



2024

DYNAMIC BIOLOGY

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**

**Ready to
Learn More?**

Scan the QR code
to visit our website



SBOE Approved!

K-8 English, K-6 Spanish
Biology, Chemistry, Physics, IPC
100% TEKS/100% ELPS

Concise and Complete Teacher Supports

Instructional Resources

Video Resources

Supplemental Resources

Course Information

Teacher Resources

Dynamic Biology

Cat 1: Cell Structure and Function

Cat 2: Mechanisms of Genetics

Cat 3: Biological Evolution and Classification

Cat 4: Biological Processes and Systems

Cat 5: Interdependence within Environmental Systems

B.13A: Ecological Relationships and Ecological St...

Pacing Guide

Lesson Guide

Assessments

TEKS Lesson Video

Vocabulary Mastery

Study Guide

Study Guide Key

Interactive E-Poster

6.12B: Predatory, Competitive, and Symbiotic Rel...

B.13B: Ecological Stability in Trophic Levels

7.12A: Flow of Energy in Trophic Levels

7.12B: Energy and the Sustainability of Ecosystems

8.12A: Disruptions of Energy Transfer in Food Webs

B.13C: Carbon and Nitrogen Cycles

8.11C: The Carbon Cycle

8.11A: Impact of Natural Events on Global Climate

B.13D: Environmental Change, Biodiversity, and E...

8.12B: Ecological Succession

8.12C: Impact of Biodiversity on Stability of Ecosy...

Lesson Guide

B.13A Learning Activities

SUMMIT K12Online

*indicates activities that support the Anchoring Phenomenon or the Engage Phenomenon

ENGAGE	
Phenomenon: Sea Otters and Ecological Relationships	30 minutes
ESTABLISH RELEVANCE	
Discussion: Take a Position	10 minutes
INVESTIGATE AND LEARN	
* Activity: Three Types of Ecological Relationships	50 minutes
Comparative Investigation: An Unlikely Relationship	2 days
* Virtual Investigation: External Factors	35 minutes
Activity: Competition and Invasive Species Data Analysis	75 minutes
Experimental Investigation: A Model of Ecological Relationships	75 minutes
Phenomenon Final Explanation: Sea Otters and Ecological Relationships	20 minutes
PRACTICE AND EXTEND	
Research: Symbiotic Relationship Between Texas Species	2 days
Descriptive Investigation: The Impacts of Population Changes on an Ecosystem	50 minutes
Research: An Application of STEM Careers	75 minutes
Study Guide: Ecological Relationships and Ecological Stability	30 minutes

TEKS B.13A

Core Vocabulary

commensalism	an ecological relationship in which one species benefits and the other is unaffected
competition	an interaction between individuals that share a resource that limits their ability to grow, survive, and reproduce in an ecosystem
ecological relationship	a close interaction between two species in the same environment

INSTRUCTIONAL RESOURCES

Pacing Guides
Lesson Guides
Assessments
TEKS Lessons/Videos
Vocabulary Mastery
Study Guides/Keys
Interactive E-Posters

VIDEO RESOURCES

Phenomena
TEKS Lesson Videos/Simulations
Texas Virtual Field Investigations
Kate the Chemist Labs

SUPPLEMENTAL RESOURCES

Introduction to Science
SEPs Background/Vocabulary
Science Literacy
Graphic Organizers

COURSE INFORMATION

Pacing Guide
5E Model
Phenomena
Science Lab Explorations
TEKS-SEPs-RTCs Crosswalk

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 Development

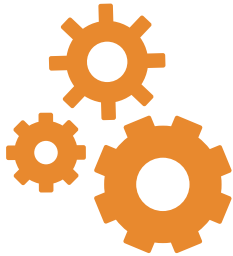
ASSESSMENT BANK

Date Created	Custom Assessment Name	Avg. Score	PLD	Assign
9/28/24	Biomolecules Pre-Assessment	65%	Approaches	
11/4/24	Cell Cycle and DNA Replication Benchmark	87%	Meets	
12/4/24	Disruptions of the Cell Cycle Extra Credit	92%	Masters	
1/12/25	Outcomes of Genetic Combinations	81%	Meets	
2/3/25	New STAAR 2.0 Item types practice	90%	Masters	
3/2/25	Dr. Kate's Natural Selection B.10A quiz	Start		

Robust assessment bank including new item types.

Teaching Science through Phenomena using the 3D Model

Science TEKS Content Standards



Scientific and Engineering Practices

Recurring Themes and Concepts



TEKS-SEPs-RTCs Crosswalk

Subject	Category	SEPs TEKS	Dynamic Biology TEKS Lessons, Labs, Investigations, and Explore Activities																										Totals by SEPs	
			B.5A	B.5B	B.5C	B.5D	B.6A	B.6B	B.6C	B.7A	B.7B	B.7C	B.7D	B.8A	B.8B	B.9A	B.9B	B.10A	B.10B	B.10C	B.10D	B.11A	B.11B	B.12A	B.12B	B.13A	B.13B	B.13C		B.13D
B	Scientific and engineering practices	B.1A		X				X			X	X	X		X			X	X				X	X	X	X	X	X	X	15
B	Scientific and engineering practices	B.1B	X		X		X		X		X		X	X	X	X		X	X		X		X	X	X	X	X		X	18
B	Scientific and engineering practices	B.1C	X	X	X				X			X		X								X	X		X		X	X	X	12
B	Scientific and engineering practices	B.1D	X		X				X			X		X				X	X			X	X		X		X		X	12
B	Scientific and engineering practices	B.1E	X	X	X	X	X					X	X	X	X		X					X	X		X		X	X	X	16
B	Scientific and engineering practices	B.1F	X	X	X	X	X		X	X	X		X	X	X	X		X	X	X	X	X	X		X	X	X		X	22
B	Scientific and engineering practices	B.1G	X		X			X		X	X			X	X	X		X	X			X	X		X		X		X	15
B	Scientific and engineering practices	B.1H		X					X						X															3
B	Scientific and engineering practices	B.2A	X				X	X		X	X	X	X	X	X	X						X			X		X		X	14
B	Scientific and engineering practices	B.2B			X						X	X			X	X	X	X	X	X	X	X	X	X	X	X	X		X	16
B	Scientific and engineering practices	B.2C				X			X									X		X						X		X	6	
B	Scientific and engineering practices	B.2D	X						X							X							X	X	X		X	X	X	9
B	Scientific and engineering practices	B.3A			X	X	X	X	X	X		X	X		X	X	X	X	X			X	X	X	X	X	X	X	X	22
B	Scientific and engineering practices	B.3B	X	X					X	X	X	X	X		X	X	X	X	X			X	X	X	X	X	X	X	X	20
B	Scientific and engineering practices	B.3C		X		X		X				X			X	X	X	X					X				X	X	11	
B	Scientific and engineering practices	B.4A	X	X	X	X		X	X	X	X	X	X		X		X		X			X		X	X	X	X	X	X	20
B	Scientific and engineering practices	B.4B		X		X			X	X			X				X					X	X			X	X	X	X	12
B	Scientific and engineering practices	B.4C		X		X								X	X								X		X	X		X	8	
B	Recurring themes and concepts		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	27
Totals by Content TEKS			11	11	10	9	6	7	7	12	9	6	14	8	10	14	6	12	11	6	5	11	13	11	14	10	17	10	18	278

Kate the Chemist

K-12 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

K-12 Texas Virtual Field Investigations

ALL K-12 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.



Back

Guided Practice Workspace

Level 5
Level 4
Level 3
Level 2
Level 1

Two heterozygous black mice are crossed. In these mice, black fur (B) is dominant over white (b). What are the expected genotypes and phenotypes of their offspring?

Father's Genotype: B b

Mother's Genotype: B b

	B	b
B	BB	Bb
b	Bb	bb

Genotypes: BB Bb bb
25% 50% 25%

1 : 2 : 1

1 2 3 4 5 6

Use dominance to drag the correct phenotype to each box of the Punnett square.

Check Help Reset



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

High Quality TEKS Lesson Videos

BIOLOGY RC 4 **TEKS B.12A**

Nervous System

The nervous system processes information, responds to stimuli, and regulates and coordinates life's functions.



TEXAS—High School

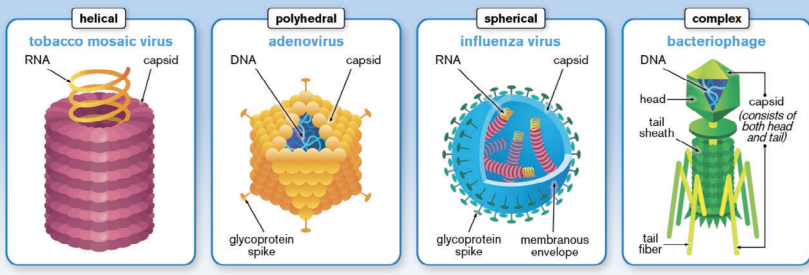
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- 100% of the Biology Content TEKS and SEPs are supported with high quality Lesson Videos
- 100% of the Videos were specifically created for 2024 K-12 Science TEKS by Texas Science Educators and authors along with a team of Professional Documentary Film Editors and storytellers

BIOLOGY RC 1 **TEKS B.5D**

Viruses and Diseases

Viral Structures and Shapes



helical
tobacco mosaic virus
RNA
capsid

polyhedral
adenovirus
DNA
capsid
glycoprotein spike

spherical
influenza virus
RNA
capsid
glycoprotein spike
membranous envelope

complex
bacteriophage
DNA
head
tail sheath
tail fiber
capsid (consists of both head and tail)

AIDS antiviral bacteriophage capsid common cold HIV host influenza
latent virus lysis lysogenic cycle lytic cycle vaccine virulent virus virus

TEXAS—High School

0:04 / 15:13

Formative and Summative Assessments and Assessment Bank

Create a Custom Assessment

Assessment Name:

Number of Items:

Select Item Types:

Select TEKS to include:

% Dual-coded:

RC1	RC2	RC3	RC4	RC5
B.5A	B.7A	B.9A	B.11A	B.13A
B.5B	B.7B	B.9B	B.11B	B.13B
B.5C	B.7C	B.10A	B.12A	B.13C
B.5D	B.7D	B.10B	B.12B	B.13D
B.6A	B.8A	B.10C		
B.6B	B.8B	B.10D		
B.6C				

Select Options, then Create

Create

The NEW Assessment appears in the table and is ready to assign to your class



Assessment Bank

Date Created	Custom Assessment Name	Avg. Score	PLD	Assign
9/28/24	Biomolecules Pre-Assessment	65%	Approaches	
11/4/24	Cell Cycle and DNA Replication Benchmark	87%	Meets	
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Create New

Includes the NEW STAAR® EOC 2.0 Items

QUESTION 1

The chart below describes how biomolecules function in cellular structures. Match the name of the biomolecules to a corresponding statement. Move ONE correct answer to each box. [B.1F]

Provide structural support in cells	Store genetic information in the nucleus of eukaryotes	Main component of the cell membrane	Found in the cell walls of plants
Proteins	Lipids	Carbohydrates	Nucleic Acids

QUESTION 2

The fluid mosaic model describes the structure of the cell membrane. Two of the structures that make up this model are labeled A and B in the diagram. What are the names of the two macromolecules labeled A and B? Select TWO correct answers. [B.3A]

☐ a. Nucleic Acids

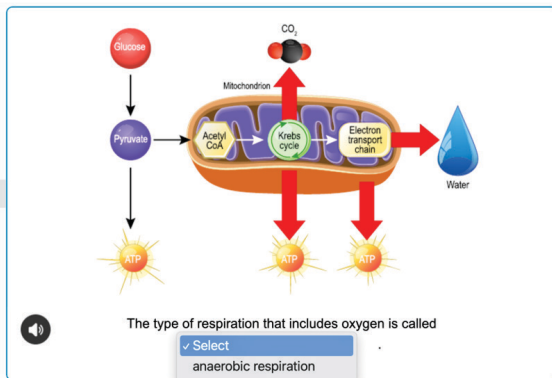
☐ b. Lipids

☐ c. Carbohydrates

☐ d. Proteins

Vocabulary Mastery

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

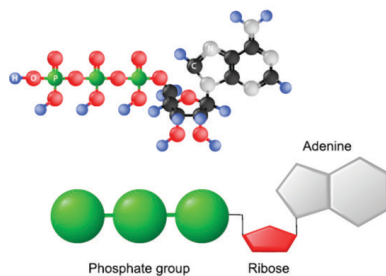


aerobic cellular respiration

respiración aeróbica

noun

The process of breaking down glucose in the presence of oxygen to yield a maximum amount of ATP is aerobic cellular respiration.



The energy molecule made from the conversion of glucose and oxygen, which powers cellular processes, is called

✓ Select

- oxygen
- glucose
- carbon dioxide
- ATP (adenosine triphosphate)

ATP (adenosine triphosphate)

trifosfato de adenosina

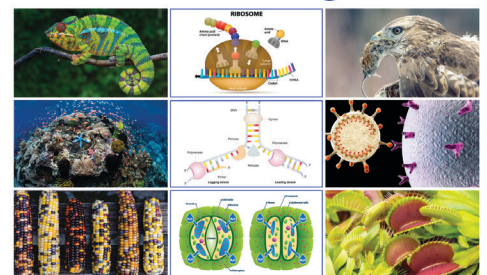
noun

ATP (adenosine triphosphate) is a molecule that provides chemical energy used by cells to power cellular processes.

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



Comprehensive Professional Development

Professional Development for ALL Stakeholders

- Science Coordinators
- Science Teachers
- Principals & Superintendents
- Parents/Guardians
- Instructional Coaches

SCIENCE COORDINATOR IMPLEMENTATION PD
INITIAL TEACHER TRAINING
TEKS CHANGES BY GRADE LEVEL
TEACHING WITH PHENOMENA

DELIVERY MODELS
• Asynchronous, Zoom, and On-site
DIFFERENTIATION/ACCELERATION
SCIENCE-LITERACY/VOCABULARY
3D TEACHING & LEARNING

"Every student in Texas will be deeply involved in the doing of science and sensemaking."

"We need to prepare teachers to teach science in a different way, but we also need to help principals understand that [the new 3D] science classrooms are going to look and sound different than[current classrooms]."



DR. LINDA COOK

Dr Linda Cook's experiences include Extensive Professional Development Work and presentations related to the Framework for K-12 Science Education; Ready, Set, Science.

- Summit K12 Professional Development Strategy and Implementation Planning
- NSELA Professional Development Committee 2023-2026
- NSELA President-Elect, President, and Past President 2020-2023
- President of the Metroplex Area Science Supervisors (2009-2010)
- Director of K-12 Science, Coppell ISD, 15 years
- PhD Curriculum and Instruction focused on Global Science Education

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Student and Teacher Editions designed for **doing** science.

Convenient, Pre-packaged Classroom Lab Kits



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2024

DYNAMIC SCIENCE

State Adoption Pricing

K-8th Grade English/Spanish, Biology, Chemistry, Physics, IPC



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\$6.95 PER STUDENT/YEAR*

*8-year Online Package with Print Teacher's Edition

DYNAMIC SCIENCE ONLINE PACKAGES

COMPREHENSIVE 100% TEKS/ELPS STATE APPROVED

PACKAGE	TOTAL PRICE	PRICE PER YEAR
Online 1-Year	\$10.95	\$10.95
Online 2-Year	\$19.90	\$9.95
Online 4-Year	\$31.80	\$7.95
 Online 8-Year	\$55.60	\$6.95

DYNAMIC SCIENCE ONLINE + PRINT PACKAGES

COMPREHENSIVE 100% TEKS/ELPS STATE APPROVED + PRINT TE

PACKAGE	TOTAL PRICE	PRICE PER YEAR
Online 1-Year + Print TE	\$13.95	\$13.95
Online 2-Year + Print TE	\$23.90	\$11.95
Online 4-Year + Print TE	\$35.80	\$8.95
 Online 8-Year + Print TE	\$55.60	\$6.95

3D Student Consumable Print K-12 (from 1-8 Years, up to 25% off)

Science Lab Investigation Kits (starting at \$1,345 per classroom)