SUMMIT K12

# 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...

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Lesson Guide

## B.13A Learning Activities

SUMMIT K12 Online

*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 | 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 | 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

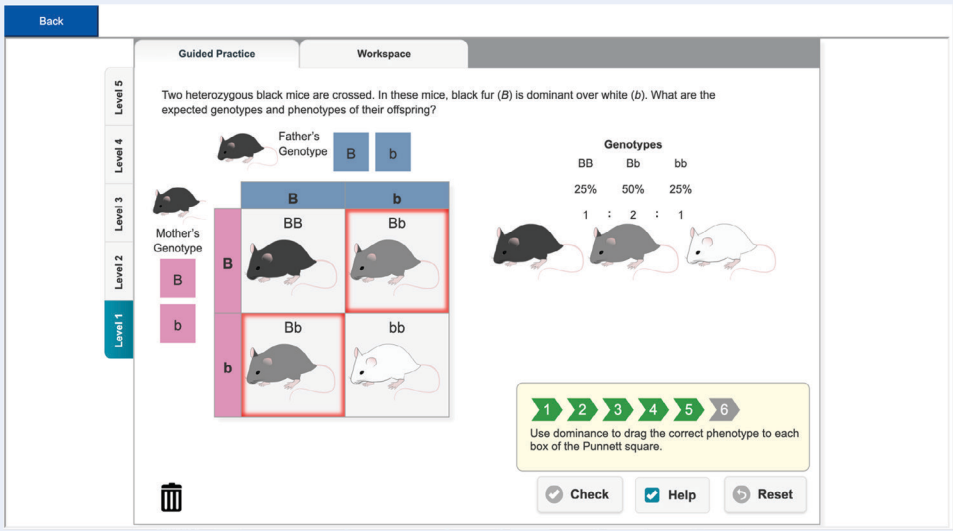
# K-12 Texas Virtual Field Investigations

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

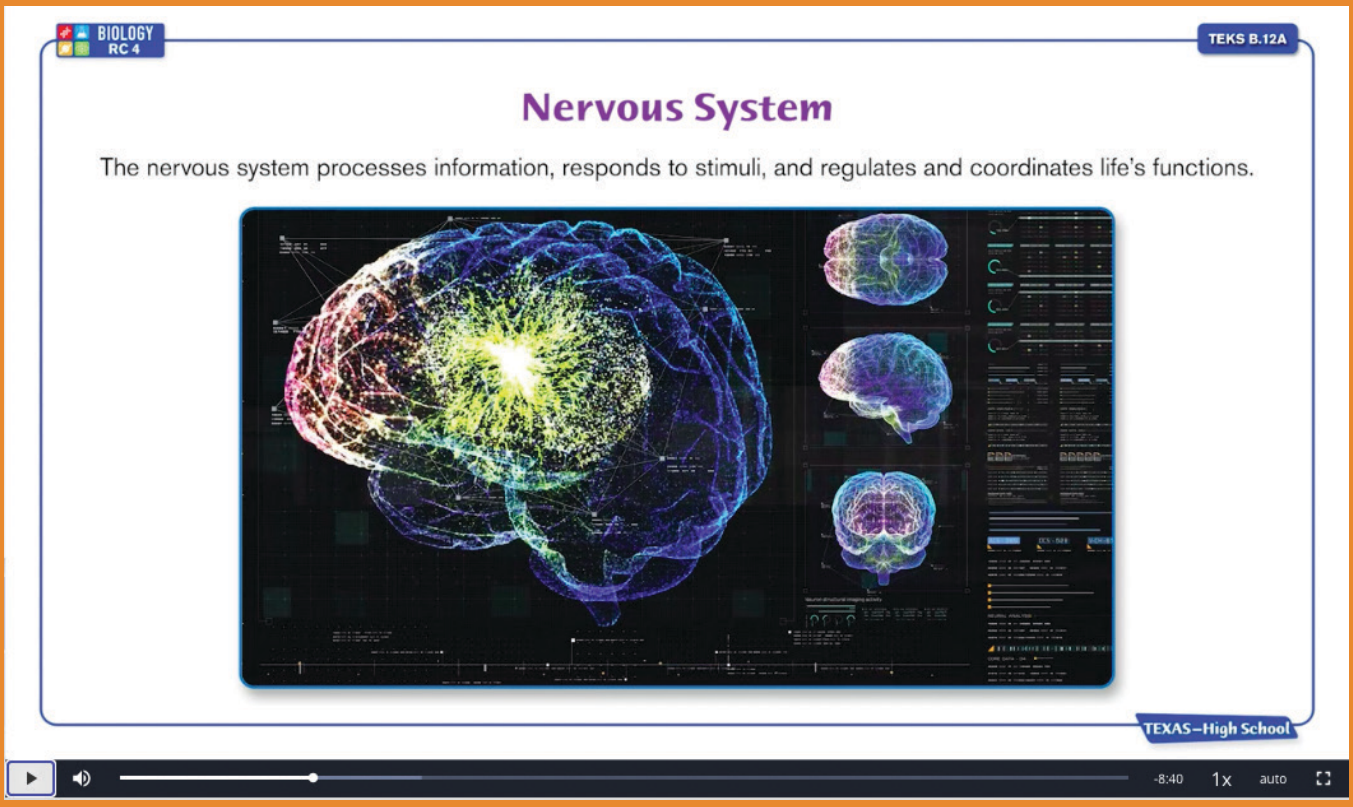
Comparative, Descriptive, and Experimental Investigations to engage students and support sensemaking.



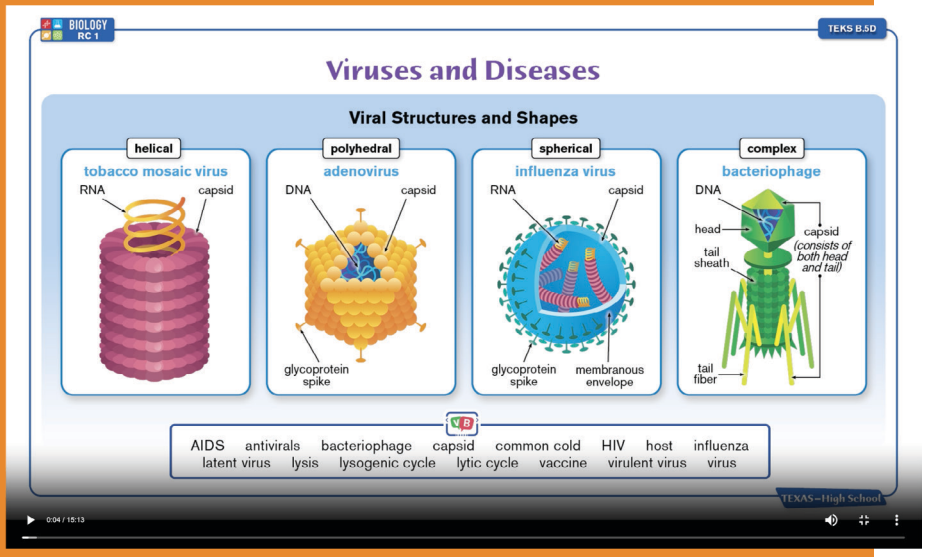

PhET INTERACTIVE SIMULATIONS

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

# High Quality TEKS Lesson Videos




- 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



# Formative and Summative Assessments and Assessment Bank

## Create a Custom Assessment

**Assessment Name:** Dr. Kate's Natural Selection B.10A quiz

**Number of Items:** 10

**Select Item Types:** MC, MS, DD, SCR, MP

**Select TEKS to include:**

**% Dual-coded:** 40%

| 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

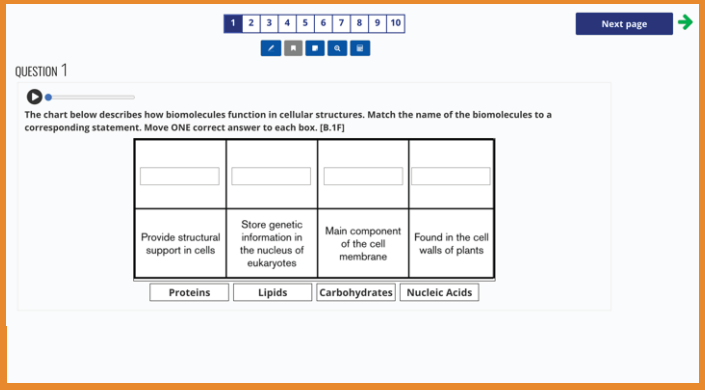
The NEW Assessment appears in the table and is ready to assign to your class

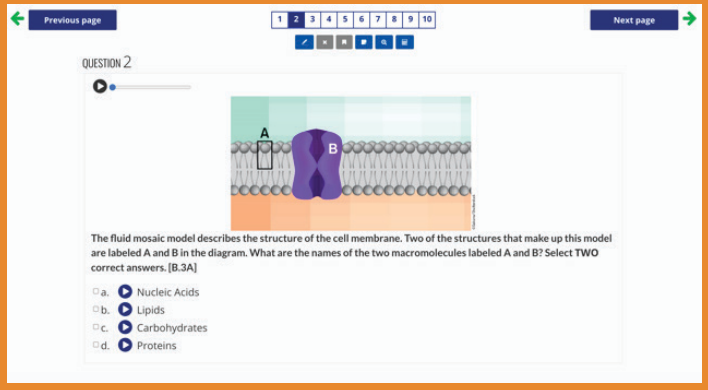
Assessment Bank

| 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 | |
| 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 | | |

Create New

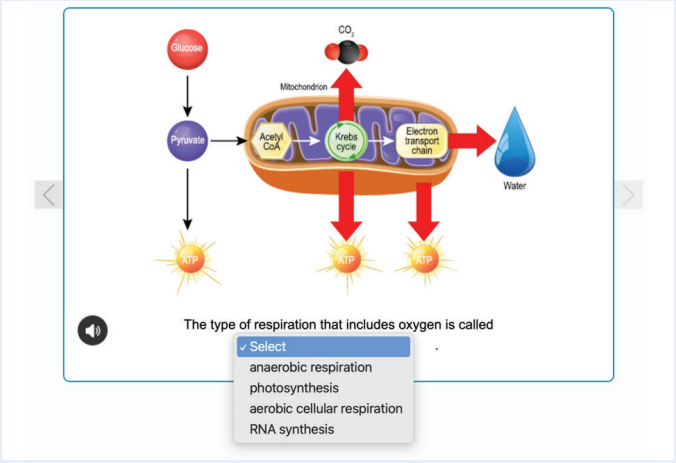
## Includes the NEW STAAR® EOC 2.0 Items

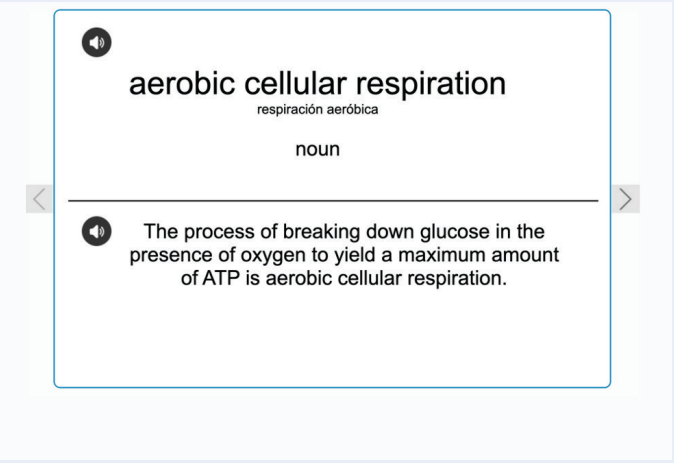


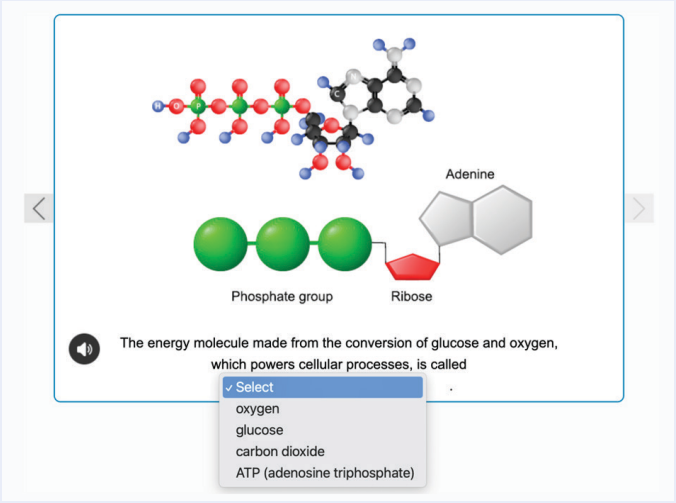



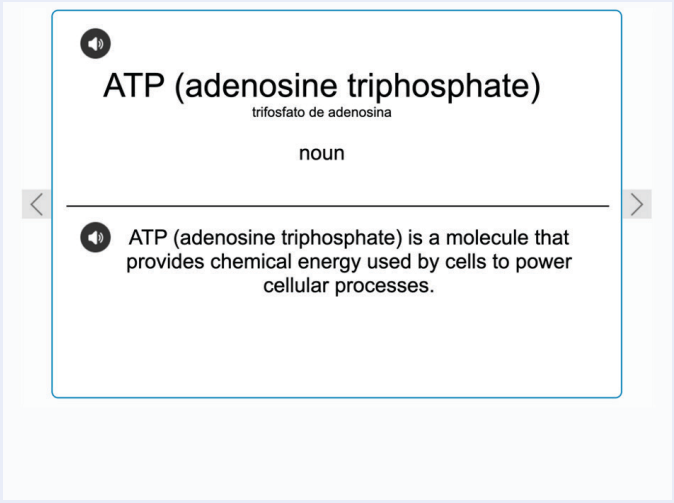
# Vocabulary Mastery

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



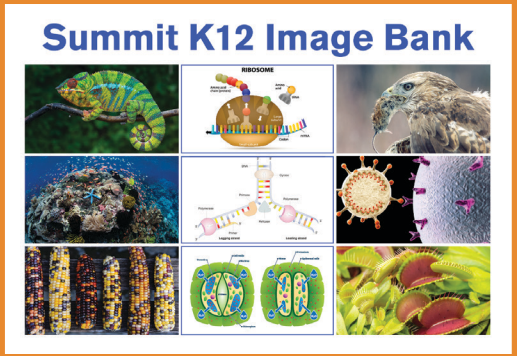




# Image Bank

- 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



# 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]."**

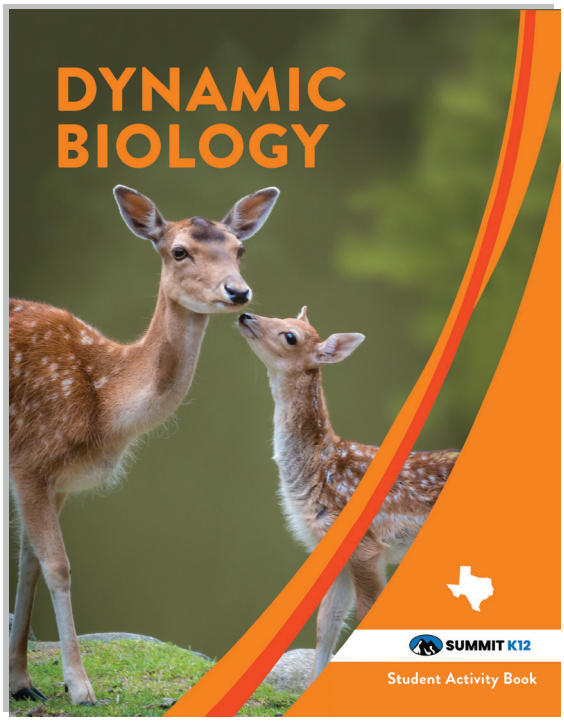
**DR. LINDA COOK**

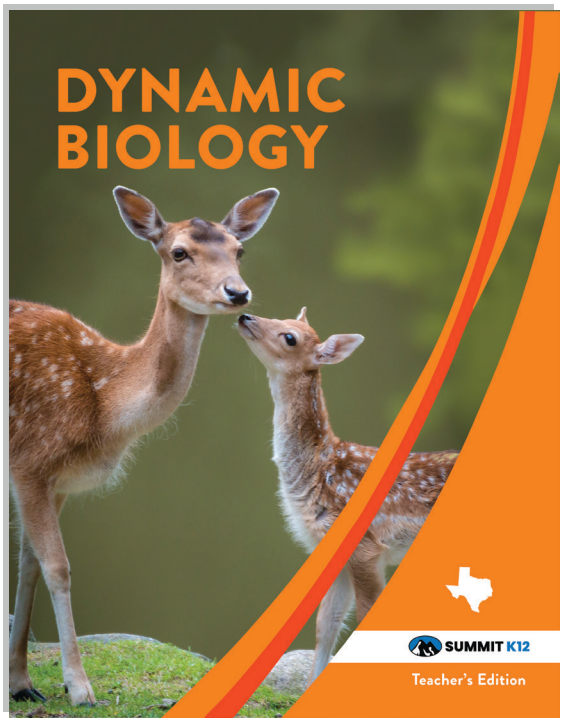
Dr Linda Cook's experiences include Extensive Professional Development Work and presentations related to the Framework for K-12 Science Education; Ready, Set, Science.

- 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

**EASY • EFFICIENT • EFFECTIVE**

# Printed 3D Student Activity Books and Teacher's Editions




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

# Convenient, Pre-packaged Classroom Lab Kits


ward's science

In partnership with Ward's Science

SUMMIT K12

2024

# DYNAMIC SCIENCE
## State Adoption Pricing

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

**$6.95 PER STUDENT/YEAR***
*8-year Online Package with Print Teacher's Edition

= **Best Value** *(up to 50% off)*

### 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)*