

HMH Science Dimensions®

# Program Resources and Features

Grades K–5

Available in Spanish

**ENGINEERED** for the  
Next Generation





# EXPLORE. EXPERIMENT. EXPERIENCE.

Envision a classroom where students ask questions, state claims, test their ideas, and find resolution through reasoning. With increased demand for science literacy in the workplace, it has become imperative to develop such innovators and problem solvers to fill critical, next generation career roles.

This instructional shift is achievable now. With built-in support and a transformed lesson structure, instructors will become facilitators who empower their students to learn through self-directed exploration, analysis, application, and explanation—in short, to think like scientists.



# HMH Science Dimensions

A K–12 solution engineered  
for success with NGSS

## Inspire the next generation of scientists and innovators

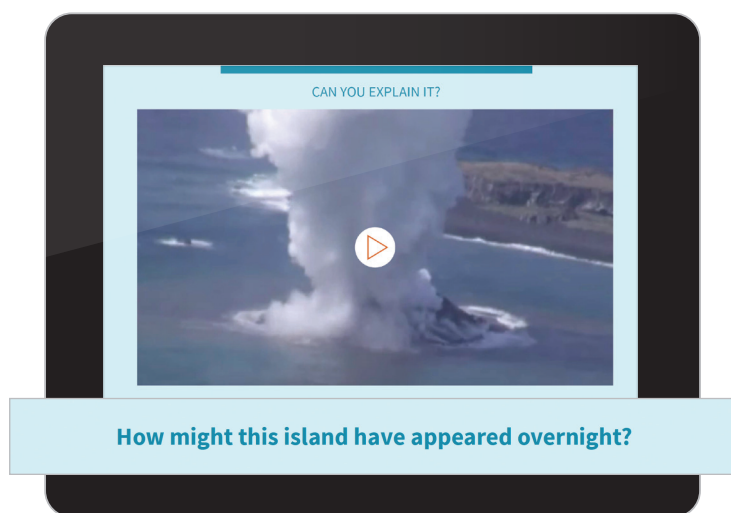
---

- ▶ Foster student engagement through **phenomena-based lessons**.
- ▶ Promote active learning with **investigation-driven activities**.
- ▶ Build excitement for **engineering and STEM**.
- ▶ Build problem-solving skills with **performance-based assessment**.
- ▶ Engage students with motivating **digital resources**, including You Solve It! Simulations.
- ▶ Create **enduring understanding** with integrated Three-Dimensional Learning.
- ▶ Develop effective NGSS\* approaches with embedded **professional learning from HMH®**.



# Build Student Confidence with Authentic Investigations

Students are more engaged and learn more meaningfully through investigative inquiry. **HMH Science Dimensions®** is built on this approach. Your students will learn to conduct hands-on investigations, define questions and objectives, make claims, and identify evidence—in short, to **take charge** and **fully engage** in their learning!




Grade 5 Online Student Edition

## Discrepant Phenomena Lead Every Lesson


- Each lesson begins with **Can You Explain It?**—a **problem to solve** or **discrepant event to explain**. This lesson-leading feature provides intrinsic motivation to spark curiosity and serves as the context for the three-dimensional learning and hands-on activities throughout the lessons. Students are motivated to think critically and construct explanations of *how* and *why*.
- The program is built around **active learning**. Rather than receive content passively, students are asked to **solve problems** or explain phenomena, by stating **claims**, gathering **evidence**, and providing explanations through **reasoning**.

## Science Notebooking to Strengthen Writing Skills

Many of the lessons in **HMH Science Dimensions** support the use of **Evidence Notebooks**. **Helpful prompts** have been inserted throughout the lessons to guide students on when to use these notebooks. Students will love creating their own study guides that can be taken into the next grade, and teachers will love the extra writing practice!

**Apply What You Know**

**Evidence Notebook** • Work with a partner to identify three examples of changes to materials caused by melting. How did adding heat change the material? Use evidence to tell how you know. Record your answer in your Evidence Notebook.

**Evidence**  
Go to the online handbook for tips.





## Drive Student Learning with Hands-On Activities

- **Hands-On Activities** are integrated into many of the lessons. These are built with teachers' busy schedules in mind. Each activity uses **easily sourced materials**.
- Many activities, including the **Hands-On Activities**, contribute to a student's evidence gathering in each lesson.
- Students get to actively "do science"; they **think critically** about their observations, practice gathering evidence, and defend their claims.

Name \_\_\_\_\_


**Hands-On Activity**  
**Explore Cooling**

**Materials** \_\_\_\_\_

**Ask a Question** \_\_\_\_\_

**Test and Record Data** [Explore online.](#)

**Step 1**

 Observe the solid and the liquid. Record your observations.

Solid	Liquid

**Step 2**

Pour the liquid into the ice-cube tray.  
Put the solid and the liquid in the freezer.  
Wait until the next day to take them out.

Lesson 2 • How Do Heating and Cooling Change Matter?

69

Grade 2 Print Student Edition

**HANDS-ON ACTIVITY**  
**Modeling Matter Moving within an Ecosystem**

**Objective**  
**Collaborate** with a partner to choose and model an ecosystem. Use this model to show how matter moves among organisms and their environment.

What question will you investigate to meet this objective?  
\_\_\_\_\_  
\_\_\_\_\_

**Materials**

- materials to model
- scissors
- index cards
- markers
- poster
- stapler

**Procedure**  
**STEP 1** With your partner, choose an ecosystem to model. Research the organisms you will include in your model ecosystem.

Which ecosystem are you researching?  
\_\_\_\_\_  
\_\_\_\_\_

Use your research to complete the table below.

Ecosystem	
Energy Source	
Producers	Consumers
Decomposers	

234

Grade 5 Print Student Edition

## Cultivate Collaboration

**Working as a team** is an essential part of developing **21<sup>st</sup>-century skills**. *HMH Science Dimensions* provides ample opportunities for students to participate in groups to complete activities and partner with their peers to discuss their findings.

## Save Prep Time with Equipment Kits

- **Equipment Kits** provide the **consumable** and **non-consumable** materials you need to complete most of the hands-on activities so you have all the materials you need right at your fingertips.
- The **Safety Kit** provides the materials you need to address **classroom safety** while performing the program activities.



# Today's Students Will Solve the Technology Challenges of Tomorrow!

NGSS\* has raised the engineering design process to the same level as scientific inquiry. In **HMH Science Dimensions**, science, technology, engineering, and math are considered an **integral** part of the curriculum. Lessons are designed for students to explore science the same way real-life scientists do. Watch your students' eyes **light up** as they brainstorm solutions, share their ideas, and experiment to find solutions.



UNIT 4
UNIT PERFORMANCE TASK

**ENGINEER IT!**  
**Design an Ecosystem**

You work for a company that is building an animal theme park. After studying the animals in their natural ecosystem, your team needs to choose an animal to bring back to live in the park. Your team has access to an empty room with a sprinkler for precipitation and temperature control. There are skylights in the ceiling to allow sunlight in. There is no floor, so the ground is covered in soil.

This reptile terrarium has everything the lizard needs to survive.

**FIND A PROBLEM:** What problem do you need to solve?

Before beginning, look at the checklist at the end of this project to be sure you are meeting all the requirements.

**RESEARCH:** Study the animal you plan to bring to the lab and write down your observations. Use online or library resources for research. Use multiple sources and cite them.

**BRAINSTORM:** Brainstorm three or more ideas with your team to solve the problem. Keep in mind the criteria and constraints.

Criteria	Constraints
<input type="checkbox"/> Animal must survive	<input type="checkbox"/> Your animal will not have access to the natural outdoors
<input type="checkbox"/> The landscape must mimic the animal's natural ecosystem	<input type="checkbox"/> Limited to one room to build your ecosystem
<input type="checkbox"/> A food web must be present to meet your animal's nutrition needs	<input type="checkbox"/> Room is about the size of your classroom
<input type="checkbox"/> The animal needs enough room to exercise and move freely	<input type="checkbox"/> Room is 6 meters by 6 meters

270

## Elevate Engineering

In **HMH Science Dimensions**, engineering and STEM are carried throughout every unit and not just treated as an ancillary. This approach elevates engineering design to the same level as scientific literacy. Each Unit includes a **Performance Task**, offering students multiple opportunities throughout the program to apply the **engineering design process** by defining a problem and designing a solution.

## Provide Extra Support for Students Who Need It

The **Science and Engineering Practices Online Handbook** will help students achieve a higher level of understanding and skill as they build their experience applying the **Science and Engineering Practices** of NGSS.





## Education Leaders You Can Trust

During consulting author **Cary Sneider's** teaching career and nearly three decades at the Lawrence Hall of Science in Berkeley, California, he developed skills in curriculum development and teacher education. He was a **writing team leader** for the Next Generation Science Standards and has been instrumental in ensuring **HMH Science Dimensions** meets the high expectations of the NGSS and provides an effective three-dimensional learning experience for all students.



Dr. Cary Sneider

**Marjorie Frank** has authored and designed a generation of instructional materials in all subject areas, including past HMH Science programs. In addition, she has served on the adjunct faculty of Hunter, Manhattan, and Brooklyn Colleges, teaching courses in **science methods, literacy, and writing**. For **HMH Science Dimensions**, she has guided the development of our K–2 strands and our approach to making connections between NGSS and Common Core ELA/literacy standards.



Marjorie Frank

## Inspire Students to Consider STEM Careers

The Take it Further (Elaborate) section of each unit features **People and Careers in Science & Engineering**. These features show students the **real-world applications** of what they're learning and pique their interest in science-based careers.

### Take It Further

#### Careers in Science & Engineering • Architect

Explore more online.  
• What's Old Is New Again

Explore online. ➔



Architects plan and draw design ideas. They make models to show how their structures will look.



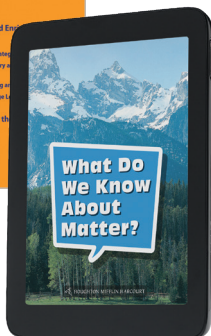
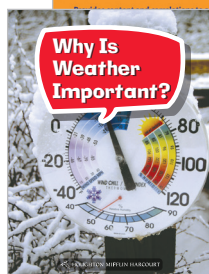
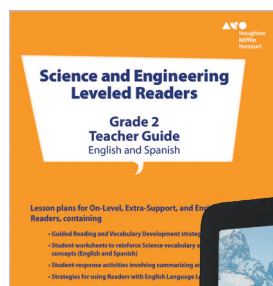
Architects work with others to improve their designs. They think of ways to make structures that are safe and strong.

Architects use sets of smaller pieces to build different models. They plan and design many types of structures, including houses, schools, and workplaces. Architects use art, math, and science in their work.

Lesson 4 • How Are Objects Put Together?

97

Grade 2 Print Student Edition



## Build Literacy and Science Content Knowledge

- The program includes print and online access to **Science and Engineering Levelled Readers** for Grades K–5. These colorful, fun, and interesting Readers provide three levels of readability for students: **On-Level**, **Extra Support**, and **Enrichment**.
- The accompanying **Teacher Guide** provides **activities** and **support** for before reading, during reading, and during response to reading.

k pictures. What patterns do you

to solid.

to liquid.

changed into ash

res.

liquid



# Let Students Show What They Know

For the first time ever, through NGSS,\* science standards now include specific **measurable learning outcomes**. These Performance Expectations guide test developers and teachers in understanding how to measure student learning.

**HMH Science Dimensions** offers flexible assessment tools in a variety of formats to help you assess both formative and summative student learning according to NGSS.

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Performance-Based Assessment

## Star Light, Star Bright

### Task 1: Twinkle, Twinkle, Different Stars

In this task, you will use a model to explore the brightness of different stars. You will organize your data into a table and graph.

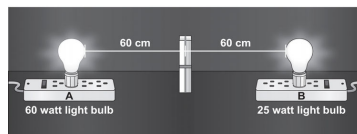
#### PROCEDURE

##### Make the photometer.

1. Fold the aluminum foil, shiny side out, to be the same size as the wax blocks.
2. Place the aluminum foil between the two wax blocks.
3. Place the rubber band around the wax blocks to hold them together.
4. Check that the 60 watt bulb is in the electric socket setup A and the 25 watt bulb is in electric socket setup B.

##### Compare the brightness of different watts of light bulbs.

5. Place the photometer in between the electric socket setups A and B. Each bulb should be 60 centimeters, cm, away from the aluminum foil in the photometer.



6. Notice that the side of photometer facing A is brighter than side facing B.

Performance-Based Assessment  
© Houghton Mifflin Harcourt Publishing Company

4

Grade 5 • Assessment Guide



#### OBJECTIVE

Investigate apparent brightness.

#### SAFETY



#### MATERIALS

##### For each group

- calculator
- electric light setup, 60-watt light bulb
- electric light setup, 25-watt light bulb
- meter stick
- rubber band
- piece aluminum foil
- 40-watt light bulb
- 100-watt light bulb
- 2 wax blocks

##### For each student

- pencil
- safety goggles

## Assess on All Dimensions

- Formal assessment questions **aligned to multiple dimensions** provide you with a complete picture of student understanding.
- A unique **3D Evaluation Rubric** helps you evaluate open-ended student responses and identify the underlying cause of student misunderstanding so that you can target remediation where it's most needed.

## Grade 5 Performance-Based Assessment

### Address Scientific Practices with Authentic Performance Assessments

**Performance-Based Assessments** help you ensure that your students can perform the science and engineering practices called for by NGSS. And they also guide students toward **making connections** across Performance Expectations.

Performance-Based Assessment  
Teacher Resources

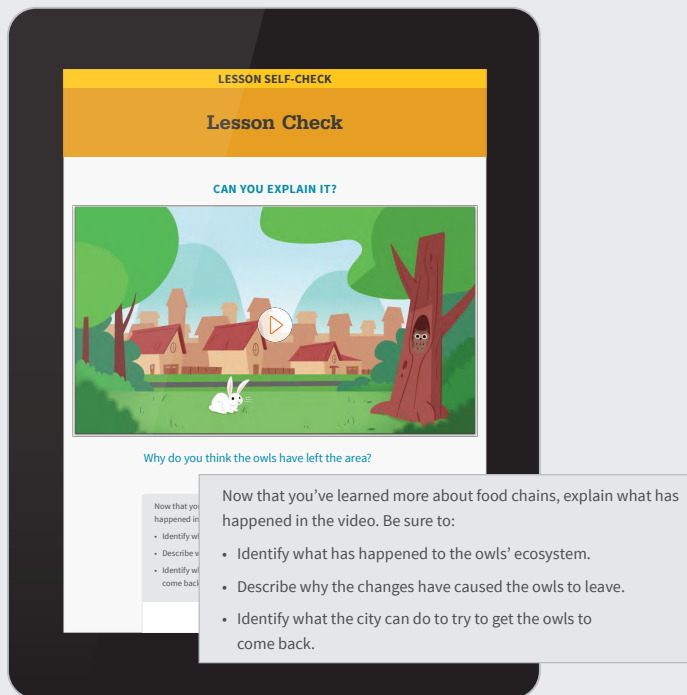
#### Task 1 Performance Rubric

##### Rating Scale

3 Outstanding	1 Needs Improvement
2 Satisfactory	0 Did Not Demonstrate Skill

Skills	Rating
<b>DCI.5-ESS1.A.1 The Universe and Its Stars</b> The student demonstrates differences in apparent brightness of the sun and other stars.	
<b>SEP.3-5.G.1 Engaging in Argument from Evidence</b> The student uses data to explain that the sun appears to be larger and brighter than other stars because of its distance from Earth.	
<b>CCC.3-5.C.1 Scale, Proportion, and Quantity</b> The student demonstrates that stars vary in size and distance from the Earth.	
<b>Additional: SEP.3-5.C.1 Planning and Carrying Out Investigations</b> The student conducts an investigation to show that the difference in apparent brightness of stars is due to their relative distances from Earth.	
<b>Additional SEP.3-5.C.2 Planning and Carrying Out Investigations</b> The student makes measurements demonstrating the differences in apparent brightness of the sun and stars.	
<b>Total</b>	





Grade 5 Online Student Edition

## Reflect on Evidence Gathered

At the end of a lesson, the **Lesson Self-Check** encourages students to reflect on the evidence they gathered throughout the lesson. They have another chance to respond to the discrepant phenomenon or central question of the lesson with **open-ended response** questions.

## Scaffold to Higher-level Thinking Skills

Formal assessments build in complexity. **Unit Pretests** help you make sure students have the basic knowledge they need to enter the lessons. **Lesson Quizzes** provide a quick check that students are getting the 3D concepts. **Unit Tests** check for understanding and challenge students to apply what they've learned in new contexts. **Mid-Year and End-of-Year benchmark tests** help you make sure your students are on track to **achieve the Performance Expectations**. Parallel print assessments ensure that your students are challenged in the same way both on- and offline.

Grade 2 - End-of-Year Test 3 of 10

Zoe set up a test with three of the same type and size of plant. She watered one plant once a week and the second plant once a month. She did not water the third plant. Zoe's table is shown.

Move the pictures and sentence to show what will happen in 60 days.

	Once a Week	Once a Month	Not Watered
How Plant Looked on Day 1			
How Plant Looked on Day 60			

What does the pattern show? Drag the correct sentence here.

A

B

C

D. The less water a plant gets, the taller the plant grows.

E. The more water a plant gets, the healthier the plant is.

Grade 2 Online End-of-Year Test



Kindergarten  
Online  
Assessment

## Prepare for High-Stakes Tests

Technology-enhanced assessment items (multi-select, drag and drop, etc.) prepare your students for modern **computer-based high-stakes tests**. Rigorous Mid-Year and End-of-Year benchmarks help you ensure that your students perform at a high depth of knowledge. Leveled benchmark tests help make the assessment accessible for all of your students.

# Engage with Meaningful Technology

**HMH Science Dimensions** leverages the advantages of technology while prioritizing a **student-centered learning model**. Students can view videos and animations, interact with instructional images and text, enter responses, pursue their intellectual interests by choosing lesson paths, and enjoy simulation-based learning. All of these features help you maintain an **integrated three-dimensional approach** to learning science.

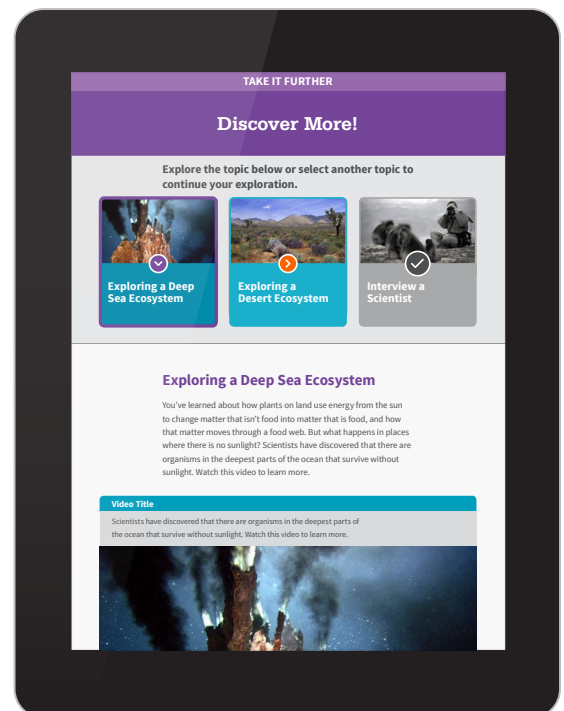


## Maximize Student Choice

The **Take It Further** feature at the end of each lesson maximizes the opportunity for students to elaborate further on what they have learned so far. By leveraging the power of technology, students can continue to go in depth on **topics of their choice**, to learn more and create stronger, more personal links to their learning.

## Immersive Digital Curriculum

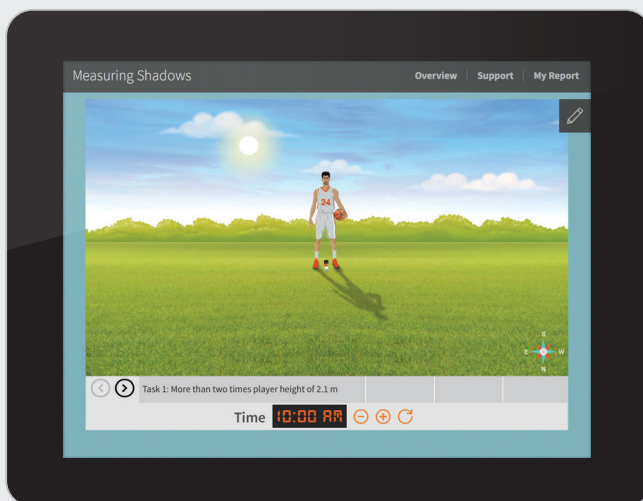
Online lessons are enriched above and beyond the print lessons with educational videos, learning interactivities, and places to save student work as **type-written responses** and **technology-enhanced item choices**. Students in Grades K–2 can even **voice-record** their responses! Vocabulary is highlighted and clickable, with point-of-use pop-up definitions.



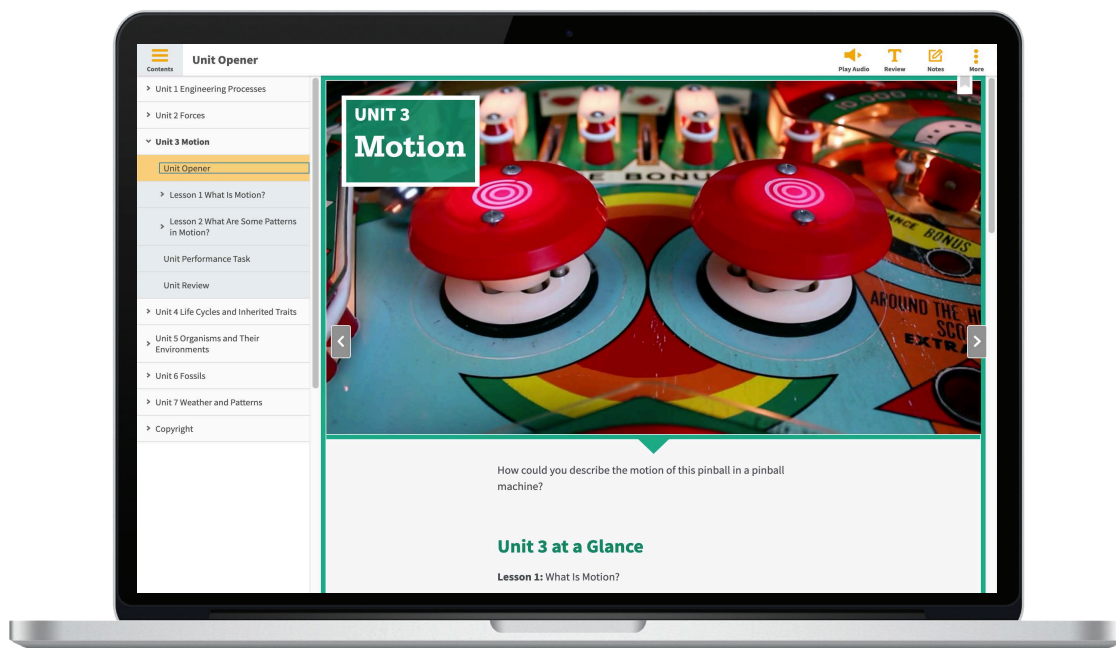


## Deepen Understanding with Open-Ended Simulations

Unique **You Solve It!** simulations provide completely **open-ended opportunities** for students to demonstrate their ability to problem solve and perform at the level described by the NGSS Performance Expectations. The program encourages students to explore multiple answers to a problem and learn to develop explanations and defend their answers.



Grade 5 You Solve It!



## The Ultimate Online and Offline Program Experience

- Teachers can look forward to accessing *HMH Science Dimensions* on *Ed*<sup>®</sup>, the HMH learning platform. *Ed* combines the best of technology, HMH content, and instruction to personalize the teaching and learning experience for every teacher and student. *Ed* is designed to be a friend to learners while supporting teachers and simplifying their instructional practice.
- Additionally, program content can be accessed offline, allowing for maximum compatibility in 1:1 or in Bring Your Own Device learning environments and with the wide variety of technology that students have at home.
- If you would like to see *HMH Science Dimensions K-5* digitally on *Ed* request access by visiting [hmhco.com/ScienceDimensions](https://hmhco.com/ScienceDimensions).



# Three-Dimensional Learning Made Simple

**HMH Science Dimensions** expertly weaves the Three Dimensions of Learning into each lesson in order to meet the Performance Expectations (PEs). This braided approach takes the burden off of you while ensuring a **quality 3D learning experience** for your students.



## 3D Learning Objectives

Each lesson has unique interrelated **3D Learning Objectives** that can be found in the Teacher Edition. The objective is generated from the SEPs, CCCs, and DCIs associated with the Performance Expectations correlated to the unit. These **custom stepping-stone objectives** ensure that the lessons cover 100% of the NGSS\* material associated with the PEs.

LESSON 3 Engage • **Explore/Explain** • Elaborate • Evaluate

### Tide Pools

#### 3D Learning Objective

Children **make observations** of plants and animals to compare the **diversity of life in tide pool habitats**. Children **observe patterns** in the needs of plants and animals that live in tide pools.

#### CCC Patterns

Discuss the pattern caused by rising and falling tides.

**Ask:** What happens at high tide? **The water rises and covers the shore.** **Ask:** What happens at low tide? **The ocean falls back.** **Ask:** What pattern do the tides cause? **They cause the water to cover the shore and then fall back twice a day.**

#### SEP Planning and Carrying Out Observations

Have children compare the three zones. **Ask:** When is each zone covered with water? **The high tide zone is only covered at high tide. The middle tide zone is covered at high tide but not at low tide. The low tide zone is covered by water most of the time.**

**Ask:** What types of animals live in each zone? **Why do you think those animals live there?** **Animals in the high tide zone have hard bodies because there is not much water. Animals in the middle tide zone can live on land or on water because there is usually some of both. Animals in the low tide zone have gills because they are always under water.**

#### Differentiate Instruction

**ELL** To help children understand and remember the words introduced on this page, have them draw and label pictures to represent *ocean, shore, high tide, and low tide*.

#### Tide Pools

Tide pools have three parts called zones. Each zone is a habitat.

[Explore online.](#)



The high tide zone is covered with water only at high tide. At low tide, there is little or no water. The animals that live in this zone usually have hard bodies or can hold onto rocks.



The middle tide zone is covered with water at high tide but not at low tide. This zone is home to many animals. That is why animals from other zones come here to find food.



The low tide zone is covered by water most of the time. Many animals that live in this zone use gills to take in oxygen from the water.

Twice a day, every day, the salty water at the ocean's shore rises and falls. At high tide, the water rises and covers the shore. At low tide, it falls back. It leaves pools of water between the rocks that are called tide pools. This is a pattern.

146

146 Unit 3 • Environments for Living Things

Grade 2 Teacher Edition

## Enrich the Learning Experience

Additional Collaboration; Differentiate Instruction; Formative Assessment; and Claims, Evidence, and Reasoning suggestions provide a wealth of support and resources.



## Clearly Labeled NGSS References

The NGSS labeling in the Teacher Edition clearly identifies all the PEs, SEPs, DCIs, and CCCs of NGSS, including the math and ELA connections. This helps educators **identify the standards** that are being covered in any given lesson.

### LESSON 1

## How Are Science and Math Used in Engineering?

#### Building to the Performance Expectations

The learning experiences in this lesson prepare students for mastery of:

**5-ESS3-1** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

**3-5-ETS1-1** Define a simple design problem reflecting a need or want that includes specified criteria for success and constraints on materials, time, or cost.

**Trace Tool to the NGSS**  
Go online to view the complete coverage of these standards across this lesson, unit, and time.

**SEP Science & Engineering Practices**

**Asking Questions and Defining Problems**  
Define a simple design problem that can be solved through the development of an object, tool, process, or system and includes several criteria for success and constraints on materials, time, or cost.

**Obtaining, Evaluating, and Communicating Information**  
Obtain and combine information from books and/or other reliable media to explain phenomena or solutions to a design problem.

**DCI Disciplinary Core Ideas**

**ESS3.C Human Impacts on Earth Systems**  
Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments.

**ETS1.A Defining and Delimiting Engineering Problems**  
Possible solutions to a problem are limited by available materials and resources (constraints). The success of a designed solution is determined by considering the desired features of a solution (criteria). Different proposals for solutions can be compared on the basis of how well each one meets the specified criteria for success or how well each takes the constraints into account.

**CCC Crosscutting Concepts**

**Systems and System Models**  
A system can be described in terms of its components and their interactions.

**Influence of Engineering, Technology, and Science on Society and the Natural World**  
People's needs and wants change over time, as do their demands for new and improved technologies.

**CONNECTIONS TO MATH**

**5.G.A.2** Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

**5.O.A.B.3** Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane.

**CONNECTIONS TO ENGLISH LANGUAGE ARTS**

**W.5.7** Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.

**W.5.8** Recall relevant information from experience or gather relevant information from print and digital sources, summarize or paraphrase information in notes and finished work, and provide a list of resources.

4A Unit 1 Engineering and Technology

Grade 5 Teacher Edition

## Utilize the 5E Model

The **Teacher Edition** (online and print) is organized around the familiar **5E instructional model**. This helps to lower the learning curve and provide a solid foundation upon which to build an NGSS curriculum.

## Integrate Engineering

The TE provides abundant opportunities for integrating engineering into the classroom.

## Incorporate English Language Arts and Math Connections

Strong math and reading skills are essential to ensuring STEM learning and science literacy. **HHM Science Dimensions** offers Common Core **Math and ELA connections** throughout the curriculum.

### LESSON 2

#### Engage • Explore/Explain • Elaborate • Evaluate

#### EXPLORATION 3 How'd That Get There? continued

**Engineer It!**  
**Tools of the Trade**

The tools used to collect fossils include safety gear such as gloves to keep the hands safe, dust masks to keep the dust from getting into your body, safety goggles to protect the eyes, and hard hats in case there is danger that rocks might hit people in the head.

**Ask:** What is the purpose of the tools shown in the images?  
*These tools help scientists see fossils better, preserve evidence of where they were found, and to remove them from the ground.*

**Ask:** What is the purpose of the tools described in the paragraph above? *These tools help keep scientists and fossil hunters safe.*

**Collaboration**

**Write, Pair, Share** After students have completed the Engineer It, have them create a 3-item list of tools similar to the ones shown. Have them pair up with a partner and compare their lists, explaining what each tool does and why it's needed.

**FORMATIVE ASSESSMENT**

**Language SmArts**  
**Making Inferences**  
**W.3.8 Recall Information**

Encourage students to be as creative as possible, and have them find a fossil that would make a big difference in understanding our past.

**Ask:** What can we infer about ancient fossils from their modern-day environments? *Ancient fossils may be found in modern-day environments not all that similar to their original environments because moving land masses may have moved them from where they were fossilized.*

**Engineer It**  
**Tools of the Trade**

You might be surprised that studying fossils requires engineering to solve some problems. Fossils form in places where they have to be excavated, or dug out, before they can be studied. It takes a certain set of tools to solve this problem. Not all engineering solutions use complicated technology. Many tools scientists use for digging up and studying fossils are simple. Read below to learn about these tools.

a. A paleontologist uses a geological hammer or mallet to break fossils out of the rock that surrounds them.

b. Brushes are used to dust away loose material from the fragile surfaces of fossils.

c. Many fossils are tiny or have very small details. A hand lens allows the paleontologist to look closely.

d. Paleontologists take pictures to document the whole process of excavation.

**Language SmArts**  
**Making Inferences**

**21.** Suppose you discovered a new animal fossil. Tell how you would determine the type of environment that it lived in. Identify specific parts of the fossil that might be evidence for your claim.

*Possible answer: Look at the teeth to determine what it ate.*  
*Look to see if it has wings or fins or legs to determine whether it lived on land or water.*

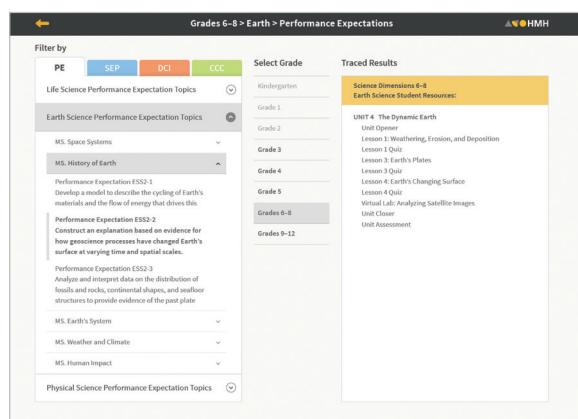
**TIP**  
**Making Inferences**  
The English Language Arts Handbook can provide help with understanding how to make inferences. Reading and Writing in Science

388 Unit 6 Fossils

Grade 3 Teacher Edition

# Unmatched Professional Learning—Transition with Ease

HMH is committed to ensuring your success throughout the year. You don't expect your students to master all their skills within the first week of school and the same shouldn't be expected of you. That's why we've designed our professional learning to be ongoing, flexible, and actionable. Any new curriculum requires significant changes in how educators teach science, but its rewards are immediate. HMH provides the support you need to make the transition to a student-centered style of teaching.



## Understand Where Your Instruction Fits

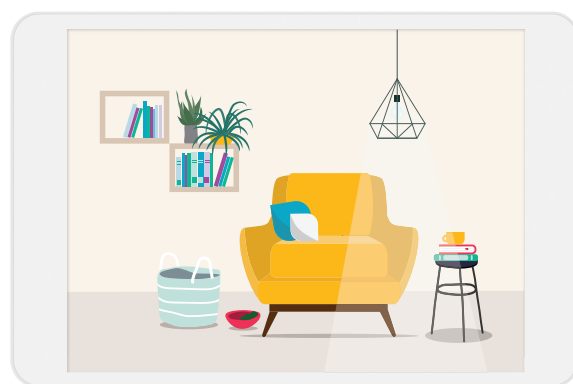
- The NGSS Trace Tool helps you make sense of the standards, understand how they connect and spiral from one grade to another, and identify HMH resources to support your instruction.
- You can trace the standards by PEs, SEPs, CCCs, or DCIs. When you click on a standard, you can view where in the program that standard is covered.

## Welcome to Teacher's Corner™

Teacher's Corner is the foundation for continuous program-specific support and an online community for teachers.

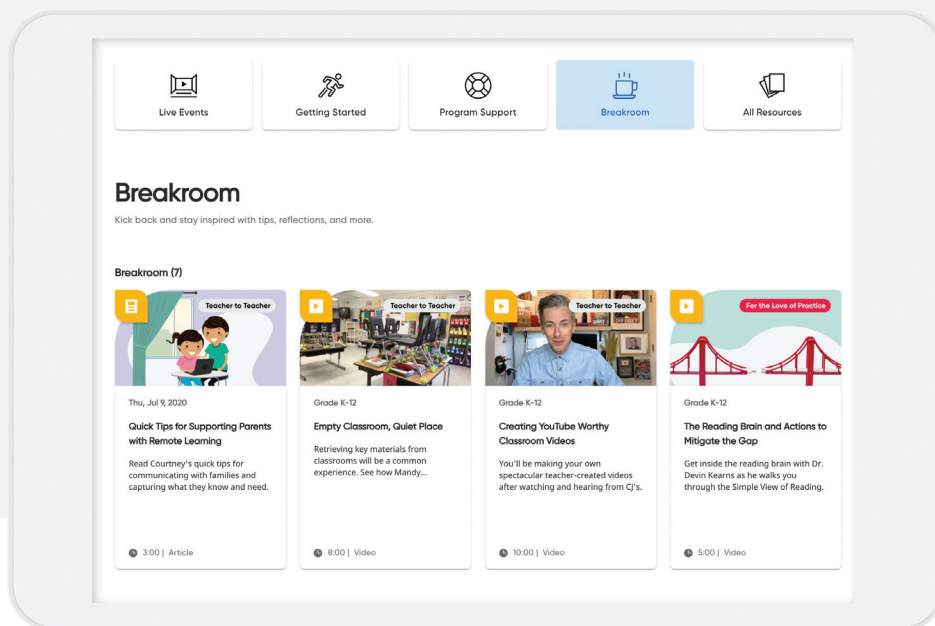
### Teacher's Corner includes:

- Access to an ever-evolving library of resources for science and grade-level needs for educators and administrators.
- Authentic classroom videos featuring dynamic authors and lab demos and articles from teachers who are currently teaching with HMH programs.
- **Getting Started** training which provides an overview of the program, components, resources, planning and differentiation tips, and ways to engage students with technology.
- **Professional Learning Guides** which provide suggestions for prioritizing content with manageable milestones.
- Embedded **Professional Development** videos guide teachers through the key approaches that ensure NGSS success.
- Links to **Professional Learning Tools** for science—Blog Articles, YouTube® Videos, Pre-Recorded Webinars.



 **Teacher's Corner™**





## Create Long-Term, Sustainable Growth

Our professional learning model allows you to move beyond the one-size-fits-all approach, with live online support that is flexible, collaborative, and personalized to meet your needs. Together, we create meaningful learning experiences for educators and their students.

## To help you further hone your craft, Follow-Up\* sessions will help you:

- Make science accessible for all learners
- Maximize learning with digital resources
- Plan effective science learning experiences
- Integrate meaningful STEM experiences

## Ensure Success for the Entire Year with Job-Embedded Coaching\*

At the heart of a successful coaching experience is the collaborative relationship between teachers and coaches. Receive ongoing support from coaches through the award-winning Coaching Studio.

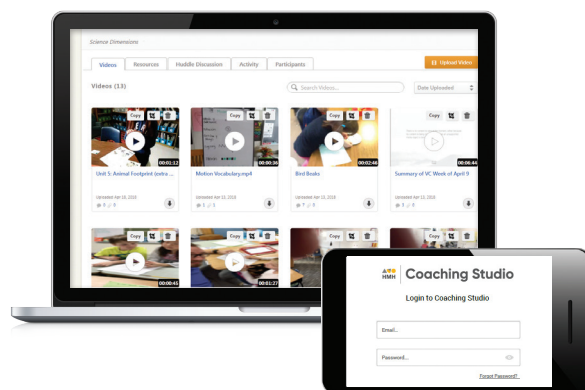
## Instructional Strategies and Science Practices\*

From foundational science concepts to instructional strategies and best practices, these courses take teaching practice and professional expertise to a deeper level.

- Student-Centered Science
- Scientific Thinking with CER (Claims, Evidence, & Reasoning)
- Phenomenon-Based Learning
- Inspire Problem Solvers with the Engineering Design Process



## Coaching Studio



For more information, please visit us at [mathsolutions.com/science](https://mathsolutions.com/science).

## Program Components

With its cohesive, spiraled approach to meeting the new standards, *HMH Science Dimensions* provides a consistent and engaging experience from transitional kindergarten through high school.

### GRADES K–5

Available as a softcover, consumable write-in worktext for each grade.

### GRADES 6–8

Available as 12 modules for *Life Science*, *Earth & Space Science*, *Physical Science*, and *Engineering*

### HIGH SCHOOL

Includes *Biology*, *Earth & Space Science*, *Chemistry*, and *Physics*



Student Resources	Print	Online
Student Edition	•	•
Student Edition, Interactive Online Edition		•
Science and Engineering Leveled Readers	•	•
<i>ScienceSaurus</i> ®	•	•
Math Handbook		•
English Language Arts Handbook		•
Science and Engineering Practices Handbook		•
Crosscutting Concepts Handbook		•
You Solve It! simulations		•
Teacher Resources	Print	Online
Teacher Edition	•	•
Teacher Edition, Interactive Online Edition		•
Performance-Based Assessments		•
Assessment Guide		•
Customizable Online Assessment		•
Multilingual Glossary K–5	•	•
NGSS Trace Tool		•

## Learn more and get an online preview:

- Visit [hnhco.com/ScienceDimensions](http://hnhco.com/ScienceDimensions)
- Contact your HMH Account Executive: [hnhco.force.com/relocator](http://hnhco.force.com/relocator)

## #HMHScience

\*Next Generation Science Standards and logo are registered trademarks of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards were involved in the production of this product, and they do not endorse it.

YouTube, Google, and Google Cardboard are registered trademarks of Google LLC. HMH Science Dimensions®, Ed Your Friend in Learning®, ScienceSaurus®, Teacher's Corner™, The Learning Company™, Houghton Mifflin Harcourt®, and HMH® are trademarks or registered trademarks of Houghton Mifflin Harcourt. © Houghton Mifflin Harcourt. All rights reserved. Printed in the U.S.A. 07/20 WF1226295 F-1807370



**Houghton Mifflin Harcourt.**  
The Learning Company™

**hnhco.com**