



2024

6TH - 8TH DYNAMIC SCIENCE

Empowering ALL Texas Learners to Reach their Summit

**Built By Texas Educators
For Texas Educators**

Texas based publisher with curricula
created by over 75 current and former
Texas educators

**Built for Texas
TEKS-SEPs-RTCs-ELPS**

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Learn More?**

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Kate the Chemist

6th-8th Video Series



Summit K12 has teamed up with UT Austin Professor and best-selling science author, Dr. Kate Biberdorf, to create Phenomena-based videos specifically for the 2024 Science TEKS.

- K-12 Phenomena-Based Videos
- Teacher Pre-Lab Prep Videos
- Student Pre-Lab Videos
- Full Length Virtual Science Lab Videos

6th-8th Texas Virtual Field Investigations

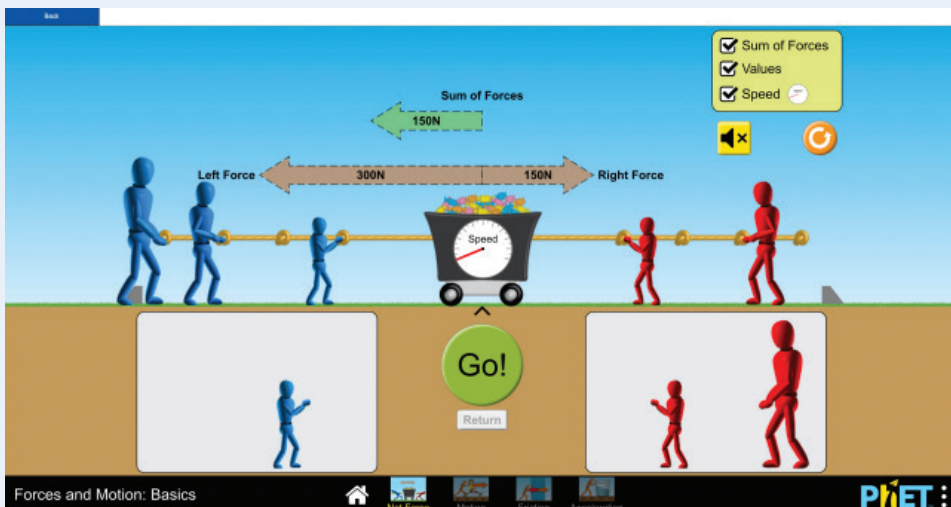
ALL 6th-8th students will have the opportunity to investigate phenomena throughout dozens of the most popular state parks and engineering marvels in Texas.

The 2024 TEKS Virtual Field Investigations series was created specifically for the Texas Science Adoption.









































Hands-on Investigations and **Virtual Labs**

Comparative, Descriptive, and Experimental Investigations to engage students and support sensemaking.



Includes Summit
K12 Lab Guides
developed to
support the 2024
Science TEKS.

Concise and Complete Teacher Supports

Reporting Category 4: Organisms and Environments						
TEKS	Title	Lesson Guide	Study Guide		E-Poster	Interactive E-Poster
			Print	Key		
8.12A	Disruptions of Energy Transfer in Food Webs					
 7.12B	Energy and the Sustainability of Ecosystems					
 5.12B	Energy in a Food Web					
8.12B	Ecological Succession					
8.12C	Impact of Biodiversity on Stability of Ecosystems					
8.13A	Functions of Organelles					
 6.13B	Basic Characteristics of Organisms					

TEKS Scaffold

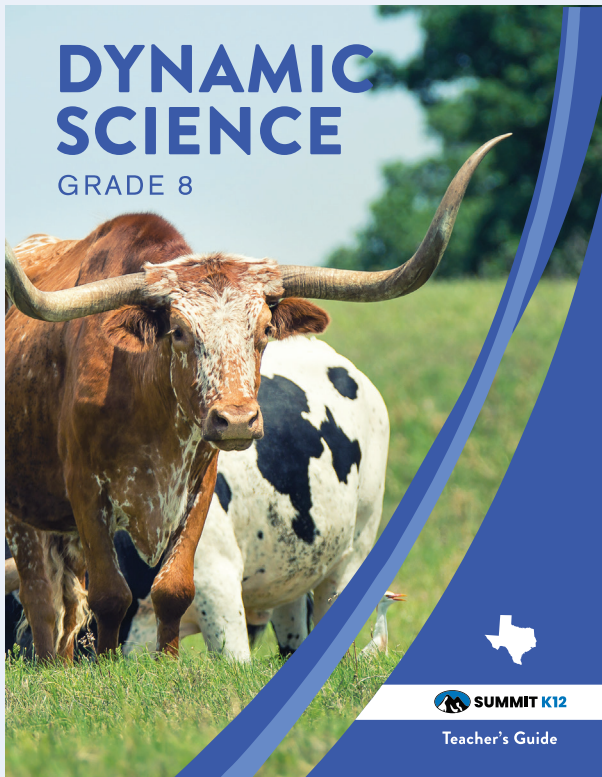
TEXAS—8th Grade

Teacher Supports Include:

- Lesson and Lab Guides
- Scope and Sequence
- Pacing Guides
- Reports and Dashboards
- Anchoring Phenomena Table
- 3D Teaching and Learning
- Image Bank
- Science E-Books
- Formative Assessments
- Year-Round Responsive Support
- Asynchronous Online Teacher Training
- Zoom and Onsite Professional Learning

**ROBUST
ASSESSMENT
BANK INCLUDING
NEW ITEM
TYPES**

High Quality Print Materials



Newton's Second Law of Motion

TEKS 8.7A

Students will:
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.

8.7A Learning Activities

SUMMIT K12 Online

	Investigation: Manipulating Mass	1 day
	Establish Relevance	5 minutes
	Virtual Investigation: Forces and Motion Lab	10 minutes
	Phenomenon: Second Law Relationships	1 day
	Investigation: Marshmallow Shooter Lab	30 minutes
	Practice: Force, Mass, and Acceleration Calculations	20 minutes
	Study Guide: Newton's Second Law of Motion	30 minutes
	Practice: Solving for Acceleration	20 minutes
	Design an Investigation: Newton's Second Law	2 days

IN
ENGLISH
AND
SPANISH

Newton's Second Law of Motion

8.7A

Name: _____ Period: _____ Date: _____

Practice: Force, Mass, and Acceleration Calculations

Part 1:
Directions:
Fill in the missing parts of the table by using the formula triangle below. Write out the formula, plug in the numbers, and then solve.

$$F = ma$$

Force (N)	Mass (kg)	Acceleration (m/s²)
	50	5
	12	30
400		25
150		37.5
75	25	
50	8	

Newton's Second Law of Motion

8.7A

Name: _____ Period: _____ Date: _____

Comparative Investigation: Marshmallow Launcher

Guiding Question:
What are the effects of force and mass on the acceleration of a marshmallow?

Prediction:
How do you think acceleration will be affected by increasing the applied force used?

How do you think acceleration will be affected by increasing the mass of the object?

Lab Safety:
Wear safety goggles and follow all teacher guidelines.

Materials:

- balloon (1 per student)
- digital scale (1 per group)
- goggles (1 per student)
- marshmallows, jumbo (3 per student)
- marshmallows, mini (3 per student)
- measuring tape (1 per group)
- roll of masking tape (1 per group)
- scissors (1 per group)
- sturdy plastic cup (1 per student)

Procedures:
Setup: Building your Launcher

- Put on your lab safety goggles.
- Carefully cut the bottom off a plastic cup.
- Cut off the closed end of a balloon as shown below.

- Tie off the other end and stretch the opening across the cut end of the plastic cup.
- Use masking tape to secure the balloon to the cup.

Science Literacy

Seamlessly Blend the 2024 Science TEKS, SEPs, ELAR TEKS, and ELPS into single Science-Literacy lessons.

<div>Differentiated Science Literacy</div> <div>Back</div>							
CAT	eBook Title	Science TEKS	RLA Focused Comprehension Strategy	Read eBook	Science Quiz	RLA Quiz	Lock/Unlock
1	Acids, Bases, and pH	8.6D	Synthesize	Start	Start	Start	
1	Breaking Bonds and Building Molecules	8.6E	Synthesize	Start	Start	Start	
1	Chemical Reactions	8.6E	Make Inferences	Start	Start	Start	
1	Everything Changes	8.6E	Synthesize	Start	Start	Start	
1	Physical and Chemical Changes	8.6E	Synthesize	Start	Start	Start	
1	Rearranging Atoms	8.6E	Synthesize	Start	Start	Start	
1	The Same Amount of Matter	8.6E	Synthesize	Start	Start	Start	
2	Newton's 1st and 2nd Laws of Motion	8.7A, 8.7B	Create Mental Images	Start	Start	Start	
2	Applying Newton's 1st and 2nd Laws of Motion	8.7A, 8.7B	Create Mental Images	Start	Start	Start	
2	Newton's 3rd Law of Motion	8.7B	Create Mental Images	Start	Start	Start	
2	Applying Newton's 3rd Law and Momentum	8.7B	Create Mental Images	Start	Start	Start	

Two types of assessments for every e-book

IN
ENGLISH
AND
SPANISH

Over 75 Science-Literacy E-books in 6th-8th grades written specifically for the 2024 State Science Adoption

- Written to the 2024 Science TEKS, RLA TEKS, SEPs, RTCs, and ELPS
- Includes Science/RLA study guides, Lesson Guides, and assessments
- Extend science instructional minutes during the RLA or Reading Intervention blocks
- K-12 Science Cognates organized by grade level and category
- Newcomer foundational Science-Literacy skills supporting 13 different home languages
- Science Writing including C.E.R. prompts and the NEW STAAR® Short- Constructed Response items

Vocabulary Mastery

TEKS Content Vocabulary | Science Tools Vocabulary |
SEPs & RTCs Vocabulary | Science Cognates



The baby birds rely on their parent to bring them food for ☒ Select
reflecting
survival
interacting
pollination

○○○○○○○○●○○



survival

supervivencia

noun



Survival refers to continuing to live or exist.

IN
ENGLISH
AND
SPANISH



☒ Select
Overpopulation
Species diversity
Ecological succession
Human activity

is the number of different species present in an ecosystem.

○○○○○○○○○○●○○



species diversity

diversidad de especies

noun



Species diversity describes the number of different species present in an ecosystem.

Finish Attempt

○○○○○○○○○○○○○○●

Image Bank

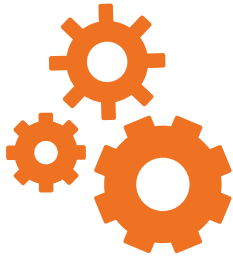
- 500-1,000 images per grade level/subject
- Minimum 15-25 images per content TEKS
- Images for all SEPs Vocabulary Words
- Images for all Science Tools Vocabulary

Summit K12 Image Bank



Teaching Science through Phenomena using the 3D Model

Science TEKS Content Standards



Scientific and Engineering Practices

Recurring Themes and Concepts



TEKS-SEPs-RTCs Crosswalk (8th Grade Example)

Grade	Category	SEPs	8th Grade Dynamic Science TEKS Lessons, Labs, Investigations, and Explore Activities																								Totals by SEPs
		TEKS	8.6A	8.6B	8.6C	8.6D	8.6E	8.7A	8.7B	8.8A	8.8B	8.9A	8.9B	8.9C	8.10A	8.10B	8.10C	8.11A	8.11B	8.11C	8.12A	8.12B	8.12C	8.13A	8.13B	8.13C	
8	Scientific and engineering practices	8.1A			X	X			X	X	SL		X	X	SL	X			X		X	X	X	X	X		15
8	Scientific and engineering practices	8.1B			X		X	X	X	X				X							X	X	X	X	X		7
8	Scientific and engineering practices	8.1C			X	X	X	X	X	X										X							6
8	Scientific and engineering practices	8.1D	X	X	X	X	X	X	X	SL	SL			X	SL					X				X		SL	13
8	Scientific and engineering practices	8.1E	X	X		X	X	X		X	SL			X	SL					X					X	X	12
8	Scientific and engineering practices	8.1F	X	X			X	X		X		X	X	X		X					X			SL	X	X	13
8	Scientific and engineering practices	8.1G	X	X			X			X	X		X	X	X			X	X	X		X	X	X	X	X	16
8	Scientific and engineering practices	8.1H					X							X													2
8	Scientific and engineering practices	8.2A	X				SL	SL		X	X	SL		SL	X											SL	9
8	Scientific and engineering practices	8.2B				SL	X	SL	SL	SL	SL		SL	SL	SL	SL					X			SL	X	SL	14
8	Scientific and engineering practices	8.2C					SL	X	SL	SL	SL			X		SL										SL	8
8	Scientific and engineering practices	8.2D		X						X									X								3
8	Scientific and engineering practices	8.3A			X	X	X	SL	X	X	X	SL		X	X	X	X	X	X	X	X	X		SL	X		19
8	Scientific and engineering practices	8.3B	X	X		X			X	X	X	X		X	X	X	X	X	X		X	X	X	X	X	X	19
8	Scientific and engineering practices	8.3C												X					X	X							3
8	Scientific and engineering practices	8.4A										SL	X	X	SL					X				SL			6
8	Scientific and engineering practices	8.4B												X						X							2
8	Scientific and engineering practices	8.4C								X				X						X							3
8	Recurring themes and concepts	8.5A				X						SL	X	X	X	X	X	X				X		SL	X		11
8	Recurring themes and concepts	8.5B				X		SL	X		SL	SL	SL						X	X	X	X	X	SL	X	X	14
8	Recurring themes and concepts	8.5C					SL		X															SL			3
8	Recurring themes and concepts	8.5D	X	X			SL		X	X	SL			X										X	X	SL	10
8	Recurring themes and concepts	8.5E				X				X	X					SL					X						5
8	Recurring themes and concepts	8.5F			X							SL			SL									SL	X	X	6
8	Recurring themes and concepts	8.5G				X			X			X			X	X	X	X	X			X	X	SL	X	X	13
Totals by Content TEKS			7	7	6	11	15	9	12	15	12	9	7	18	12	8	4	5	11	7	6	8	5	14	13	11	232

KEY

X	Lab Investigations or Explore Activity
SL	Science Literacy Process Skill or RTC