Get Ready to Be Inspired!
Introducing the new modular K-5 science learning experience designed to prepare the next generation of innovators.

Program Overview
WHY IS THE SKY BLUE?

WHY IS THE EARTH ROUND?

WHY DOES THE SUN SHINE?
Get Ready to Be Inspired!

Learning begins with curiosity. *Inspire Science* is designed to help you spark students’ interest and empower them to ask more questions, think more critically, and maximize their ability to creatively solve problems. *Inspire Science*’s instructional model will prove that science education can be comprehensive and offer fun learning experiences that are sure to pique the interest of the bright minds in your classroom. Let us, help you cultivate curiosity and inspire the next generation of innovators, visionaries, and inventors.

Embrace science through a simple, user-friendly teaching experience.

Get more out of science time through built-in literacy and math connections.

Prepare students for a future full of STEM opportunities.

See a video of Chloe and the other STEM Career Kids at [Inspire-Science.com/career_kids](http://Inspire-Science.com/career_kids)
User-Friendly Lesson Structure

*Inspire Science* lessons are designed with the familiar and proven 5E instructional model. Each lesson also comes with an easy-to-follow process so you know exactly what comes next.

Key Steps to Three Dimensional Instruction

**ASSESS LESSON READINESS**

1. Page Keeley Science Probe

**ENGAGE**

2. Science in Our World
3. Essential Question
4. Science and Engineering Practices

**EXPLORE**

5. Inquiry Activity

Disciplinary Core Ideas
PS3.A Definitions of Energy

Crosscutting Concepts
Energy and Matter

Science and Engineering Practices
Constructing Explanations and Designing Solutions

Learning Progression

PAGE KEELEY, M.ED.

EQuIP Rubric Aligned! Review the Inspire Science EQuIP Rubric at Inspire-Science.com
**5E Instructional Model**

1. **Assess Lesson Readiness**
2. ENGAGE
3. EXPLORE
4. EXPLAIN
5. ELABORATE
6. EVALUATE

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**EXPLAIN**

- I Can
  6. Obtain and Communicate Information
  7. Reflect and Refine
  8. Science and Engineering Practices
- I Did

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**ELABORATE**

- Research, Investigate, and Communicate

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**EVALUATE**

- Performance Task
- Essential Question
- Science and Engineering Practices

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**Approximate Pacing**

(based on 45-minute teaching blocks)

- Module = 1 month of instruction
- Lesson = 8-10 days of instruction
- Fast Track = 4-6 days of instruction

Follow the Fast Track when short on time. We'll show you the activities key to understanding the lesson content.
Performance Task

Make a Prediction

You will make a variety of mixtures to show that mass is conserved when different types of matter are mixed. Then, you will try to identify the type of mixture that is made.

Make a Prediction

Is mass conserved when two or more materials are mixed?

Carry Out an Investigation

1. Record Data

Measure 5 g of baking soda on a wax paper square and 20 milliliters (mL) of water. Using a stirrer, mix them in one of the cups and measure the mass. Record the mass in the data table.

2. What type of mixture did you make? Record it in the table.

3. Repeat steps 1 and 2 with 5 grams (g) of baking soda and 5 g of baking powder.

4. Repeat steps 1 and 2 with 5 g of baking powder and 20 mL vinegar.

5. Repeat steps 1 and 2 with 5 g of cornstarch and 20 mL of water.

6. Repeat steps 1 and 2 with 5 g of salt and 20 mL of vinegar.

7. Repeat steps 1 and 2 with 5 g of cornstarch and 5 g of salt.

8. Repeat steps 1 and 2 with 20 mL of water and 20 mL of vinegar.

<table>
<thead>
<tr>
<th>Mixture Mass or Volume</th>
<th>Type of Mixture</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 g Baking Soda + 20 mL Water</td>
<td></td>
</tr>
<tr>
<td>5 g Baking Soda + 5 g Baking Powder</td>
<td></td>
</tr>
<tr>
<td>5 g Cornstarch + 20 mL Water</td>
<td></td>
</tr>
<tr>
<td>5 g Salt + 20 mL Vinegar</td>
<td></td>
</tr>
<tr>
<td>5 g Cornstarch + 5 g Salt</td>
<td></td>
</tr>
<tr>
<td>20 mL Water + 20 mL Vinegar</td>
<td></td>
</tr>
</tbody>
</table>

Think like a pharmacist and investigate whether mixtures and solutions show conservation of mass.
User-Friendly Support

*Inspire Science* comes with extensive support and professional development to ensure that you are able to teach every one of our science lessons with great success—and feel like a real science guru, too!

**PROFESSIONAL DEVELOPMENT**
- Quick Start
- Implementation
- Administrator Support Videos
- Mastery Online Courses

**DINAH ZIKE, M.ED.**
**VKV® AND FOLDABLES®**
- Classroom Models
- Coaching
- Demonstration Videos

**PAGE KEELEY, M.ED.**
**FORMATIVE ASSESSMENT PROBES**
- Classroom Models
- Coaching
- Teaching Techniques for Science Probes

**RILEY**
Automotive Engineer
3D Learning

*Inspire Science* integrates Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts with literacy and mathematics standards so teaching science feels as natural and intuitive as it should be.

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**Disciplinary Core Ideas**

THE CONTENT IN FOCUS
-(for example, “The Universe and Its Stars”)

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**Science and Engineering Practices**

THE SKILLS
-(for example, “Developing and Using Models”)

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**Crosscutting Concepts**

THE COMMON THEMES
-(for example, “System and System Models”)
ALL GREAT SCIENTISTS AND ENGINEERS NEED STRONG LITERACY AND MATH SKILLS.

The Inspire Science lessons include cross-curricular connections with quick and easy references to the specific literacy and math skills being reinforced through the science investigations.

STUDENTS APPLY AND DEMONSTRATE THEIR UNDERSTANDING

Students apply and demonstrate their understanding by using the Disciplinary Core Ideas, the Science and Engineering Practices and the Crosscutting Concepts together. (for example, “Use observations of the sun, moon, and stars to describe patterns that can be predicted.”)

Cross-Curricular Connections

LITERACY  MATH

ALL GREAT SCIENTISTS AND ENGINEERS NEED STRONG LITERACY AND MATH SKILLS.

Not using Next Generation Science Standards*? Inspire Science is still for you.

Inspire Science is built for Next Generation Science Standards, with the added bonus of literacy and math integration. Whether your state has adopted the Next Generation Science Standards or not, science standards everywhere are shifting to include more hands-on, problem-solving lessons, greater integration with other disciplines, and a higher demand for new, innovative science education programs. That’s where Inspire Science can help.

*Next Generation Science Standards is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards were involved in the production of or endorse this product.
Cross-Curricular Connections

*Inspire Science* connects the science you teach to the core subjects your students study. By integrating science, literature, and math, students master key concepts that impact science and beyond.

**Science + Engineering Practices**

Students achieve and demonstrate greater understanding through hands-on science and engineering activities using the engineering design process.

- Asking Questions and Defining Problems
- Developing and Using Models
- Planning and Carrying Out Investigations
- Analyzing and Interpreting Data
- Using Mathematics and Computational Thinking
- Constructing Explanations and Designing Solutions
- Engaging in Argument from Evidence
- Obtaining, Evaluating, and Communicating Information

**Math Practices**

Students solve science and engineering challenges using math skills including:

- Analyzing and Interpreting Data
- Using Mathematics and Computational Thinking
- Developing and Using Models
- Obtaining, Evaluating, and Communicating Information

**PERFORMANCE TASK**

**EVALUATE**

**SIMULATIONS**
Eyes are like cameras because they take pictures of the world all around. They send these pictures to the brain. The brain uses the information from the eyes to understand the world.

The Eyes You See

When you look at your eyes in a mirror, you can see these parts.

Sclera

The sclera is the white part of your eye.

Iris

The iris is the colored part of your eye. The cornea covers the iris. The cornea lets light enter.

Pupil

Your pupils get bigger and smaller to let in the light you need in order to see.

Your eyelids blink to keep your eyeballs clean, moist, and protected.

Eye Socket

Your eyeballs sit in empty spaces in your skull called eye sockets.

The Eye Inside

Your eyes have many parts you cannot see.

Lens

A clear eye lens is behind each iris. The lens collects light and then moves it back to the retina.

Retina

The retina has cells called rods and cones. Rods help you see black, white, and gray while cones help you see other colors.

The rods and cones of the retina change all the shapes and colors you see into nerve messages. The nerve messages travel along nerve paths to the brain. Your brain reads these messages, and then you can tell what you are seeing.

Text Evidence

1. How do you know that The Way Eyes See It is a nonfiction text? Identify the text features that tell you this.

2. Read the book again with a partner. Make a Venn diagram to compare human eyes with the eyes of one animal described in the book.

3. What is the meaning of the word pupil on page 2? What is another meaning for the word pupil? What clues in the text show you which meaning to use on page 2?

4. Find out more about the human eye. Use a Venn diagram to compare two parts of the human eye. Write a paragraph to describe how these parts are similar and how they are different.

Leveled Readers

Approaching, On, Beyond, ELL, & On-Level Spanish (Grades K-5)
Preparing the Next Generation of Innovators

The pace of change is accelerating. The challenges your students will face in their careers will likely be ones that don’t even exist yet. Their future will require problem-solving skills that go beyond the status quo. Inspire Science is designed to help today’s students prepare for any future they may face through an emphasis on problem-based and career-based learning. With Inspire Science, your students will learn to think like scientists and engineers, and develop the skills they need to create solutions to everyday challenges.

Problem-Based Learning

Empower students to develop critical-thinking through Inspire Science’s problem-based learning components.

PERFORMANCE PROJECT

Electric and Magnetic Forces

Performance Project
Solve a Simple Design Problem

The farmer needs your help! Create a design solution that will keep the gate around his garden shut.

Make a list of ways you could solve the problem.

Sample answer: I could use a magnet on each side of the gate. I could use string to tie the gate closed.

Do any of your solutions use magnets? If not, how could you incorporate magnets?

Sample answer: I am using magnets in one of my solutions, placing opposite poles on each side.

Students should show where magnets will be used to keep the gate closed.

How does the design solve the gate problem?

Sample answer: The magnets were attracted to each other, so the gate stayed shut.

How could you improve the solution?

Accept reasonable answers. Sample answer: I could use bigger and stronger magnets.

Explore More in Our World

Did you learn the answers to all of your questions from the beginning of the module? If not, how could you design an experiment or conduct research to help answer them?
Career-Based Learning

Inspiring

INSPIRE CURIOUSITY WITH THE STEM CAREER KIDS

Future Career
Ocean Engineer Have you ever wondered what lies on the ocean floor? An ocean engineer studies this mysterious part of Earth. They develop vehicles that explore parts of the ocean floor that are dangerous for humans to go to. Ocean engineers identify the effect of the ocean on the shore and restore beaches that have worn away. They also examine coastal ecosystems for changes. These engineers are looking for safe ways to drill for oil and natural gas on the ocean floor.

Hiro
Ocean Engineer

Watch STEM Career Kid Videos at Inspire-Science.com/career_kids

Grade 5
Be a Scientist Notebook
Student Journal

11
A Flexible, Digital, Learning Experience
with Print Where It Matters Most

DIGITAL

DIGITAL TEACHER CENTER

DIGITAL STUDENT CENTER

READY-TO-GO LESSON PRESENTATIONS

INTERACTIVES

SIMULATIONS

SCIENCE SONGS

GAMES

eASSESSMENT

VIDEOS

PROFESSIONAL DEVELOPMENT

DINAH ZIKE, M.ED.

INVESTIGATOR

InspireScience

Interactive Whiteboard and Mobile Friendly
**Components Overview**

- **DIGITAL AND PHYSICAL**
  - **TEACHER’S EDITION** (Grades K-5)
  - **BE A SCIENTIST NOTEBOOK** (Grades K-5)
  - **LEVELED READERS** (Grades K-5) Available in Spanish
  - **SCIENCE PAIRED READ ALOUDS** (Grades K-2) Available in Spanish
  - **SCIENCE HANDBOOK** (Grades K-5) Available in Spanish

- **PHYSICAL**
  - **LAB KITS**
    - Inspire Science lab kits contain hands-on activity materials clearly labeled and correlated to each module.

**Digital versions of the student books include audio, dynamic search tools, text highlighting, and more.**

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**GRACE**
Computer Programmer