Mc Graw Hill

Program Overview
Grades K–5

Tennessee Science

Welcome to *Tennessee Science*

Engaging, Flexible, Cross-Curricular Learning

Tennessee Science provides an in-depth, collaborative, project-based learning experience designed to engage students, empower them to ask questions, and learn to think critically. Designed with the Tennessee Academic Standards for Science in mind, *Tennessee Science* provides the structure for students to develop a solid background of foundational science knowledge while they learn to practice problem solving and critical thinking skills inherent in science.

Student eBook and assignments can be accessed from anywhere on a mobile device using the K–12 Portal App!

Encourage Young Students to Explore Their World

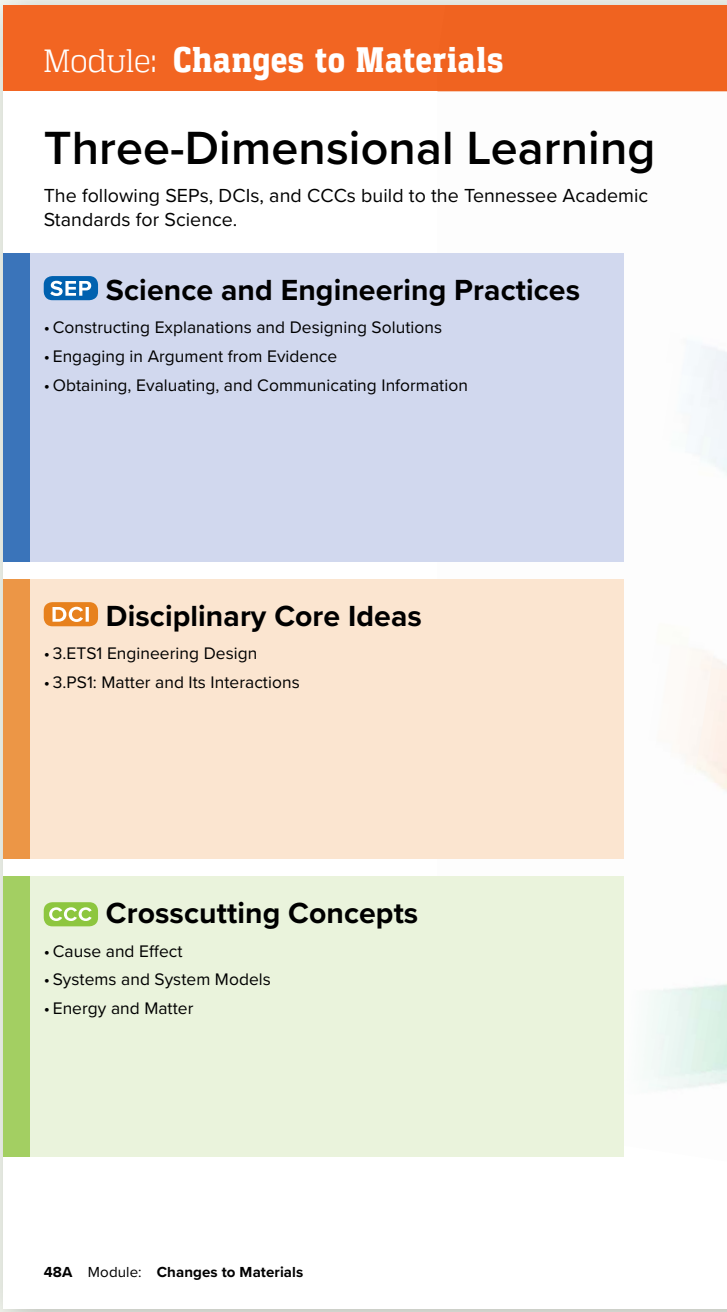
Children are natural problem-solvers and innovators. Fueled by curiosity, they approach each day with a sense of wonder and a drive to learn. *Tennessee Science* helps students retain and expand on this natural inclination by empowering them to explore and learn from our world's amazing natural phenomena in exciting, hands-on ways. A new generation of innovators is ready to grow up now and many are tomorrow's scientists. **Are you ready to help guide them to meet the challenges of the 21st Century?**

Designed for the Rigor of the Tennessee Academic Standards for Science

Tennessee Science represents a program that ensures Tennessee educators have the resources and tools to deliver high-quality instruction to help students meet the rigor and challenge of the Tennessee Academic Standards for Science.

Comprehensive Tennessee Academic Standards for Science Planning

At the beginning of each module, Tennessee Academic Standards for Science codes and descriptions help teachers quickly see performance expectations addressed in the module.



Module: **Changes to Materials**

Three-Dimensional Learning

The following SEPs, DCIs, and CCCs build to the Tennessee Academic Standards for Science.

SEP Science and Engineering Practices

- Constructing Explanations and Designing Solutions
- Engaging in Argument from Evidence
- Obtaining, Evaluating, and Communicating Information

DCI Disciplinary Core Ideas

- 3.ETS1 Engineering Design
- 3.PS1: Matter and Its Interactions

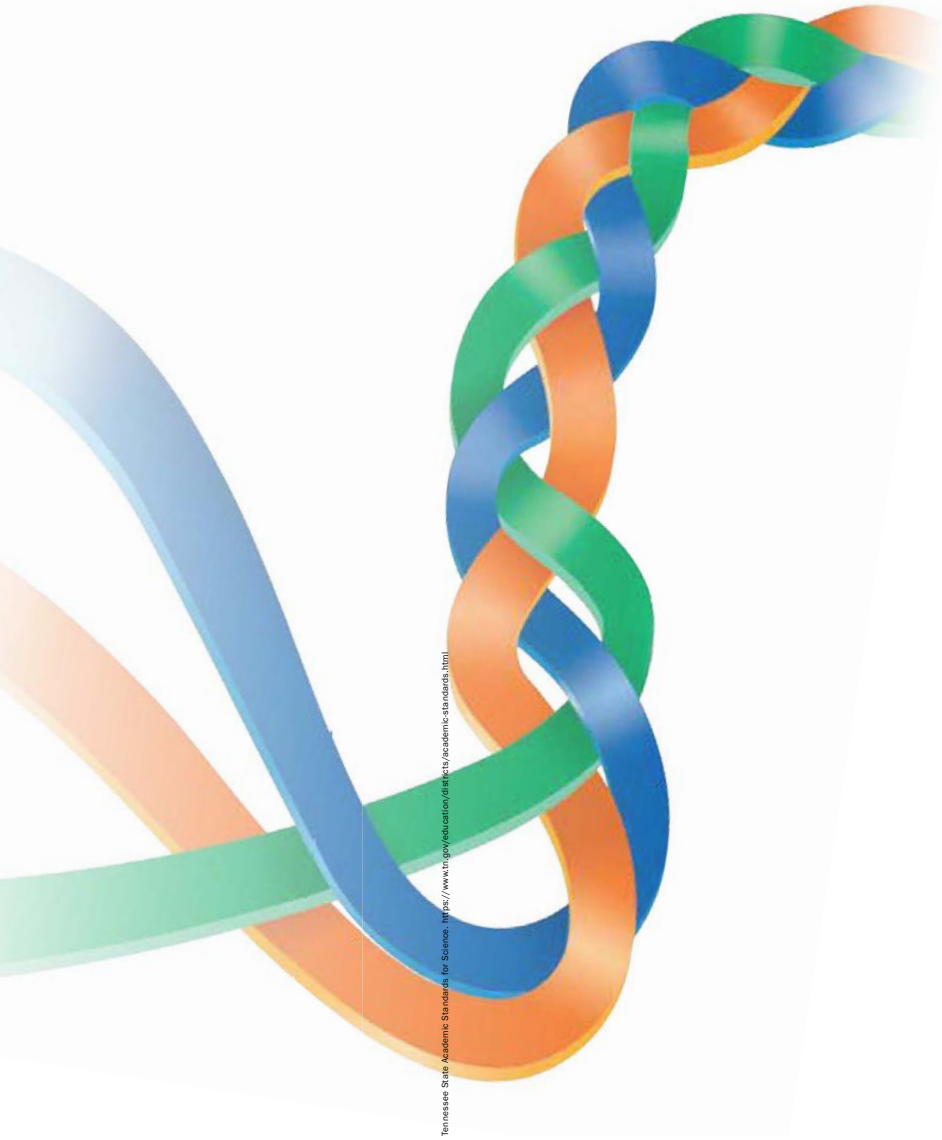
CCC Crosscutting Concepts

- Cause and Effect
- Systems and System Models
- Energy and Matter

48A Module: **Changes to Materials**

Disciplinary Core Idea Progression

Each module includes a table illustrating in detail the Disciplinary Core Idea Progressions across Grades K–8.



Tennessee State Academic Standards for Science. https://www.tn.gov/education/districts/academic-standards.html

Tennessee Academic Standards for Science

3.ETS1.1 Design a solution to a real-world problem that includes specified criteria and constraints

3.ETS1.2 Apply evidence or research to support a design solution

3.PS1.2 Construct an explanation about the effects of heating and cooling a substance differentiating between changes that can be reversed (i.e., freezing & melting) and those that cannot (e.g., baking a cake or burning fuel).

CROSS-CURRICULAR Connections

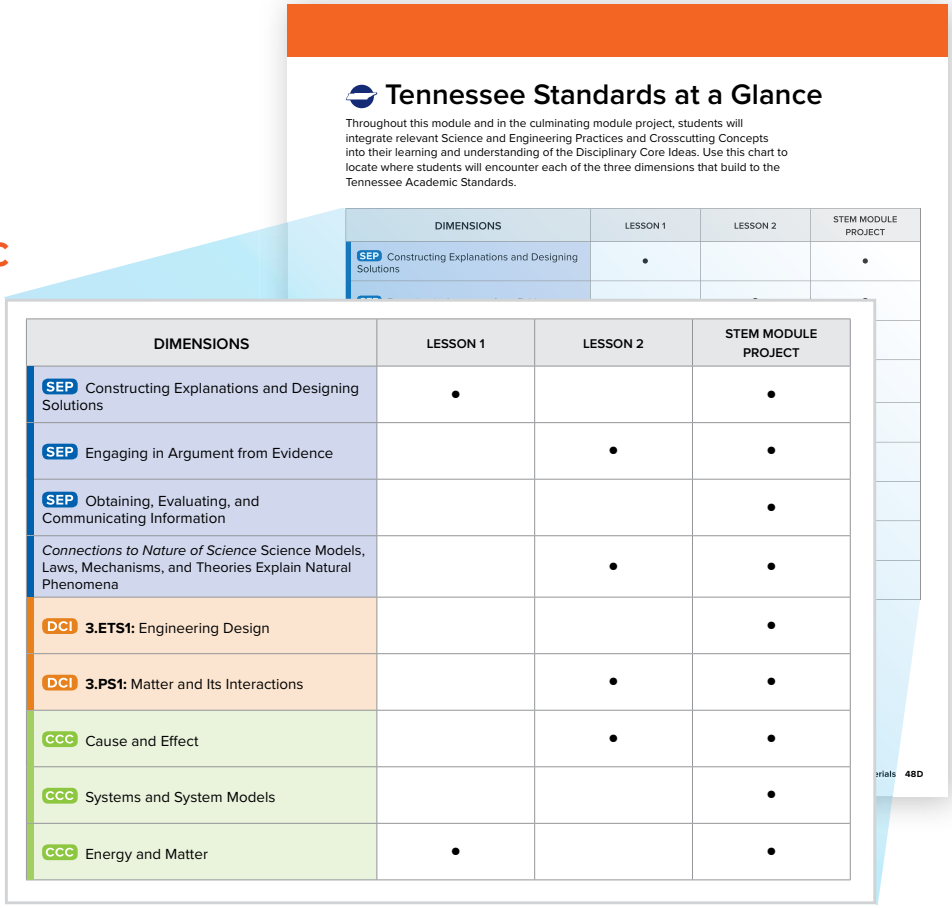
In addition to in-depth coverage of the three dimensions, this module also covers connections to English-Language Arts, Engineering, and Environmental topics.

GO ONLINE Explore the videos in Module Planning Resources that support professional development of three-dimensional learning.

K–2	3–5	6–8
3.PS1: Matter and Its Interactions		
• Plan and conduct an investigation using patterns to classify different kinds of materials by their observable properties (i.e. absorbency, color, texture, hardness, and flexibility), by their uses, and by whether they occur naturally or are manufactured. (K.PS1.1) • Conduct investigations to understand that matter can exist in different states (solid and liquid) and has properties that can be observed and tested. (K.PS1.2)	• Construct an argument based on evidence that materials have both fixed and changing properties, some of which are useful for identification of a material. (3.PS1.3) • Develop a model of solids, liquids, and gases to describe that each state of matter is made of particles too small to be seen. (3.PS1.1)	• Evaluate and communicate information that all substances in the universe are made of many different types of atoms that combine in various ways. (7.PS1.1) • Develop a model to explain how changes to a system can be explained by changes in temperature and/or pressure and the effect of those changes on particle motion and/or spatial arrangement. (7.PS1.3)

Three Dimensions at a Glance Building to Tennessee Academic Standards

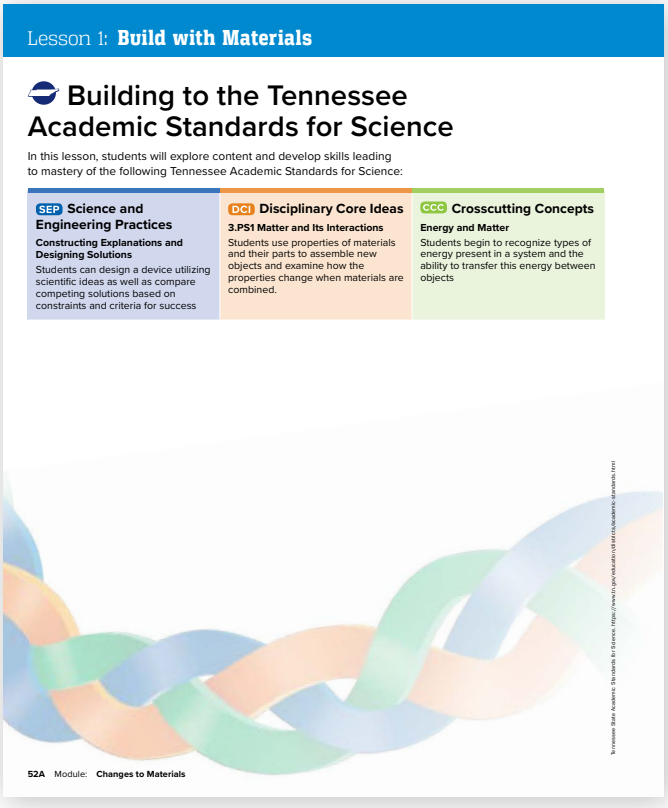
Use this chart to locate where students will encounter each of the three dimensions that build to the Tennessee Academic Standards expectations within the module.



Tennessee Standards at a Glance

Throughout this module and in the culminating module project, students will integrate relevant Science and Engineering Practices and Crosscutting Concepts into their learning and understanding of the Disciplinary Core Ideas. Use this chart to locate where students will encounter each of the three dimensions that build to the Tennessee Academic Standards.

DIMENSIONS	LESSON 1	LESSON 2	STEM MODULE PROJECT
SEP Constructing Explanations and Designing Solutions	•		•
SEP Engaging in Argument from Evidence		•	•
SEP Obtaining, Evaluating, and Communicating Information			•
Connections to Nature of Science Science Models, Laws, Mechanisms, and Theories Explain Natural Phenomena		•	•
DCI **3.ETS1:** Engineering Design			•
DCI **3.PS1:** Matter and Its Interactions		•	•
CCC Cause and Effect		•	•
CCC Systems and System Models			•
CCC Energy and Matter	•		•



Lesson 1: **Build with Materials**

Building to the Tennessee Academic Standards for Science

In this lesson, students will explore content and develop skills leading to mastery of the following Tennessee Academic Standards for Science:

SEP Science and Engineering Practices

Constructing Explanations and Designing Solutions

Students can design a device utilizing scientific ideas as well as compare competing solutions based on constraints and criteria for success

DCI Disciplinary Core Ideas

3.PS1 Matter and Its Interactions

Students use properties of materials and their parts to assemble new objects and examine how the properties change when materials are combined.

CCC Crosscutting Concepts

Energy and Matter

Students begin to recognize types of energy present in a system and the ability to transfer this energy between objects

Tennessee State Academic Standards for Science. https://www.tn.gov/education/standards/academic-standards.html

Focused Lesson Planning for Effective Standards-Based Instruction

Within the lesson opener, find the extension of Building to Performance Expectations to help focus student learning by standard and integrated Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts.

Flexibility for Busy Class Schedules

Tennessee Science provides Grades K–5 teachers with the flexibility to decide what works for their classroom schedule and student learning needs. With a choice between pacing found in the Teacher Edition or the online Essential Lesson Guide, teachers will find it easy to integrate science into their classroom literacy instruction so that students have continued emphasis on reading, writing, listening, and speaking.

Lesson at a Glance

Full Track is the recommended path for the complete lesson experience.

		Full Track 45 min/day (full year)	
	Day-to-Day	Pacing	Resources
Assess Prior Knowledge	Page Keeley Science Probe: *Big and Small Blocks*	Day 1	Page 59
Engage	Encounter the Phenomenon: How could these same tiles be used to make a different design?		Pages 60–61 Video: *Mosaic Art*
Explore	Inquiry Activity: *Get Connected*	Day 2	Pages 62–64
	Make Your Claim: Does the total number of blocks change when you rearrange the pieces?		Page 65
Explain	Put Pieces Together	Day 3	Pages 66
	Take Objects Apart	Day 4	Pages 67 Video: *Making Objects*
	Notebook Foldables		Page 68
	Inquiry Activity: *Build and Rebuild*	Day 5	Page 69–70
Elaborate	STEM Connection: *What Does an Architect Do?*	Day 6	Page 71
	Build a House		Pages 72
Evaluate	Explain the Phenomenon: How could these same tiles be used to make a different design?	Day 7	Pages 74–76
	STEM Module Project Planning		Page 97
		7 Days	

Essential Lesson Planning Guide

What is the Essential Lesson Planning Guide?

The Essential Lesson Planning Guide is a lesson plan designed for teachers who are looking to make the most of limited science instructional time. This lesson plan uses only 30 minutes of science two times every week but still ensures the entire *Tennessee Science* curriculum can be taught within the allotted number of instructional days. In some cases, specifically for grades 3-5, additional reading time may be needed so students are able to learn and apply the information necessary to meet the Tennessee Academic Standards for Science. Each lesson spans two weeks and is designed using the 5E Learning Cycle.

Instructional Overview

STEP 1 Use the chart below to plan your lesson. Set aside time each week for science.

WEEK 1 INSTRUCTION		WEEK 2 INSTRUCTION	
MODULE OVERVIEW	10 min	EXPLAIN	35 min
ENGAGE	15 min	EVALUATE	15 min
EXPLORE	10–35 min	THREE-DIMENSIONAL THINKING	5 min
		MODULE WRAP-UP*	5 min

* last lesson of each module

STEP 2 Gather and bookmark these resources for easy access:

- Digital / Online access
- Teacher Edition and Student Edition
- Learning Transfer Strategy Guide

STEP 3 Choose your inquiry path for EXPLORE and gather your materials.

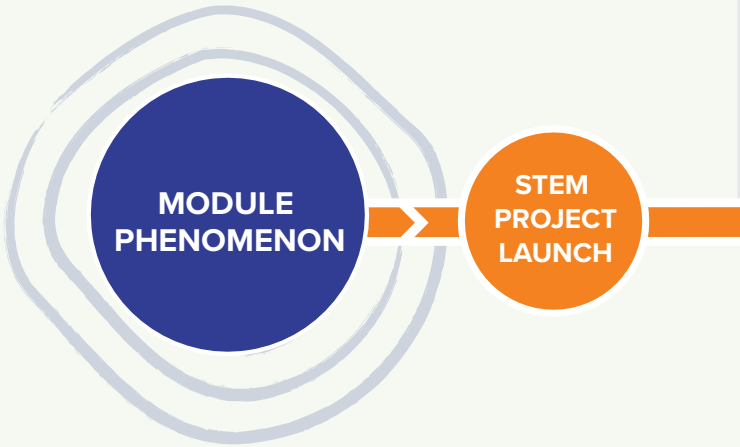
Finding time for Science becomes easier with the Essential Lesson Guide.

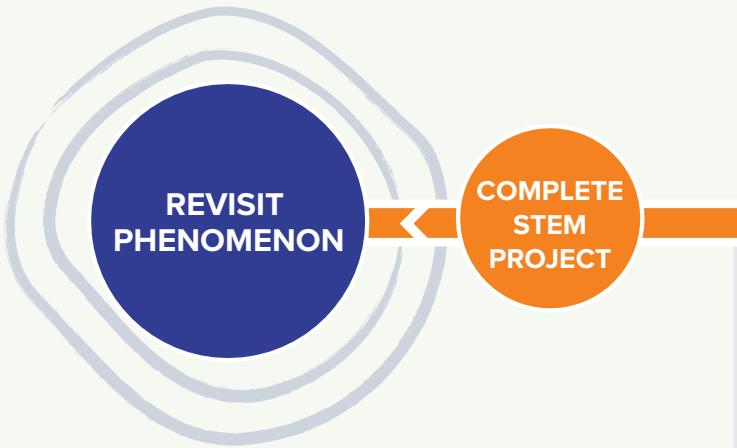
Learning Through Storylines

Children (and adults too!) live in a world full of the unknown—one governed by phenomena big and small that inspire us to pose hypotheses, make observations, ask questions, and seek explanations to increase understanding.

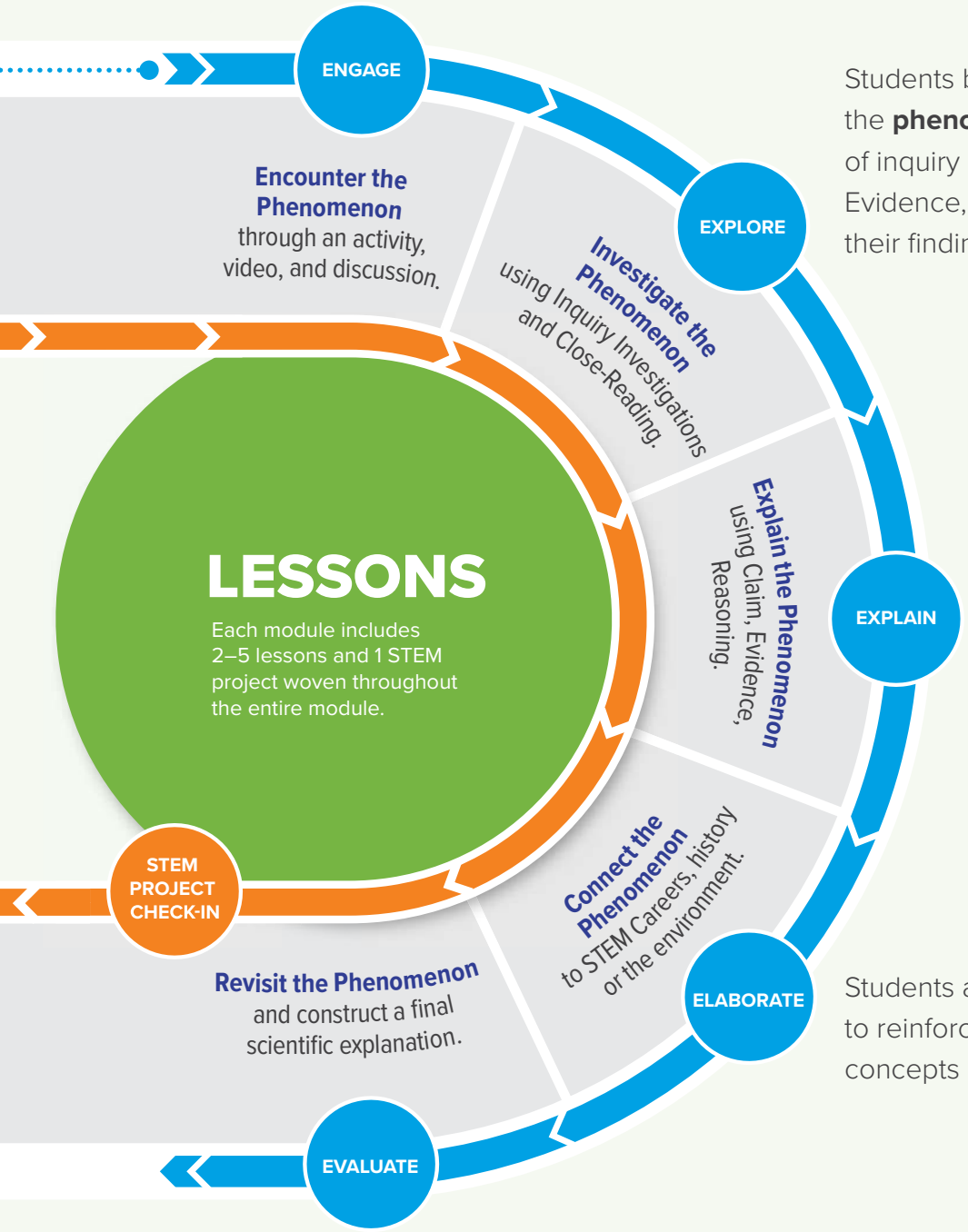
Tennessee Science starts with Module Storylines designed to anchor and engage students as they investigate each lesson-level phenomenon. Within each lesson-level phenomenon, they will gather pieces of the puzzle to help solve and explain the module-level phenomenon.

Tennessee Science is built around the 5E framework to guide students toward scientific understanding using a thorough and methodical process aligned with Tennessee Academic Standards for Science.





Each module and lesson in *Tennessee Science* begins by introducing a natural **phenomenon**, which students are charged with investigating as they progress through the text.



Students begin to explore and investigate the **phenomenon** through different types of inquiry activities, using the CER (Claim, Evidence, Reasoning) framework to record their findings and results.

Students delve into an array of informational text, supportive resources, and interactive activities designed to help them synthesize and convey their understanding of **phenomena** while practicing close-reading skills.

Students apply knowledge to new situations to reinforce deep understanding of lesson concepts introduced by the **phenomenon**.

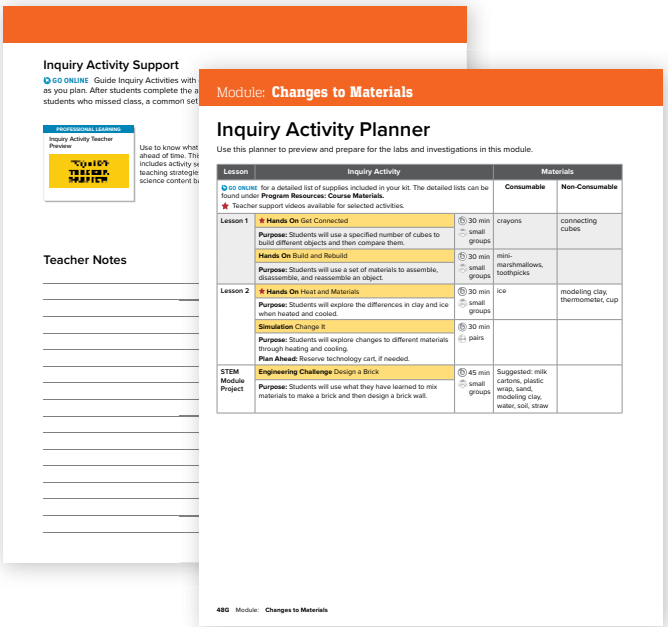
Students explain the **phenomenon** so that teachers can gauge progress and assess understanding.

Empower Students With Inquiry-Based Learning

While working through Inquiry Activities in each lesson, students use the same techniques as scientists and engineers to ask questions, think critically, and design solutions to real-world problems. Easily implementable in any classroom, Inquiry Activities drive home science topics in meaningful, engaging ways.

Types of Inquiry Activities in *Tennessee Science* to enable students to investigate phenomena and record findings in the same way as real-world practitioners do:

- Hands-On
- Data Analysis
- Research
- Simulations
- Engineering



Inquiry Activity Planning

Planning and preparing for students to become elbows-deep in science is made easier with the *Tennessee Science* Inquiry Activity Planner that clearly identifies all the materials needed within the module.

Structured Inquiry
This is a structured inquiry activity.

Guided Inquiry
To make this a guided inquiry, provide the students with the same activity question about the apparent brightness of stars, prediction, and list of materials they will need. Have them design a procedure, determine a way to organize and analyze their data. Write a statement answering the activity question using evidence to support their conclusion.

Open Inquiry
To make this an open inquiry allow students to come up with their own question and prediction about the apparent brightness of stars, determine what materials and data collecting procedures they will use, analyze the data and use it to support a written conclusion answering the activity question.

Inquiry Spectrum

Not all inquiry activities are the same. Depending upon the available time and student readiness, structured inquiry might be perfect, or your class may be ready for open inquiry. The *Tennessee Science* Inquiry Spectrum provides flexible options to adjust the inquiry level to align with the learning needs of each student.

Each lesson offers inquiry activities developed with a recommended inquiry spectrum level, giving you guidance but with the flexibility to modify the level of instruction based on your students' needs.

Inquiry Rewind Videos:

- Encourage student engagement.
- Show the activity materials and the step-by-step procedure.
- Demonstrate the expected outcomes for each step of the activity.
- Provide opportunities for students to pause the video and utilize the Claim, Evidence, and Reasoning skills they have learned through *Tennessee Science*.
- Support easy implementation for new teachers, substitute teachers, absent students or remote learning.

Collaboration Kits

When students are engaged in their learning, they succeed, and nothing is more engaging than rolling up your sleeves and digging into hands-on activities. Developed specifically for group projects, the *Tennessee Science* Collaboration Kits make it easy to implement hands-on activities in your classroom—freeing you to focus on the activity itself.

Support Every Learner

Tennessee Science incorporates the research-based Universal Design For Learning Principles to ensure that all students have access to rigorous curriculum.

Robust differentiation support is found within the Teacher's Edition, as well as through leveled informational text resources such as the leveled readers and online Investigator articles. Support with practical strategies is found at the module and lesson level at multiple points. Leveled text aligns with the Lexile ranges appropriate for each grade level.

Differentiated Instruction

Module Concept Different kinds of materials can be classified by their observable properties. Materials can be used to make objects that can be assembled or disassembled. Materials can be changed by heating or cooling them. Help students connect these key module concepts by providing multiple means of engagement.

AL Approaching Level

Help groups of four students write a recipe for making a fruit salad. What fruits will they include? How will they prepare each fruit? Will they make any changes to the fruit? How will they share it?

OL On Level

Have students choose two different objects, such as a marshmallow and a pencil. Ask them to predict what would happen to each item if it were heated or cooled. Have them write a prediction about how the item would be affected when heated or cooled. *A marshmallow is heated.* ➔ *I predict it will* _____ *A pencil is cooled.* ➔ *I predict it will* _____

BL Beyond Level

Have students observe a parent making dinner. Then have them write a brief report about what changes were made to the ingredients. Ask them to include information about which of the changes were reversible and which were not.

Module Level Differentiation Support

Differentiated Instruction

AL Elicit a list of building materials from students. Write their lists on the board. Then have them model how to take something apart (disassemble) and put it back together again (assemble).

OL Have partners make a list of things they might build outside, such as a shelter or a tent. Have them draw the structure and write a list of materials and steps for building the structure.

BL Have students design and perform a test to see which of their 12-cube structures is less likely to tip over in an earthquake. How can they relate their findings to designing building solutions for places that are prone to earthquakes?

Lesson Level Differentiation Support

Teacher Toolbox

Science Background

This is a photo of steps decorated with a mosaic. A mosaic is a piece of art made by assembling small pieces of stone, colored glass, and other materials.
A physical change occurs when matter changes in size, shape, or state, but the type of matter (or material) itself does not change. Matter can be put together and broken apart. Mass is the amount of matter an object contains. The mass of matter remains the same, even though the shape of matter may change. For example, the total mass of a board will remain the same if the board is cut into two pieces. The mass of a lump of clay stays the same even if the shape of the clay changes.

Identifying Preconceptions

Students may think that when more pieces are used, more material is used. Help students understand that when something is cut into pieces, there is still the same amount of material.

Teacher Support

Science Background and Identifying Preconception sections are found through the Teacher's Edition to provide scientific information around the topic and give educators insights into common ways students think.

Cognates

Cognates are words in two different languages that share a similar meaning, spelling, and pronunciation. Review differences in spelling and pronunciation of these terms with your Spanish-speaking English learners.

assemble ensamblar	**reversible** reversible	**temperature** temperatura
thermometer termómetro	**plastic** plástico	**block** bloque

Language Building Resources

Tennessee Science lessons carefully and purposefully integrate reading, writing, speaking, listening, and collaborating into each lesson. This structure provides English language learners with purposeful language usage and resource access to convey their understanding.

Advanced and Gifted Learners

In addition to the Approaching Level, On Level, and Beyond Level support included in the differentiated instruction strategies for each module and lesson, *Tennessee Science* provides challenging activities directed at advanced and gifted learners.

Advanced Learners and Gifted Learners

Instruction should focus on adding depth and complexity in student understanding of the ways that materials can be put together to make other objects or changed by heating or cooling.

DOK 3 Strategic Thinking Have students revisit the investigations they conduct throughout the module to think about how they can investigate further questions. For example, what would happen if we added further heat to the ice and clay in the Heat and Materials Inquiry Activity? What observable changes can students predict?

DOK 4 Extended Have students research the melting and freezing points of several different materials, such as plastic, steel, clay, oil, and glass. Ask them to display their results in a table. Then have them choose one of the materials and tell what uses it would be good for based on its ability to withstand extreme temperatures. Have partners discuss their findings.

Tennessee Assessment Strategies

Tennessee Science includes a variety of assessment options to support teachers with differentiation strategies and support students on their journey to mastery of the Tennessee Academic Standards for Science and culminating with success on the Tennessee Comprehensive Assessment Program (TCAP).

Each Grades 3–5 *Tennessee Science* lesson begins with a Formative Assessment Science Probe.

(Grades K–2 available online only)

PAGE KEELEY, MEd

Page Keeley's Science Probes present the lesson phenomenon in an engaging way to promote student thinking and discussion, revealing commonly-held preconceptions students bring to their learning to guide differentiated instruction strategies.

Formative Assessment

Formative assessment—embedded at many points throughout each module and lesson—facilitates student reflection on their thinking (metacognition) and allows teachers to dynamically differentiate instruction. The table below shows the types of formative assessment resources in *Tennessee Science* found online and in print.

FEATURE	INSTRUCTIONAL PURPOSE
Science Probes	Found at the beginning of each lesson, **Science Probes** reveal student preconceptions to guide instruction.
Claim-Evidence-Reasoning	With the **CER Framework** (Claim, Evidence, Reasoning), found in certain lessons, students will make claims and document their reasoning during the EXPLORE phase and add evidence and adjust their claims as needed later in the lesson.
Three-Dimensional Thinking Questions	Throughout each lesson, students will encounter questions that address at least two of the three dimensions of the Tennessee Academic Standards for Science to check progress with the SEPs, DCIs, CCCs, and Performance Expectations.
Talk About It	Throughout each lesson, student-initiated or teacher-led **Talk About It** prompts encourage discussion to enable students to demonstrate their understanding of the phenomena, DCIs, or CCCs.
Inquiry Activities	In each Inquiry Activity, students will encounter formative assessment questions that help build three-dimensional thinking.

Summative Assessment

Summative assessment tools at the module and lesson level help ensure lasting learning and alignment of student skills to the Performance Expectations with the following summative assessment tools found in *Tennessee Science* in print Student Editions and online.

FEATURE	INSTRUCTIONAL PURPOSE
Module Pretest	The **Module Pretests**, found at the beginning of each module in Grades 2–5, assess prerequisite knowledge of Disciplinary Core Ideas from prior grades to evaluate student readiness for the module.
Three-Dimensional Thinking Questions	At the end of the lessons, students will demonstrate their understanding of at least two of the three dimensions of Tennessee Academic Standards for Science to develop three-dimensional thinking skills.
Lesson Check	Found in every lesson online, **Lesson Checks** determine how students are building a progression of learning toward the Performance Expectations.
Module Test	Found at the end of each module online, **Module Tests** evaluate student proficiency against the Performance Expectations with multiple choice, extended response, constructed response, and performance-task items.
STEM Module Project Performance-Based Rubrics	With each STEM Module Project, found at the end of each module, students will complete **Performance-Based Rubrics** and answer summative questions to demonstrate how they've applied their knowledge and understanding of the Performance Expectations to their project.

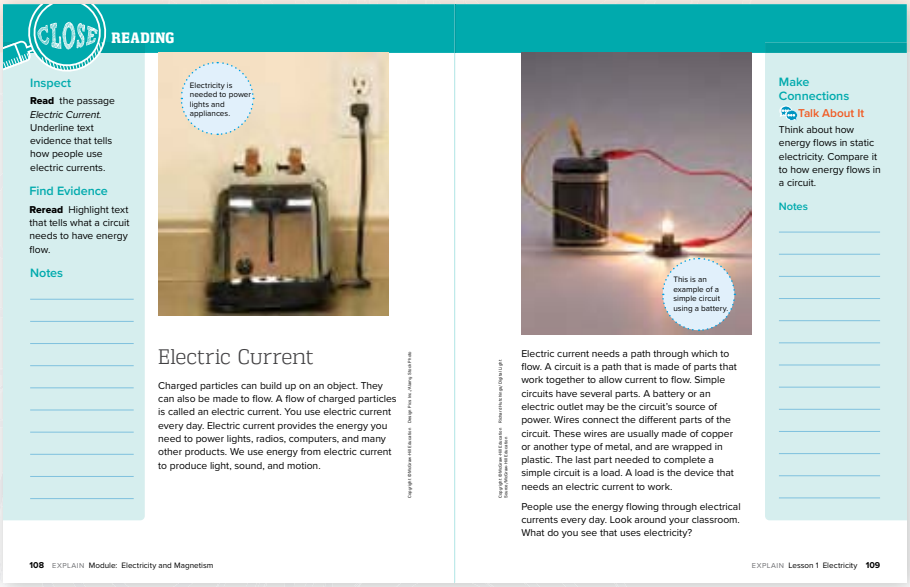
State Assessment Guide

The *Tennessee Science* State Assessment Guide—available in digital format—provides Guided Practice and Practice items that will prepare students for end-of-year success.

Cross-Curricular Connections

When students study science, they practice and build upon other skill sets along the way.

Tennessee Science has been designed to maximize opportunities for cross-curricular connections, integrating ELA/Literacy and Mathematics standards so that by the time students reach the Grade 3 TCAP, they are ready. For fourth and fifth graders, these connections prepare them for the rigors of middle school science courses.


CLOSE READING

Inspect

Read the passage *Electric Current*. Underline text evidence that tells how people use electric currents.

Find Evidence

Reread Highlight text that tells what a circuit needs to have energy flow.

Notes

Electricity is needed to power lights and appliances.

Electric Current

Charged particles can build up on an object. They can also be made to flow. A flow of charged particles is called an electric current. You use electric current every day. Electric current provides the energy you need to power lights, radios, computers, and many other products. We use energy from electric current to produce light, sound, and motion.

This is an example of a simple circuit using a battery.

Electric current needs a path through which to flow. A circuit is a path that is made of parts that work together to allow current to flow. Simple circuits have several parts. A battery or an electric outlet may be the circuit's source of power. Wires connect the different parts of the circuit. These wires are usually made of copper or another type of metal, and are wrapped in plastic. The last part needed to complete a simple circuit is a load. A load is the device that needs an electric current to work.

People use the energy flowing through electrical currents every day. Look around your classroom. What do you see that uses electricity?

Make Connections

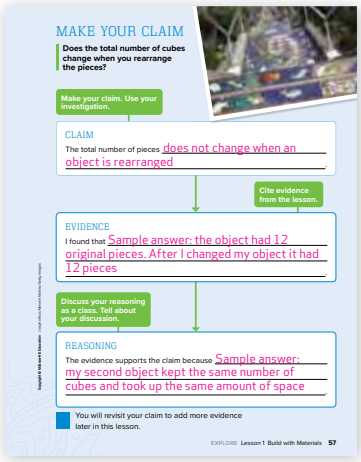
Talk About It

Think about how energy flows in static electricity. Compare it to how energy flows in a circuit.

Notes

108 EXPLAIN Module: Electricity and Magnetism

EXPLAIN Lesson 1 Electricity 109


MAKE YOUR CLAIM

Does the total number of cubes change when you rearrange the pieces?

Make your claim. Use your investigation.

CLAIM

The total number of pieces does not change when an object is rearranged

Cite evidence from the lesson.

EVIDENCE

I found that Sample answer: the object had 12 original pieces. After I changed my object it had 12 pieces

Discuss your reasoning as a class. Tell about your discussion.

REASONING

The evidence supports the claim because Sample answer: my second object kept the same number of cubes and took up the same amount of space

You will revisit your claim to add more evidence later in this lesson.

EXPLORE Lesson 1 Build with Materials 57

Close Reading

The Close Reading activities in *Tennessee Science* guide students to search for answers to text dependent questions within informational text passages, encouraging them to focus on meaning.

Writing Prompts

With the CER Framework (Claim, Evidence, Reasoning) found in certain lessons, students will make claims and document their reasoning during the Explore phase of the lesson. Later, they add evidence and revise their claims as needed.

Science Read Alouds

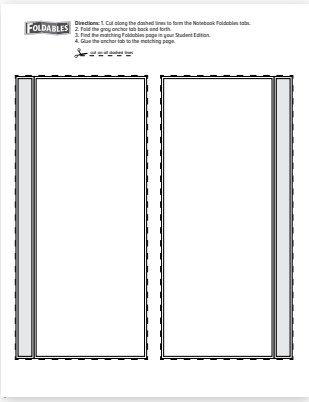
For students in Grades K–1, Science Read Alouds anchor module content and drive discovery by using the power of narrative storytelling to pique students' interest in a science topic.

Investigator Articles

For students in Grades 2–5, Online Investigator Articles supply real-world science and engineering stories, available in Approaching Grade Level and On Grade Level.

Leveled Readers

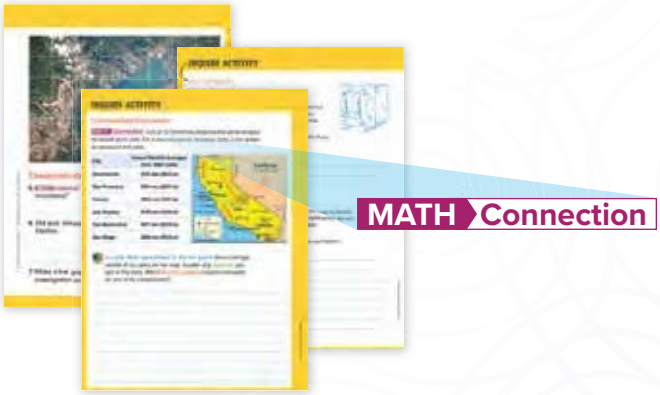
Every *Tennessee Science* module includes a Leveled Reader title, written at four readability levels—Approaching, On, Beyond, and ELL. For Grades K–5, these readers include a Paired Read to enhance the experience with a narrative-story.



Dinah Zike's Foldables® and Kinesthetic Vocabulary

Engage students as they organize their notes with Dinah Zike's Study Guide and Notebook Foldables®, which help organize important lesson information.

Introduce and review vocabulary terms using the Visual Kinesthetic Vocabulary designed to construct meaning and promote mastery.



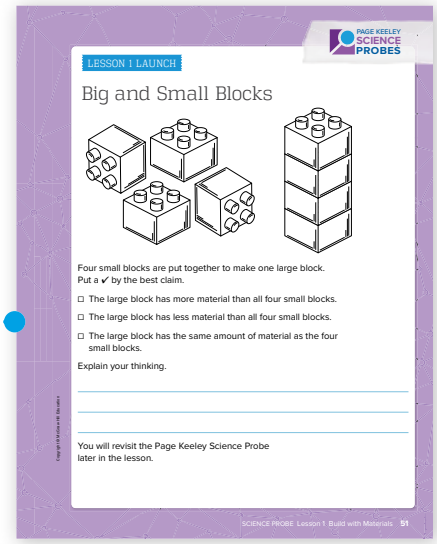
Math Integration

Science and math are closely related in the real-world—a key reason for the Science and Engineering Practice of using Mathematical and Computational Thinking, as well as Analyzing and Interpreting Data. In *Tennessee Science*, students engage with math the way science and engineers do by collecting and analyzing data, creating graphs, and making connections between mathematics and real-world events to solve challenging problems.

Fuel Student Engagement

What happens when students are truly engaged?

The classroom has a buzzing undercurrent, students have an increased focus, and they are waiting to see what comes next. *Tennessee Science* helps you fuel that engagement with features that keep students interested.



Page Keeley Science Probes

When students do the talking, it is evidence that they are thinking and provides you an avenue to uncover and resolve preconceptions or misconceptions.

Visualizing Phenomena in Action

Phenomenon Videos enable students to observe scientific topics in action, providing a visual experience that encourages thinking and collaborative conversations.

STEM Career Connections

Introduce students to real-world STEM professions that they may have one day. Students will learn about careers and apply what they have learned to a related assignment. The wide variety of connections, whether real-world or avatar based, represents a broad range of careers, from jobs that require a high-school education to those that require a Ph.D.

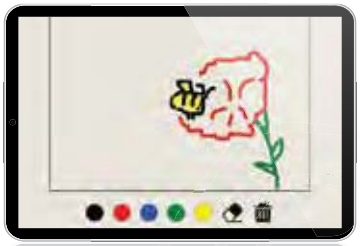
Types of Interactive Resources

In the *Tennessee Science* digital experience, students will interact with a wide variety of digital content types that will make learning science engaging and fun.

Why Go Online?

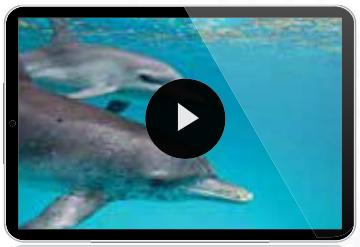
The following list is a few of many offerings for *Tennessee Science*:

- Engaging Interactive Content
- Video Demos of Hands-On Activities
- Science Content Videos
- Text Read Aloud and Highlighting Features
- Dynamic Search Tools

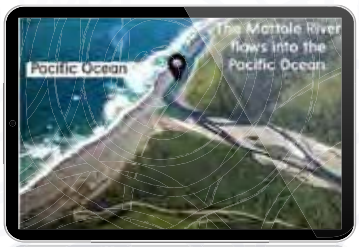


Drawing Tool

Drag and Drop



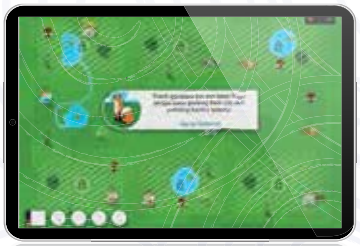
Science Content Videos



Pop Tips

Phenomena Videos

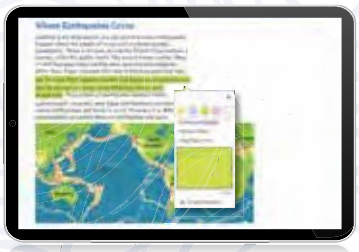
Simulations



Games

Layer Reveal

Choose Your Path



Interactive Text

Beyond the Classroom (Grades 2–5)

State Assessment Guide

Organized by unit and module structure for each grade, the State Assessment Guide will provide your students with guided and independent practice, with assessment items along with rubrics designed to prepare students for the end of course assessments.

Use this guide in your classroom in a variety of ways to meet the needs of your students.

- ✓ Use the guided practice and independent practice sections before a Module Test to provide extra support.
- ✓ Use the practice sections after a Module Test but before a Unit Test for remediation.
- ✓ Administer the independent practice section first and use the guided practice as remediation.
- ✓ Use the Unit Test before implementing a Tennessee Science unit for pre-assessment to serve as a benchmark, or after to identify reteaching opportunities.

Seamless Integration Services

We are proud to work with schools across Tennessee to implement our programs into a range of classroom environments using different platforms. Both our Integration team and our Digital Technical Support team are ready to support you and your implementation.

To learn more, visit **mheducation.com/tennessee**.

Google Classroom

Clever

PowerSchool

CANVAS
BY INSTRUCTURE

schoology

Continued Professional Learning

Professional Development

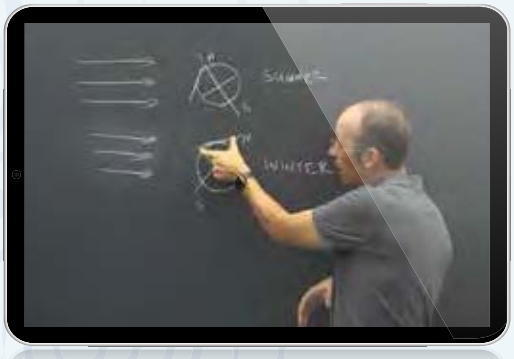
We know it can be a challenge to implement a new science program with new standards. That's why *Tennessee Science* comes with a library of relevant, self-paced, professional learning videos and modules to support you from implementation through instructional progression and mastery, all available 24/7, from any device.

Program Implementation Support

Implementation support provides everything you need to know to get up to speed on the first day of school.

Quick Start Videos explain program basics to help get you started.

Plan, Teach, and Assess **eLearning Modules** provide deep-dives of the program's instructional model and resources.



Ongoing Pedagogy Support

With *Tennessee Science*, you will find a wide range of resources on key instructional and pedagogical topics, including videos from our program authors and consultants.

- **STEM Classroom Videos** model lessons from real classrooms.
- **Science Preconceptions Videos** review common preconceptions and strategies to overcome them.
- **Instructional Coaching Videos** discuss best practice strategies and the "Why" behind the success.
- **Teacher Activity Videos** show planning tips and expected results to help with hands-on activity time.
- **Science Pedagogy Micro-Courses** provide facilitation guides for both self-guided or small group courses.

Tennessee Science

Learn More at mheducation.com/tennessee

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