



SUMMIT K12

2024

DYNAMIC IPC

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?

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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 IPC

- Cat 1: Force and Motion
 - 1.1 Velocity (IPC.5A)
 - Pacing Guide
 - Lesson Guide
 - Assessments
 - TEKS Lesson Video
 - Vocabulary Mastery
 - Study Guide
 - Study Guide Key
 - Interactive E-Poster
 - Speed vs. Velocity (7.7B)
 - 1.2 Acceleration (IPC.5A)
 - Newton's Second Law of Motion (8.7A)
 - 1.3 Mass, Acceleration and Net Force (IPC.5B)
 - Balanced and Unbalanced Forces (6.7B)
 - 1.4 Momentum and Impulse (IPC.5C)
 - 1.5 Four Fundamental Forces (IPC.5D)
 - Gravity, Friction, Magnetism, Applied and Normal ...
 - Applications of Electromagnetic Waves (8.8B)
 - 1.6 Gravitational and Electrical Forces (IPC.5E)
- Cat 2: Energy Transfer and Energy Conservation
- Cat 3: Structure and Properties of Matter
- Cat 4: Changes in Matter

Lesson Guide

IPC.5A Learning Activities

ENGAGE AND ESTABLISH RELEVANCE	
Phenomenon: Velocity and Acceleration in Daily Life	30 minutes
INVESTIGATE AND LEARN	
Activity: 10-Meter Course	20 minutes
Activity: Position Graph	50 minutes
Activity: Modeling Motion	20 minutes
Virtual Investigation: Graphing Motion	50 minutes
Activity: Acceleration: Exploration	15 minutes
Activity: Acceleration Problems	30 minutes
Activity: Graphing Acceleration	15 minutes
Activity: Graphing Velocity	15 minutes
PRACTICE AND EXTEND	
Practice: Velocity Problems	30 minutes
Practice: Graph Analysis	30 minutes
Study Guide: Velocity and Acceleration	40 minutes
EVALUATE	
Concept Mastery Assessments	20 min each

TEKS IPC.5A

Core Vocabulary

acceleration	the rate at which velocity changes over time
average velocity	the vector quantity that measures the change in position of an object over time
displacement	the vector quantity that measures the change in position of an object from its starting point to its final position

SUMMIT K12

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

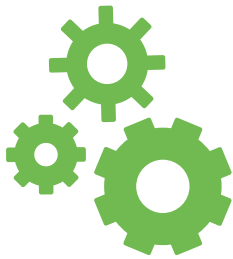
ASSESSMENT BANK

Date Created	Custom Assessment Name	Avg. Score	PLD	Assign
9/28/24	Velocity and Acceleration review	65%	Approaches	
11/4/24	Mass, Acceleration, and Net Force Quiz	87%	Meets	
12/4/24	Energy Transfer and Energy Conservation Test	92%	Masters	
1/12/25	TEKS IPC.7A Atomic Structure quiz	81%	Meets	
2/3/25	Unit 3.5 (IPC.7F) quiz	90%	Masters	
3/2/25	Dr. Kate's Changes in Matter Exam	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 IPC TEKS Lessons, Labs, Investigations, and Explore Activities																Totals by SEPs							
			1.1	1.2	1.3	1.4	1.5	1.6	2.1	2.2	2.3	2.4	2.5	2.6	2.7	3.1	3.2	3.3		3.4	3.5	4.1	4.2	4.3	4.4	
IPC	Scientific and engineering practices	IPC.1A		X				X		X							X							X	5	
IPC	Scientific and engineering practices	IPC.1B				X		X	X				X						X	X	X			X	9	
IPC	Scientific and engineering practices	IPC.1C									X							X	X	X					4	
IPC	Scientific and engineering practices	IPC.1D						X	X	X										X	X				5	
IPC	Scientific and engineering practices	IPC.1E			X		X		X	X	X	X						X			X				8	
IPC	Scientific and engineering practices	IPC.1F		X	X		X	X			X		X			X		X		X				X	10	
IPC	Scientific and engineering practices	IPC.1G					X	X	X		X	X		X		X						X			8	
IPC	Scientific and engineering practices	IPC.1H				X	X																		2	
IPC	Scientific and engineering practices	IPC.2A					X				X				X			X							4	
IPC	Scientific and engineering practices	IPC.2B	X			X	X				X			X											5	
IPC	Scientific and engineering practices	IPC.2C	X	X		X	X															X			5	
IPC	Scientific and engineering practices	IPC.2D				X				X			X										X		4	
IPC	Scientific and engineering practices	IPC.3A	X			X	X	X		X		X			X	X	X	X	X	X	X	X	X	X	X	16
IPC	Scientific and engineering practices	IPC.3B	X			X			X	X				X	X	X	X		X	X		X	X	X	X	13
IPC	Scientific and engineering practices	IPC.3C	X			X								X	X				X				X		6	
IPC	Scientific and engineering practices	IPC.4A										X			X	X	X	X		X				X	7	
IPC	Scientific and engineering practices	IPC.4B		X		X	X				X			X		X	X		X			X			X	10
IPC	Scientific and engineering practices	IPC.4C															X						X		2	
IPC	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	22
Totals by Unit			6	5	6	10	6	7	6	7	9	4	7	5	4	8	6	4	9	6	6	11	5	8	145	

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

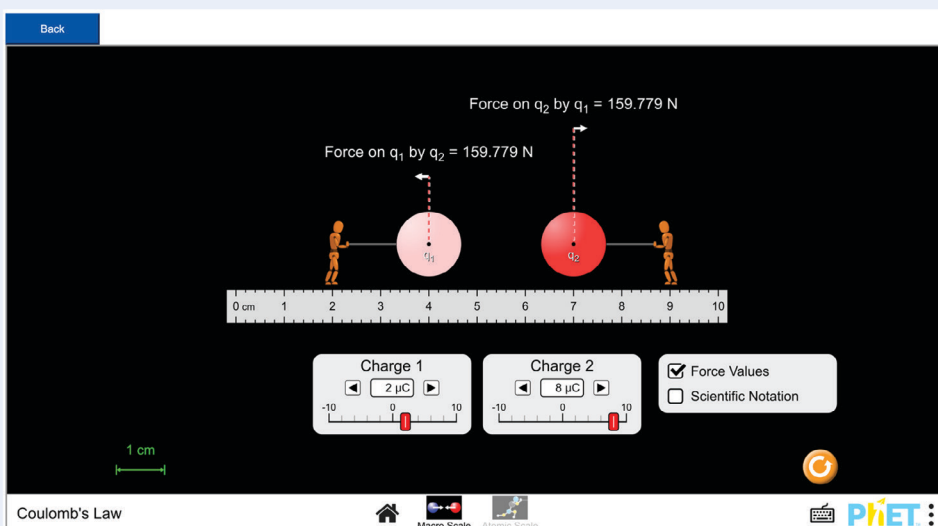
ALL K-12 students will have the opportunity to investigate phenomena throughout dozens of the most popular state parks and engineering marvels in Texas.

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.



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

High Quality TEKS Lesson Videos

Dynamic IPC
TEKS IPC.5A

Acceleration

$V_0 = 0 \text{ m/s}$ $V_1 = 10 \text{ m/s}$ $V_2 = 20 \text{ m/s}$ $V_3 = 30 \text{ m/s}$
 $t_0 = 0 \text{ s}$ $t_1 = 1 \text{ s}$ $t_2 = 2 \text{ s}$ $t_3 = 3 \text{ s}$

$$a = \frac{v_f - v_i}{\Delta t}$$

a = acceleration (m/s²)
 v_f = final velocity (m/s)
 v_i = initial velocity (m/s)
 Δt = change in time (s)

Types of Acceleration:

- positive acceleration
- negative acceleration
- change in direction
- no acceleration

acceleration final velocity initial velocity instantaneous acceleration

9:19
1x
auto

- 100% of the IPC Content TEKS and SEPs include 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

Dynamic IPC
TEKS IPC.8A

Series and Parallel Circuits

parallel circuit

series circuit

Transfer of electrical energy can occur in a closed circuit.

Transfer of electrical energy cannot occur in an open circuit.

parallel circuit
resistor
series circuit
switch

Current flows from the positive end to the negative end of a circuit.

0:03 / 6:10
9:19
1x
auto

Formative and Summative Assessments and Assessment Bank

Create a Custom Assessment

Assessment Name:

Number of Items:

Select Item Types:

Select Units to include:

% Dual-coded:

Force and Motion	Energy Transfer and Conservation	Structure and Properties of Matter	Changes in Matter
Velocity	Series and Parallel Circuits	Atomic Structure, Bonding, Reactivity, and the Periodic Table	Chemical Changes
Acceleration	Electromagnetic Induction	Patterns of Elements' Physical and Chemical Properties in the Periodic Table	Chemical Equations and Conservation of Mass
Mass, Acceleration, and Net Force	Conservation of Energy	Physical and Chemical Properties in Everyday Life	Nuclear Reactions - Advantages and Disadvantages
Momentum and Impulse	Thermal Energy: Conduction, Convection, Radiation	Atomic Energy Levels, Emission Spectra, and Wave Particle Duality	Environmental Impact of Chemical Reactions
Four Fundamental Forces	Transfer of Energy by Waves		
Gravitational and Electrical Forces	Waves Interference, Reflection, and Refraction		
	Renewable and Nonrenewable Resources		

Select Options, then Create →

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



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Includes Items Written for the 2024 TEKS

QUESTION 3

Two boxers are sparring in a ring. One boxer wears gloves, while the other boxer uses her bare fists. Why is the impulse different in the two boxers if the acceleration and mass are the same? [IPC.3A]

Select one:

- a. The boxer with bare hands increases the time that the impact of the collision is felt. This reduces the impulse of her punch.
- b. The boxer with bare hands decreases the time that the impact of the collision is felt. This reduces the impulse of her punch.
- c. The boxer with the gloves increases the time that the impact of the collision is felt. This reduces the impulse of her punch.
- d. The boxer with the gloves decreases the time that the impact of the collision is felt. This reduces the impulse of her punch.

QUESTION 1

Four vehicles traveled at the same velocity when they collided with a concrete barricade. Which vehicle had the greatest momentum? Select ONE correct answer.

Vocabulary Mastery

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




Volunteers work to clean up after an oil to spill in causes

Select
tracer
nuclear event
catastrophic accident
medical image

catastrophic accident
accidente catastrófico

noun

A catastrophic accident is a sudden and life-threatening disaster.



A yellow precipitate forms when two clear liquids are mixed in the same beaker.

Select
gas
precipitate
catalyst
reactant

precipitate
precipitado

noun

A precipitate is a solid that forms due to a chemical change. This is often seen in a double replacement reaction.

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



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]."



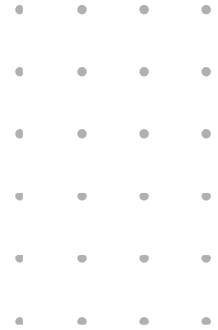
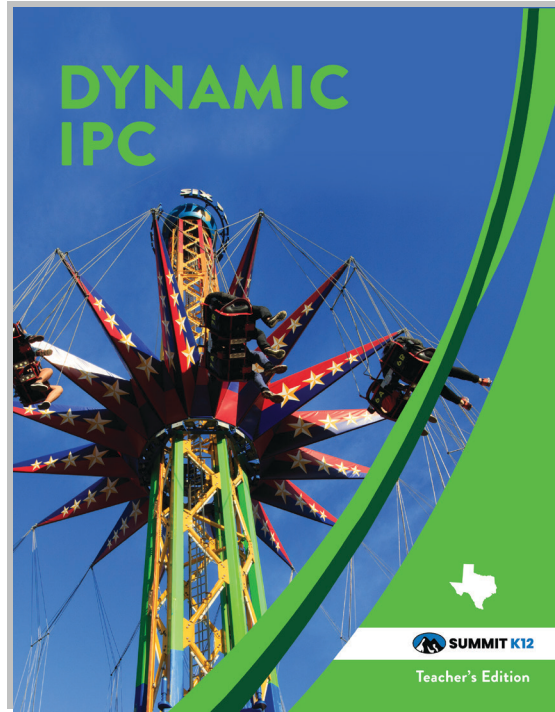
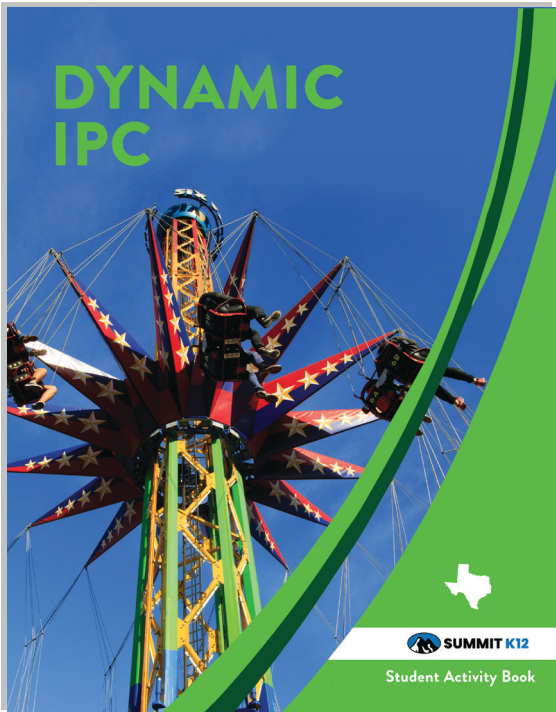
DR. LINDA COOK

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


\$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)