptive, comparative, and experimental investigations

**8.1G** Develop and use models to represent phenomena and systems

**8.2B** Analyze data by identifying patterns, features, and sources of error

## DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 <b>Modeling Matter</b> <b>ENGAGEMENT</b> <b>Modeling Matter Station Labs</b> <b>STATION LAB (INPUT)</b>	Day 2 <b>Modeling Matter Station Labs</b> <b>STATION LAB (OUTPUT)</b>	Day 3	Day 4	Day 5 <b>Modeling Matter</b> <b>ASSESSMENT</b> <b>Properties of Water</b> <b>ENGAGEMENT</b>
Day 6 <b>Properties of Water Station Labs</b> <b>STATION LAB (INPUT)</b>	Day 7 <b>Properties of Water Station Labs</b> <b>STATION LAB (OUTPUT)</b>	Day 8	Day 9	Day 10 <b>Properties of Water</b> <b>INQUIRY LAB</b>
Day 11 <b>Properties of Water</b> <b>ASSESSMENT</b> <b>Properties of Acids and Bases</b> <b>ENGAGEMENT</b>	Day 12 <b>Properties of Acids and Bases Station Labs</b> <b>STATION LAB (INPUT)</b>	Day 13 <b>Properties of Acids and Bases Station Labs</b> <b>STATION LAB (OUTPUT)</b>	Day 14	Day 15
Day 16 <b>Acids and Bases</b> <b>INQUIRY LAB</b>	Day 17 <b>Properties of Acids and Bases</b> <b>ASSESSMENT</b>			



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## 2

# Chemical Reactions

17 days 2 standards: 8.6B, 8.6E

## CONTENT STANDARDS

### TEKS 8.6B

Use the periodic table to identify the atoms involved in chemical reactions

### TEKS 8.6E

Investigate how mass is conserved in chemical reactions and relate conservation of mass to the rearrangement of atoms using chemical equations, including photosynthesis

## KEY VOCABULARY

periodic table	atomic number
periods	groups
atoms	chemical reaction
reactants	products
law of conservation of mass	photosynthesis

## SUGGESTED RECURRING THEMES

**8.5A** Identify and apply patterns to explain phenomena or design solutions

**8.5E** Analyze how energy flows and matter cycles through systems

## SUGGESTED SCIENCE & ENGINEERING PRACTICES

**8.1B** Plan and conduct descriptive, comparative, and experimental investigations

**8.1G** Develop and use models to represent phenomena and systems

**8.3C** Engage respectfully in scientific argumentation using evidence

## DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 <b>Periodic Table &amp; Reactivity</b> <b>AMAZING ANCHORS PT 1</b> <b>Periodic Table &amp; Reactions Station Labs</b> <b>STATION LAB (INPUT)</b>	Day 2 <b>Periodic Table &amp; Reactions Station Labs</b> <b>STATION LAB (OUTPUT)</b>	Day 3	Day 4 <b>Periodic Table &amp; Reactivity</b> <b>WIKI TICKET</b>	Day 5 <b>Periodic Table &amp; Reactivity</b> <b>READING COMPREHENSION</b>
Day 6 <b>Periodic Table &amp; Reactions</b> <b>STUDENT CHOICE</b>	Day 7 <b>Periodic Table &amp; Reactions</b> <b>STUDENT CHOICE</b>	Day 8 <b>Periodic Table &amp; Reactions</b> <b>STUDENT CHOICE</b> <b>Periodic Table &amp; Reactivity</b> <b>AMAZING ANCHORS PT 2</b>	Day 9 <b>Periodic Table &amp; Reactions</b> <b>ASSESSMENT</b>	Day 10 <b>Conservation in Reactions</b> <b>ENGAGEMENT</b> <b>Counting Atoms &amp; Elements</b> <b>INQUIRY LAB</b>
Day 11 <b>Counting Atoms &amp; Elements</b> <b>INQUIRY LAB</b>	Day 12	Day 13 <b>Counting Atoms &amp; Elements</b> <b>WIKI TICKET</b>	Day 14 <b>Mass &amp; Chemical Reactions</b> <b>READING COMPREHENSION</b>	Day 15 <b>Mass &amp; Chemical Reactions</b> <b>WRITING PROMPT</b>
Day 16 <b>E - Balancing Equations &amp; Counting Atoms</b> <b>ESCAPE ROOM</b>	Day 17 <b>Conservation in Reactions</b> <b>ASSESSMENT</b>			



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# 3

## Newton's Laws

15 days 2 standards: 8.7A, 8.7B

### CONTENT STANDARDS

#### TEKS 8.7A

Calculate and analyze how the acceleration of an object is dependent upon the net force acting on the object and the mass of the object using Newton's Second Law of Motion

#### TEKS 8.7B

Investigate and describe how Newton's three laws of motion act simultaneously within systems such as in vehicle restraints, sports activities, amusement park rides, Earth's tectonic activities, and rocket launches

### KEY VOCABULARY

acceleration	mass
velocity	force
net force	motion
inertia	unbalanced forces
simultaneously	Newton's first law of motion
Newton's second law of motion	Newton's third law of motion

### SUGGESTED RECURRING THEMES

- 8.5B** Identify and investigate cause-and-effect relationships
- 8.5C** Use scale, proportion, and quantity to compare or model systems

### SUGGESTED SCIENCE & ENGINEERING PRACTICES

- 8.1B** Plan and conduct descriptive, comparative, and experimental investigations
- 8.1G** Develop and use models to represent phenomena and systems
- 8.1H** Distinguish between scientific hypotheses, theories, and laws
- 8.2C** Use mathematical calculations to assess quantitative relationships

### DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 Newton's Second Law AMAZING ANCHORS PT 1 INQUIRY LAB	Day 2 Newton's Second Law INQUIRY LAB	Day 3	Day 4 Newton's Second Law WIKI TICKET	Day 5 Newton's Second Law WRITING PROMPT Newton's Second Law AMAZING ANCHORS PT 2
Day 6 Newton's Second Law of Motion ASSESSMENT	Day 7 Laws of Motion in Systems ENGAGEMENT Laws of Motion in Systems Station Labs STATION LAB (INPUT)	Day 8 Laws of Motion in Systems Station Labs STATION LAB (OUTPUT)	Day 9	Day 10
Day 11 Laws of Motion in Systems STUDENT CHOICE	Day 12 Laws of Motion in Systems STUDENT CHOICE	Day 13 Laws of Motion in Systems STUDENT CHOICE	Day 14 B - Newton's Laws ESCAPE ROOM	Day 15 Laws of Motion in Systems ASSESSMENT



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# 4

## Waves

11 days 2 standards: 8.8A, 8.8B

### CONTENT STANDARDS

#### TEKS 8.8A

Compare the characteristics of amplitude, frequency, and wavelength in transverse waves, including the electromagnetic spectrum

#### TEKS 8.8B

Explain the use of electromagnetic waves in applications such as radiation therapy, wireless technologies, fiber optics, microwaves, ultraviolet sterilization, astronomical observations, and X-rays

### KEY VOCABULARY

waves	vibration
mechanical waves	longitudinal waves
transverse waves	crest
trough	amplitude
wavelength	frequency
electromagnetic waves	electromagnetic spectrum
radio waves	microwaves
infrared radiation	visible light
ultraviolet radiation	x-rays
gamma rays	

### SUGGESTED RECURRING THEMES

**8.5A** Identify and apply patterns to explain phenomena or design solutions

**8.5E** Analyze how energy flows and matter cycles through systems

### SUGGESTED SCIENCE & ENGINEERING PRACTICES

**8.1G** Develop and use models to represent phenomena and systems

**8.2A** Identify advantages and limitations of models

**8.2C** Use mathematical calculations to assess quantitative relationships

**8.4A** Relate how research and innovation shape scientific thought and society

### DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 <b>Transverse Waves</b> <b>ENGAGEMENT</b> Transverse Waves Station Labs <b>STATION LAB (INPUT)</b>	Day 2 <b>Transverse Waves</b> Station Labs <b>STATION LAB (OUTPUT)</b>	Day 3	Day 4	Day 5 <b>Transverse Waves</b> <b>ASSESSMENT</b>
Day 6 <b>Electromagnetic Spectrum</b> <b>AMAZING ANCHORS PT 1</b> Electromagnetic Waves Station Labs <b>STATION LAB (INPUT)</b>	Day 7 <b>Electromagnetic Waves</b> Station Labs <b>STATION LAB (OUTPUT)</b>	Day 8	Day 9 <b>Electromagnetic Spectrum</b> <b>AMAZING ANCHORS PT 2</b>	Day 10 <b>Electromagnetic Spectrum</b> <b>READING COMPREHENSION</b>
Day 11 <b>Electromagnetic Waves</b> <b>ASSESSMENT</b>				



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# 5

# Space

12 days 3 standards: 8.9A, 8.9B, 8.9C

## CONTENT STANDARDS

### TEKS 8.9A

Describe the life cycle of stars and compare and classify stars using the Hertzsprung-Russell diagram

### TEKS 8.9B

Categorize galaxies as spiral, elliptical, and irregular and locate Earth's solar system within the Milky Way galaxy

### TEKS 8.9C

Research and analyze scientific data used as evidence to develop scientific theories that describe the origin of the universe

## KEY VOCABULARY

main sequence	red giant
white dwarf	red supergiant
blue giant	H-R diagram
luminosity	apparent magnitude
absolute magnitude	galaxy
Milky Way	spiral galaxies
elliptical galaxies	irregular galaxies
light year	redshift
microwave background radiation	

## SUGGESTED RECURRING THEMES

**8.5A** Identify and apply patterns to explain phenomena or design solutions

**8.5C** Use scale, proportion, and quantity to compare or model systems

## SUGGESTED SCIENCE & ENGINEERING PRACTICES

**8.1A** Ask questions and define problems based on observations

**8.2C** Use mathematical calculations to assess quantitative relationships

**8.3C** Engage respectfully in scientific argumentation using evidence

## DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 <b>Classifying Stars</b> ENGAGEMENT Classifying Stars Station Labs STATION LAB (INPUT)	Day 2 <b>Classifying Stars</b> Station Labs STATION LAB (OUTPUT)	Day 3	Day 4 <b>H-R Diagram</b> WIKI TICKET	Day 5 <b>Classifying Stars</b> Waves ASSESSMENT <b>Categorizing Galaxies</b> ENGAGEMENT
Day 6 <b>Categorizing Galaxies</b> INQUIRY LAB	Day 7	Day 8 <b>Galaxies &amp; Light Years</b> WRITING PROMPT	Day 9 <b>Categorizing Galaxies</b> ASSESSMENT <b>Origins of the Universe</b> ENGAGEMENT	Day 10 <b>Origins of the Universe</b> Station Labs STATION LAB (INPUT)
Day 11 <b>Origins of the Universe</b> Station Labs STATION LAB (OUTPUT)	Day 12 <b>Big Bang Theory</b> INQUIRY LAB			



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## 6

## Weather

15 days 3 standards: 8.10A, 8.10B, 8.10C

## CONTENT STANDARDS

**TEKS 8.10A**

Describe how energy from the Sun, hydrosphere, and atmosphere interact and influence weather and climate

**TEKS 8.10B**

Identify global patterns of atmospheric movement and how they influence local weather

**TEKS 8.10C**

Describe the interactions between ocean currents and air masses that produce tropical cyclones, including typhoons and hurricanes

## KEY VOCABULARY

weather	climate
hydrosphere	atmosphere
air pressure	low pressure
high pressure	convection
global winds	Coriolis effect
jet stream	isobars
front	weather map
hurricane	typhoon
cyclone	ocean currents

## SUGGESTED RECURRING THEMES

**8.5A** Identify and apply patterns to explain phenomena or design solutions

**8.5D** Examine and model the parts of a system and their interdependence

## SUGGESTED SCIENCE &amp; ENGINEERING PRACTICES

**8.1D** Use appropriate tools to collect, record, and analyze data

**8.1G** Develop and use models to represent phenomena and systems

**8.2A** Identify advantages and limitations of models

**8.2B** Analyze data by identifying patterns, features, and sources of error

## DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 <b>Energy from the Sun</b> <b>ENGAGEMENT</b> <b>Energy from the Sun</b> <b>Station Labs</b> <b>STATION LAB (INPUT)</b>	Day 2 <b>Energy from the Sun</b> <b>Station Labs</b> <b>STATION LAB (OUTPUT)</b>	Day 3	Day 4	Day 5 <b>Energy from the Sun</b> <b>ASSESSMENT</b>
Day 6 <b>Weather Maps &amp; Air Pressure</b> <b>AMAZING ANCHORS PT 1</b> <b>Atmospheric Movement</b> <b>Station Labs</b> <b>STATION LAB (INPUT)</b>	Day 7 <b>Atmospheric Movement</b> <b>Station Labs</b> <b>STATION LAB (OUTPUT)</b>	Day 8	Day 9 <b>Weather Maps &amp; Air Pressure</b> <b>WIKI TICKET</b>	Day 10 <b>Weather Maps &amp; Air Pressure</b> <b>INQUIRY LAB</b> <b>AMAZING ANCHORS PT 2</b>
Day 11 <b>Atmospheric Movement</b> <b>ASSESSMENT</b> <b>Hurricanes</b> <b>AMAZING ANCHORS PT 1</b>	Day 12 <b>Hurricanes</b> <b>INQUIRY LAB</b>	Day 13 <b>Hurricanes</b> <b>WIKI TICKET</b>	Day 14 <b>Hurricanes</b> <b>WRITING PROMPT</b> <b>AMAZING ANCHORS PT 2</b>	Day 15 <b>Tropical Storms</b> <b>ASSESSMENT</b>



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# 7

## Cells

7 days 1 standard: 8.13A

### CONTENT STANDARDS

#### TEKS 8.13A

Identify the function of the cell membrane, cell wall, nucleus, ribosomes, cytoplasm, mitochondria, chloroplasts, and vacuoles in plant or animal cells

### KEY VOCABULARY

cells	organelles
cell membrane	mitochondria
cytoplasm	nucleus
ribosomes	vacuole
cell wall	chloroplast

### SUGGESTED RECURRING THEMES

**8.5F** Explain the relationship between structure and function

### SUGGESTED SCIENCE & ENGINEERING PRACTICES

**8.1H** Distinguish between scientific hypotheses, theories, and laws

**8.2B** Analyze data by identifying patterns, features, and sources of error

**8.2D** Evaluate experimental and engineering designs

**8.4A** Relate how research and innovation shape scientific thought and society

### DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 <b>Cell Organelles</b> ENGAGEMENT Cell Organelles Station Labs STATION LAB (INPUT)	Day 2 <b>Cell Organelles Station Labs</b> STATION LAB (OUTPUT)	Day 3	Day 4 <b>Plant &amp; Animal Cells Organelles</b> WIKI TICKET	Day 5 <b>Plant &amp; Animal Cells</b> READING COMPREHENSION
Day 6 <b>Cells</b> ESCAPE ROOM	Day 7 <b>Cell Organelles</b> ASSESSMENT			



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# 8

# Genetics

11 days 2 standards: 8.13B, 8.13C

## CONTENT STANDARDS

### TEKS 8.13B

Describe the function of genes within chromosomes in determining inherited traits of offspring

### TEKS 8.13C

Describe how variations of traits within a population lead to structural, behavioral, and physiological adaptations that influence the likelihood of survival and reproductive success of a species over generations

## KEY VOCABULARY

heredity	inherited trait
cell	nucleus
chromosomes	DNA
gene	variations
natural selection	adaptions
structural adaptions	behavioral adaptions
physiological adaptions	

## SUGGESTED RECURRING THEMES

**8.5F** Explain the relationship between structure and function

**8.5G** Explain how factors or conditions impact stability and change

## SUGGESTED SCIENCE & ENGINEERING PRACTICES

**8.1D** Use appropriate tools to collect, record, and analyze data

**8.2D** Evaluate experimental and engineering designs

**8.3C** Engage respectfully in scientific argumentation using evidence

**8.4C** Research resources to investigate STEM careers

## DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 <b>Inherited Traits &amp; DNA</b> <b>AMAZING ANCHORS PT 1</b> Genes Station Labs <b>STATION LAB (INPUT)</b>	Day 2 <b>Genes Station Labs</b> <b>STATION LAB (OUTPUT)</b>	Day 3 <b>Inherited Traits &amp; DNA</b> <b>WIKI TICKET</b>	Day 4 <b>Inherited Traits &amp; DNA</b> <b>WRITING PROMPT</b> <b>AMAZING ANCHORS PT 2</b>	Day 5 <b>Inherited Traits &amp; DNA</b> <b>ASSESSMENT</b> Adaptations for Survival <b>ENGAGEMENT</b>
Day 6 <b>Adaptations for Survival Station Labs</b> <b>STATION LAB (INPUT)</b>	Day 7 <b>Adaptations for Survival Station Labs</b> <b>STATION LAB (OUTPUT)</b>	Day 8	Day 9 <b>Variation in Populations</b> <b>WIKI TICKET</b>	Day 10 <b>Variation in Populations</b> <b>READING COMPREHENSION</b>
Day 11 <b>Adaptations for Survival</b> <b>ASSESSMENT</b>				



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# 9

# Ecosystems

15 days 3 standards: 8.12A, 8.12B, 8.12C

## CONTENT STANDARDS

### TEKS 8.12A

Explain how disruptions such as population changes, natural disasters, and human intervention impact the transfer of energy in food webs in ecosystems

### TEKS 8.12B

Describe how primary and secondary ecological succession affect populations and species diversity after ecosystems are disrupted by natural events or human activity

### TEKS 8.12C

Describe how biodiversity contributes to the stability and sustainability of an ecosystem and the health of the organisms within the ecosystem

## KEY VOCABULARY

ecosystems	food webs
ecological succession	primary succession
secondary succession	pioneer species
species diversity	climax community
biodiversity	genetic diversity
ecological diversity	

## SUGGESTED RECURRING THEMES

**8.5B** Identify and investigate cause-and-effect relationships

**8.5G** Explain how factors or conditions impact stability and change

## SUGGESTED SCIENCE & ENGINEERING PRACTICES

**8.1A** Ask questions and define problems based on observations

**8.2A** Identify advantages and limitations of models

**8.2B** Analyze data by identifying patterns, features, and sources of error

**8.3A** Develop explanations and propose solutions supported by data and models

**8.3C** Engage respectfully in scientific argumentation using evidence

## DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 <b>Disruptions in Ecosystems</b> ENGAGEMENT <b>Disruptions in Ecosystems Station Labs</b> STATION LAB (INPUT)	Day 2 <b>Disruptions in Ecosystems Station Labs</b> STATION LAB (OUTPUT)	Day 3	Day 4 <b>Environmental Changes</b> WIKI TICKET	Day 5 <b>Disruptions in Ecosystems</b> ASSESSMENT <b>Ecological Succession</b> AMAZING ANCHORS PT 1
Day 6 <b>Ecological Succession</b> INQUIRY LAB	Day 7	Day 8 <b>Ecological Succession</b> WIKI TICKET	Day 9 <b>Ecological Succession</b> WRITING PROMPT AMAZING ANCHORS PT 2	Day 10 . 8.12B - Succession & Species Diversity ASSESSMENT . 8.12C - Sustainability of an Ecosystem ENGAGEMENT
Day 11 . 8.12C - Sustainability of an Ecosystem Station Labs STATION LAB (INPUT)	Day 12 . 8.12C - Sustainability of an Ecosystem Station Labs STATION LAB (OUTPUT)	Day 13	Day 14 . 8.12C - Sustainability of an Ecosystem READING COMPREHENSION	Day 15 . 8.12C - Sustainability of an Ecosystem ASSESSMENT



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# 10

# Climate

15 days 3 standards: 8.11C, 8.11A, 8.11B

## CONTENT STANDARDS

### TEKS 8.11C

Use scientific evidence to describe how natural events, including volcanic eruptions, meteor impacts, abrupt changes in ocean currents, and the release and absorption of greenhouse gases influence climate

### TEKS 8.11A

Use scientific evidence to describe how human activities, including the release of greenhouse gases, deforestation, and urbanization, can influence climate

### TEKS 8.11B

Describe the carbon cycle

## KEY VOCABULARY

carbon cycle	photosynthesis
respiration	decomposition
combustion	climate
greenhouse gases	deforestation
urbanization	atmosphere
volcanic eruptions	meteor
ocean currents	

## SUGGESTED RECURRING THEMES

**8.5B** Identify and investigate cause-and-effect relationships

**8.5D** Examine and model the parts of a system and their interdependence

**8.5G** Explain how factors or conditions impact stability and change

## SUGGESTED SCIENCE & ENGINEERING PRACTICES

**8.1G** Develop and use models to represent phenomena and systems

**8.3A** Develop explanations and propose solutions supported by data and models

**8.4C** Research resources to investigate STEM careers

## DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 . 8.11C - Describing the Carbon Cycle <b>ENGAGEMENT</b> . 8.11C - Describing the Carbon Cycle Station Labs <b>STATION LAB (INPUT)</b>	Day 2 . 8.11C - Describing the Carbon Cycle Station Labs <b>STATION LAB (OUTPUT)</b>	Day 3	Day 4 . 8.11C - Describing the Carbon Cycle <b>ASSESSMENT</b> . 8.11A - Natural Events & Climate <b>ENGAGEMENT</b>	Day 5 . 8.11A - Natural Events & Climate Station Labs <b>STATION LAB (INPUT)</b>
Day 6 . 8.11A - Natural Events & Climate Station Labs <b>STATION LAB (OUTPUT)</b>	Day 7	Day 8 . 8.11A - Natural Events & Climate <b>STUDENT CHOICE</b>	Day 9 . 8.11A - Natural Events & Climate <b>STUDENT CHOICE</b>	Day 10 . 8.11A - Natural Events & Climate <b>STUDENT CHOICE</b>
Day 11 . 8.11A - Natural Events & Climate <b>ASSESSMENT</b>	Day 12 . 8.11B - Human Activities & Climate <b>ENGAGEMENT</b> . 8.11B - Human Activities & Climate Station Labs <b>STATION LAB (INPUT)</b>	Day 13 . 8.11B - Human Activities & Climate Station Labs <b>STATION LAB (OUTPUT)</b>	Day 14	Day 15 . 8.11B - Human Activities & Climate <b>ASSESSMENT</b>



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# 11

## Engineering Design

10 days Engineering design projects

Close the year with open-ended engineering design challenges that let students apply what they have learned across multiple units. Each project links to the full resource on the store.

### DAY-BY-DAY PACING

MON	TUE	WED	THU	FRI
Day 1 <b>Off to the Races</b> PROJECT	Day 2 <b>Off to the Races</b> PROJECT	Day 3 <b>Off to the Races</b> PROJECT	Day 4 <b>Off to the Races</b> PROJECT	Day 5 <b>Off to the Races</b> PROJECT
Day 6 <b>Star Gazer</b> PROJECT	Day 7 <b>Star Gazer</b> PROJECT	Day 8 <b>Star Gazer</b> PROJECT	Day 9 <b>Star Gazer</b> PROJECT	Day 10 <b>Star Gazer</b> PROJECT

### MORE STEM CHALLENGES IN THIS COLLECTION

Project Last Dance

Project What Happens Next

Project Skydive



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