



Program Overview
Grades K–5



Inspire Science

Explore Our Phenomenal World

mheonline.com/oklahoma




Inspiring the Next Generation of Innovators

While career opportunities in Science, Technology, Engineering, and Math (STEM) increase each year, qualified candidates for these careers continue to fall short. This is known as the STEM Gap. This gap represents a great opportunity for the students in your classrooms today to become the innovators of the future.

Inspire Science helps students build innovative thinking skills by empowering them to explore and learn from our world's amazing natural phenomena in exciting, hands-on ways.

 By fostering student's innate **curiosity**, you elevate their critical thinking.

 By facilitating hands-on **investigation**, you deepen their understanding.

 By encouraging creative problem-solving, you inspire their **innovation**.

A new generation of innovators is growing up right now. Are you ready to inspire?



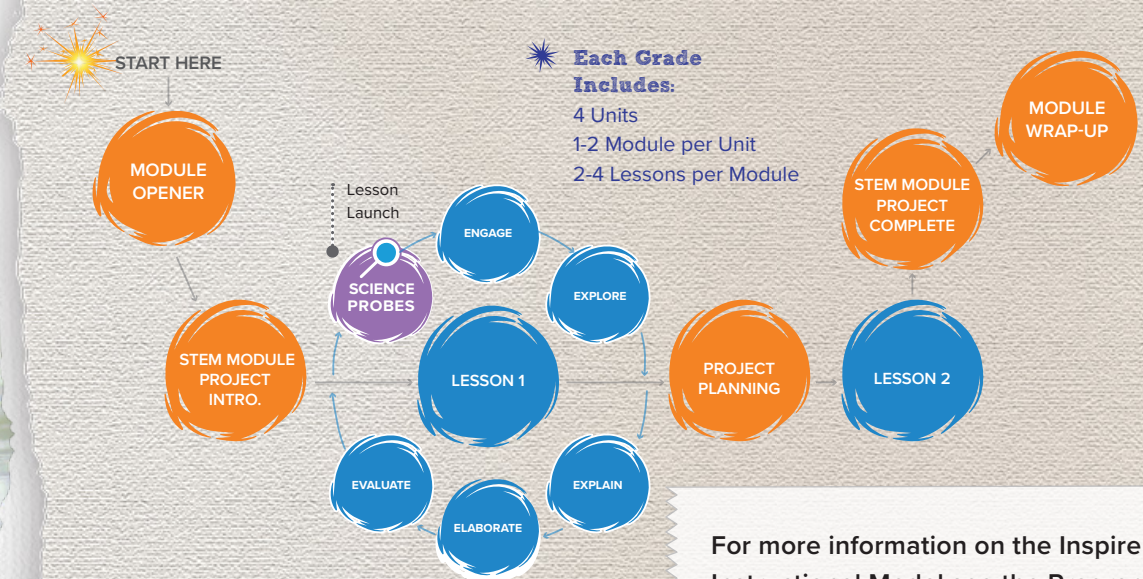
Meeting Oklahoma Academic Standards for Science

Oklahoma Academic Standards for Science (OAS) and Next Generation Science Standards (NGSS) are new philosophies for K-12 Science education focused on helping you prepare students for career and college readiness.

That's why the *Inspire Science* team has been studying science standards for years, while testing ideas with teachers like you to create a user-friendly experience for both teachers and students.

User-Friendly Instructional Model

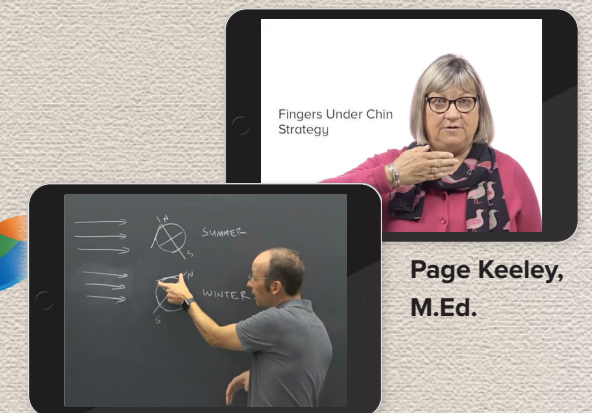
Inspire Science provides the proven and research-driven 5E instructional model enhanced to align with the demands of the OAS and NGSS for three-dimensional, phenomena-driven learning.



For more information on the Inspire Science Instructional Model see the Program Guide.

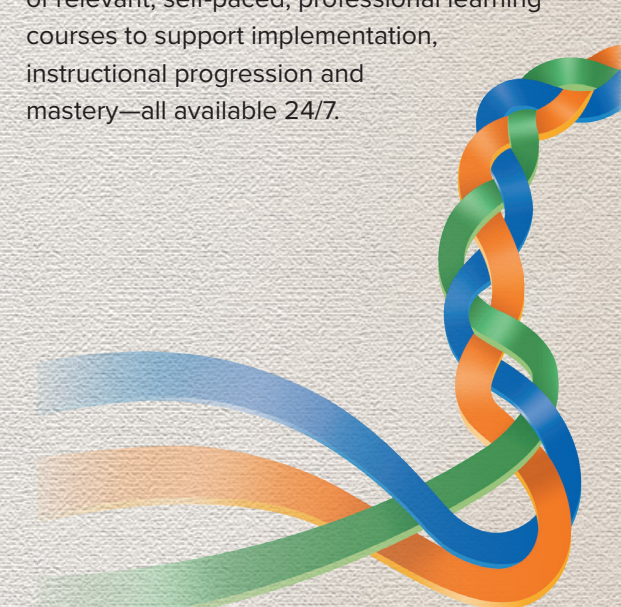
Professional Learning When You Need It

Inspire Science includes an expansive library of relevant, self-paced, professional learning courses to support implementation, instructional progression and mastery—all available 24/7.



Page Keeley, M.Ed.

Dr. Rhett Allain



Encounter the Phenomenon

Inspire Science places student engagement at the forefront. Each module and lesson is designed to tap into students' natural curiosity about the world around them through the investigation of real-world phenomena. Student engagement is further fueled through the connections to real-world applications with the STEM Career Connections and STEM Module Projects.

Phenomena-Driven Learning

Inspire Science places natural phenomena at center stage within each module and lesson. By introducing an anchoring phenomenon in each module, supported by lesson-level investigative phenomena, students dig deep into key science and engineering concepts.



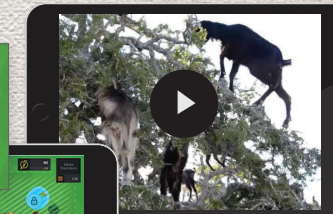
Designed for the Digital Generation

Inspire Science is infused with highly engaging interactive experiences designed for today's digitally-native students. Interactive simulations, 360 videos, 3D models, learning-based games, and immersive science content videos will keep students' attention and inspire them to explore and discover.

Inquiry-Based Approach

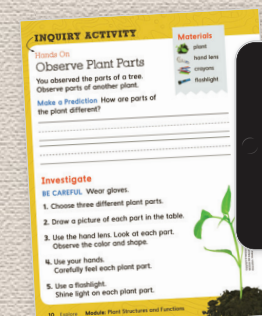
Inquiry-driven learning helps students understand how to ask deeper questions and think critically as they answer science questions and design creative solutions to real-world problems. With *Inspire Science*, students learn how to become great investigators through a variety of inquiry activities that connect to the Science and Engineering Practices.

Phenomenon Videos

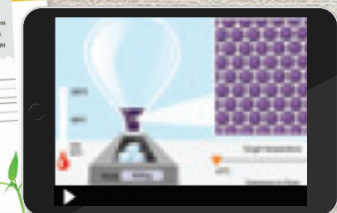


Learning-Based Games

INQUIRY ACTIVITIES



Hands On



Simulations

Supporting Hands-On Learning

Oklahoma Academic Standards for Science (OAS) and Next Generation Science Standards (NGSS) require a marked increase in inquiry-based learning, resulting in more hands-on activities. This shift makes for a more exciting classroom experience, but it also comes with new logistical challenges that can be difficult to manage. With *Inspire Science*, we've provided a number of support structures to help make this shift more manageable and more fun for you and your students.



Inquiry Activity Planners

The *Inspire Science* Inquiry Activity Planners make preparing for hands-on activities easier than ever—listing out all the materials needed for the entire module and clearly noting which materials are included in the Collaboration Kits.

Module: **Information Processing and Transfer**

Inquiry Activity Planner

In this module, students will investigate information processing and transfer and design and build a device that uses light and/or sound to communicate a message.

Lesson	Inquiry Activity	Materials	
		Consumable	Non-Consumable
★ GO ONLINE for teacher support videos on selected activities. Materials included in the Collaboration Kit are listed in blue.			
Lesson 1	Hands On Sense of Touch Purpose: To explore how their sense of touch works when their sense of sight is impaired.	30 min small groups	material for blindfold 3 sandpaper samples of different grades, hand lens
	Hands On Pill Bugs Purpose: To investigate how pill bugs use their senses to help them survive.	30 min small groups	15 pill bugs, petting soil, leaves, paper towels, water, fish food hand lens, plastic habitat

The Inquiry Spectrum

The *Inspire Science* Inquiry Spectrum provides flexible options to adjust the inquiry level to align with the learning needs of each student.

Inquiry Spectrum

Structured Inquiry
In this Inquiry Activity, students are given a question to investigate and procedure to follow.

Guided Inquiry
To make this a guided inquiry, present students with the same question to investigate and make a prediction on, but have students come up with materials and a procedure to investigate the question.

Open Inquiry
To make this an open inquiry, have students investigate one of their own questions based on the phenomenon. Allow students time to plan how they will investigate their question and carry out their investigation.

Engaging Inquiry Activities with Options

Every lesson in *Inspire Science* offers multiple inquiry-based activities, along with techniques that scientists and engineers use in the real world. These inquiry activities include differentiation strategies (through the Inquiry Spectrum), and various pacing options ranging from simple investigations to complex lab explorations.

The image shows two sample inquiry activity worksheets. The first is titled 'Model a Food Chain and a Food Web' and the second is 'Particles in Matter'. Below the worksheets is a tablet displaying a video of a science experiment with a beaker and a light source.

Collaboration Kits*

*Available for Additional Purchase

Developed specifically for group collaboration, the *Inspire Science* Collaboration Kits make hands-on activities a breeze—allowing you to focus on the activity rather than planning and hunting for supplies.



Ensure Equity

Inspire Science fosters deep learning for every student by providing built-in supports for differentiated instruction, English Language (EL) strategies, and language-building resources at the module level and at multiple points throughout each lesson. Each student is given an opportunity to construct explanations of phenomena and use evidence-based logic to make connections, building critical skills at every step.



Differentiated Instruction

Inspire Science incorporates the research-based Universal Design 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 INVESTIGATOR articles. Support with practical strategies is found at the module and lesson level at multiple points. Leveled text aligns with the Lexile ranges of the CCSS.

Advanced Learners and Gifted Learners

Instruction should focus on adding depth and complexity in understanding how the structure and function of young animals helps them grow and survive and how humans mimic animal structures to design solutions for a problem.

DOK 3 Strategic Thinking Have students research and make a list of birds that are unable to fly, such as the penguin, kiwi, or ostrich. Then have them create a KWL (Know, Want to Know, Learn) chart. Allow them to do independent research to answer their questions and complete their chart. Make sure students find out why their bird cannot fly.

DOK 4 Extended Thinking Have students research biomimicry. Have them write a definition for the word, and then brainstorm or research examples. Then have students choose a special animal structure (such as the sticky feet of a gecko or the silk of a spider) and imagine how humans could mimic its use to solve a problem. Have them write a sentence or two to describe the problem and then design a solution for it, using what they know about biomimicry.

Literacy Support: Using the Leveled Reader

Use the Leveled Readers to enable students to further develop their literacy skills through science.

- Fiction: Engages students in key concepts
- Nonfiction: Focuses on real-world topics. Makes informational text accessible to all learners.
- Also available in print and online.

Assessment Strategies

Ensuring students are well prepared for the state-wide tests can seem daunting, but with *Inspire Science's* next generation assessment tools, in partnership with Measured Progress (STEM Gauge) and the *Inspire Science* Three-Dimensional Guide, you'll know what to expect and how to prepare your students for success with mastery of the Performance Expectations.

Online Assessment Center

GO ONLINE

Inspire Science Three-Dimensional Assessment Guide
Coaching for NGSS Success

Features:
 • Technical Support with Learning Basics
 • Student Support with Guided Practice and Practice
 • Performance Task Practice

English Language Support

Rooted in learning sciences research, *Inspire Science* applies the best instructional practices for teaching EL students. Each module and lesson has scaffolded activities that offer students of any level of English language proficiency the opportunity to engage in academically challenging science and engineering content while supporting language acquisition.

English Language Support

Home Language Support Build on and make use of students' home language to support their science learning in English. Teach students how to identify and use cognates to create linguistic bridges between school science and home to capitalize on emerging bilingualism.

EMERGING

Cognate Strategies Demonstrate the meaning of cognates by writing the word animal on the board. Ask students to tell you what the word means using words, phrases or gestures. Say and point to the word animal and have students repeat. Then have students say the word in their home language. Guide students to notice that the pronunciation is a little different but the spelling is not different. Write animal and animales on the board. Guide students to notice the differences in spelling and pronunciation in the plural form. There are many cognates in this module. Ask students to keep a list of the words they see that are similar in their home language.

EXPANDING

Cognate Strategies Explain the meaning of cognates by writing the words animals and animales on the board. Ask students to tell you the meaning of the words. Then support students in finding the differences and similarities in sounds and letters. For example, both words have the same spelling except that one ends in s and the other in es. Say the word animals and say animales. Note not a lot of difference or pronunciation. Cognates in this module.

BRIDGING

Cognate Strategies Ask students to tell you if they know what a cognate is. It is a word that looks similar, sounds similar, and shares a meaning across some languages. Have students read the title of the module to find the cognate, animal. Have them tell you the word in their home language (animal) and give you a definition of the word in English. Do not.

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.

mammal	insect	reptile
mamífero	insecto	reptil
amphibian	protection	signal
anfíbio	protección	señal
armadillo	zebra	lion
armadillo	cebra	león

CER Framework

The Claim, Evidence, Reasoning (CER) framework in *Inspire Science* ensures every student is engaged in rigorous scientific inquiry and argument from evidence.

CLAIM

I think an object's motion will speed up when height is added.

EVIDENCE

The evidence I found in the activity is _____

REASONING

My reasoning for my claim is _____

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

INSPIRE SCIENCE Lesson 2 Forces Can Change Motion 27

Designed to Fit Any Classroom

At McGraw-Hill, we understand that different classrooms have different needs for tactile and digital resources. We know those needs can change day to day. *Inspire Science* is designed to fit all of your resource needs through a wide array of print, digital, and hands-on materials so you have access to all of the great learning resources in any form you'd like, whenever you need them.



Print Resources

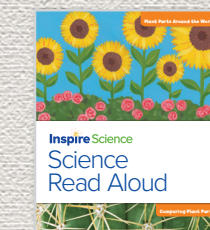
Every *Inspire Science* print book includes a digital companion to compliment the digital interactive resources such as simulations, 3D models, videos, and learning-based games.

TEACHER'S AND STUDENT EDITION (Grades K-5, Four Units Per Grade)



Available in Spanish

SCIENCE READ ALOUDS (Grades K-1)



Available in Spanish

INVESTIGATOR ARTICLES (Grades 2-5)



Available in Spanish

LEVELED READERS (Grades K-5)



Available in Spanish

Digital Resources

In addition to the digital versions of each print book, *Inspire Science* provides a digital experience, in both English and Spanish, designed with advantages for both you and your students, including innovative interactives, videos, simulations, learning-based games, personal tutors, and more.



Collaboration Kits*

*Available for Additional Purchase

Inspire Science Collaboration Kits make planning for hands-on time easier, so you can focus more of your time on the activities than the planning. Each Collaboration Kit contains the materials needed for the hands-on inquiry activities, organized by unit and module.

See the Collaboration Kit Guide to learn more about what each unit kit includes.

A Future Full of Innovation. Dream Big.

With the emphasis *Inspire Science* places on curiosity, investigative skills, and innovative thinking, just imagine what the students in your classroom today might dream up to improve our lives someday—in our country and beyond.

Innovative Solutions for Global Warming

New solutions to reduce carbon emissions and clean up the carbon from our atmosphere?

Practical fuel cell transportation to power cars from water, emitting only steam?

An influential role in global carbon emissions management?



Innovations in Health Care and Disease Management

Advances in cellular immunotherapy treatments to leverage our own immune systems to stop cancer and diseases in their tracks?

Advances in using robotics for healing and repairing the human body?

New ideas for identifying and stopping diseases before they happen?





Inspire Science

ANTHONY GREESON

Oklahoma Sales Representative
918.240.4836 | anthony.greeseon@mheducation.com

JORDAN BAKER, M. ED.

Oklahoma Sales Representative
405-441-2047 | jordan.baker@mheducation.com

KIMBERLY FOUKE

Small Account Representative
918-404-2120

Learn more at mheonline.com/oklahoma