

Science A-Z

Digital K-6 Science Curriculum Aligned to the Next Generation Science Standards



Printable



Projectable



Online



Mobile



Science A-Z delivers an award-winning, three-dimensional, science and literacy curriculum!

Multilevel Science Books, Lessons, Activities, and Experiments

Science A-Z delivers an extensive collection of in-depth digital and printable books, activities, and hands-on experiments that make it easy to incorporate science into literacy instruction, while fully supporting today's science standards. With Storylines and Unit Roadmaps to help guide instruction, teachers can focus on creating engaging three-dimensional learning experiences that make the most of their skills, talent, and time.

Key Features

- **Complete K–5 Storylines Curriculum** delivers an entire year of resources to address all Next Generation Science Standards (NGSS)* and state science standards based on the NGSS framework.
- **Comprehensive science units** provide a library of printable, projectable, and digital resources that integrate science and literacy.
- **Unit activities and experiments** provide hands-on learning opportunities and put science into practice.
- **Investigation and Project-Based Learning Packs** encourage collaboration and promote further exploration of STEM concepts.
- **Automated reporting** tracks scientific literacy growth and helps determine future instruction.

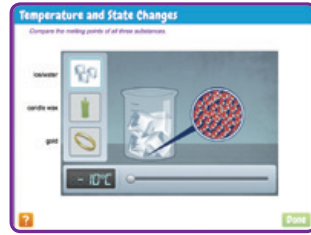


*Next Generation Science Standards is a registered trademark of Achieve. Neither Achieve nor the lead states and partners that developed the Next Generation Science Standards were involved in the production of this product, and do not endorse it.

Supporting the NGSS Framework



Storylines are phenomenon-based lesson series that integrate all three dimensions of the NGSS Framework via investigations, readings, and assessments.



Interactive Science Lessons offer engaging virtual labs that help students think like scientists as they learn science concepts.



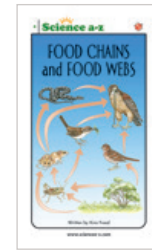
Process Activities offer hands-on learning opportunities to apply important concepts and develop science practices.



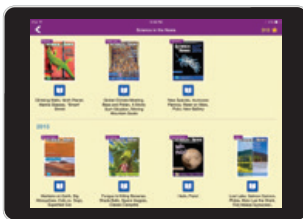
Science Videos extend the core concepts of a unit, model real science in action, and serve as virtual field trips.



Investigation Packs use close reading activities to help students apply key practices and develop 21st century skills.



Multilevel Nonfiction Books build a strong foundation for each unit and integrate science into the reading curriculum.



Science in the News engages students with multilevel articles covering current STEM-related news and events.



FOCUS Books explore high-interest topics in depth and reinforce STEM practices with challenges and assessments.



Multilevel Quick Reads give students an opportunity to dig deeper into core science ideas and crosscutting concepts.

Science A-Z Delivers Complete Coverage of K–5 NGSS Topics

Grade K

- Interdependent Relationships in Ecosystems: Animals, Plants, and Their Environment
- Weather and Climate
- Forces and Interactions: Pushes and Pulls

Grade 1

- Structure, Function, and Information Processing
- Space Systems: Patterns and Cycles
- Waves: Light and Sound

Grade 2

- Interdependent Relationships in Ecosystems
- Earth’s Systems: Processes That Shape the Earth
- Structure and Properties of Matter

Grade 3

- Inheritance and Variation of Traits: Life Cycles and Traits
- Interdependent Relationships in Ecosystems
- Weather and Climate
- Forces and Interactions

Grade 4

- Structure, Function, and Information Processing
- Earth’s Systems: Processes That Shape the Earth
- Energy
- Waves: Waves and Information

Grade 5

- Matter and Energy in Organisms and Ecosystems
- Space Systems: Stars and the Solar System
- Earth’s Systems
- Structure and Properties of Matter

Engineering standards are embedded within the Storylines.

Science A-Z Storylines

Three-Dimensional Learning Aligned With All 21 NGSS Topics

Science A-Z Storylines, phenomenon-driven lesson plans and assessments, are carefully designed to help teachers address all three dimensions of NGSS within one coherent sequence of lessons.

Each Storyline targets a bundle of Performance Expectations within a grade-specific topic of the NGSS Framework. Students explore Disciplinary Core Ideas and Crosscutting Concepts by engaging in Science and Engineering Practices, providing them with an integrated, three-dimensional learning experience.

Storylines Resources

Storylines include videos, books, graphic organizers, articles, experiments, and assessments!

The screenshot shows the 'Introduction' section of the 'Earth's Land and Water' Storyline. It explains that Science A-Z Storylines are designed to address all three dimensions of the Next Generation Science Standards (NGSS). Each Storyline targets a set of Performance Expectations through a coherent series of lessons. The page also includes a 'Storyline Summary' section with a table of lessons and their associated standards.

Lesson	Performance Expectations
Lesson 1	(p. 4)—Students discover that maps are a kind of model that people can use to show the types of landforms and shapes of bodies of water in a particular location. 2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area.
Lesson 2	(p. 7)—Students discover that various bodies of water on Earth's surface and that some of these bodies of water are made of solid, liquid, or gas. 2-ESS2-3. Analyze and compare the shapes of different bodies of water and explain how they formed.
Lesson 3	(p. 10)—Students discover that weathering and erosion are processes that change the Earth's surface. 2-ESS1-1. Use a model to describe how weathering and erosion can change the Earth's surface. 2-ESS1-2. Use a model to describe how weathering and erosion can change the Earth's surface.
Lesson 4	(p. 13)—Students discover that wind from storms can change the Earth's surface. 2-ESS2-1. Classify and compare different types of weathering and erosion. K-2-ETS1-3. Ask a question to generate a problem to solve.

A collage of various Science A-Z resources. It includes a book cover for 'Hawaii Volcanoes National Park', a 'Science A-Z' map of California landforms, a 'Landslide' video thumbnail, an 'Impact Craters' book cover, a 'Research' worksheet, an 'Earthquake Quiz' worksheet, and a 'Science News' article titled 'EARTHQUAKE: Moves Cities, Changes Time!'. The article discusses the 2010 earthquake in Chile and explains how tectonic plates move and cause earthquakes.

Samples from the Grade 2 Storyline Earth's Land and Water

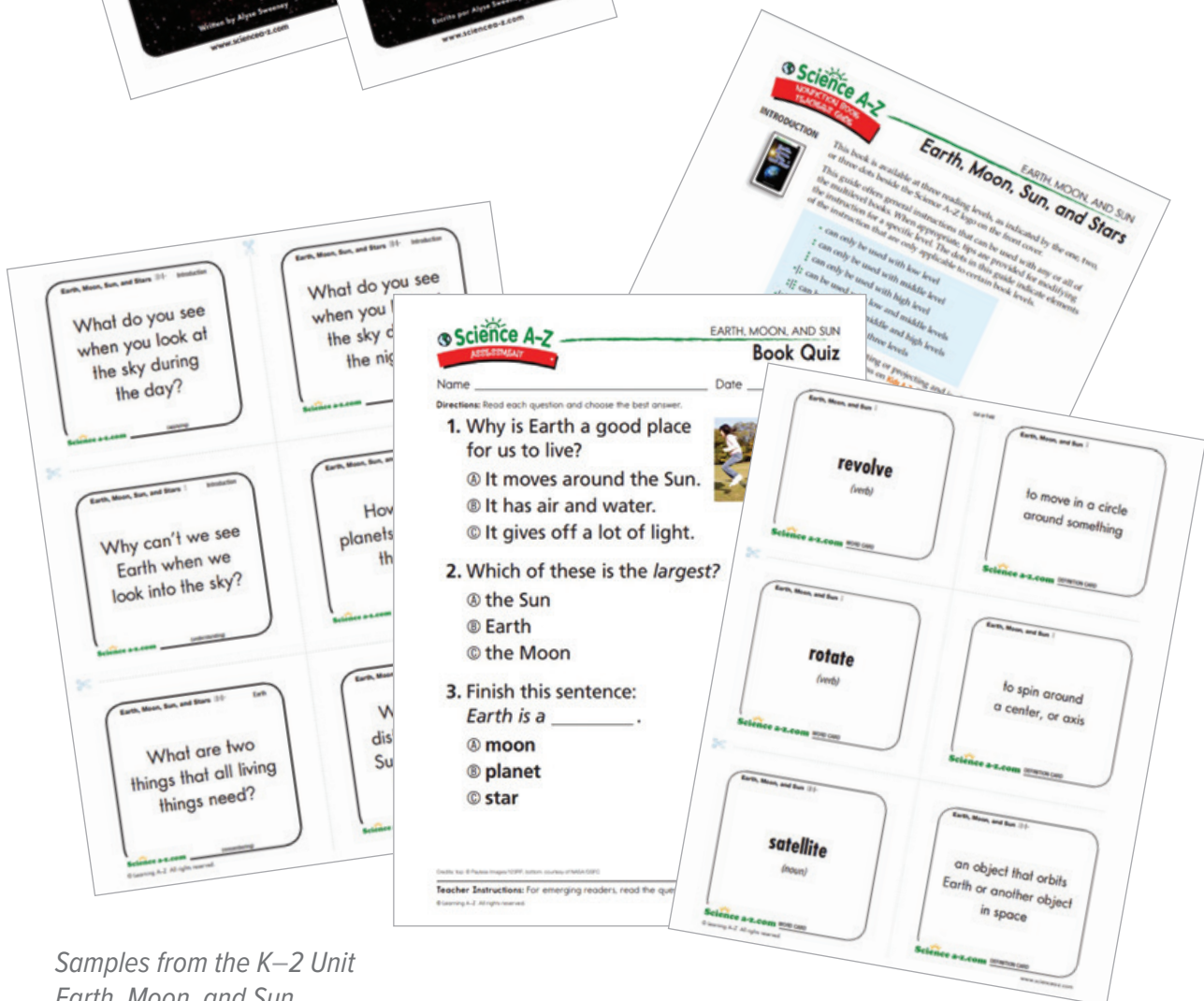
Unit Nonfiction Books and Ancillary Resources



The Unit Nonfiction Book serves as the anchor text for the unit.

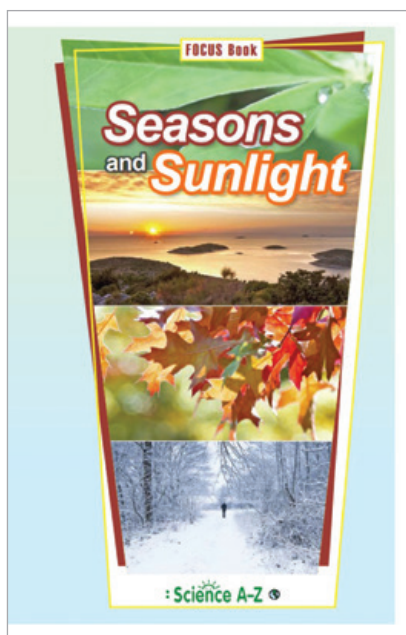
Each book includes a **Teacher's Guide, Discussion Cards, Vocabulary Cards, and Quiz.**

These books are available at **3 reading levels** in both **English and Spanish.**



Samples from the K–2 Unit Earth, Moon, and Sun

FOCUS Books and Ancillary Resources



Five **FOCUS Books** help students dig deeper into high-interest science topics related to each unit.

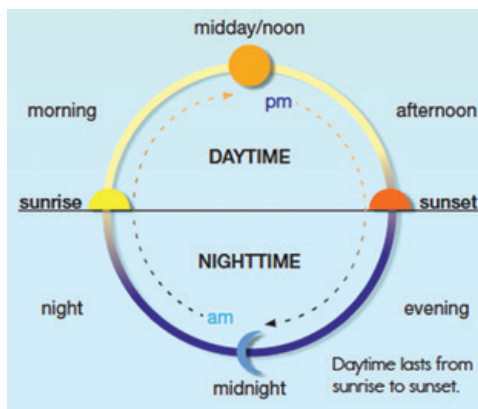
These 12-page books use **real-world examples** and engaging images to describe specific concepts.

Written at **3 reading levels**, each FOCUS Book includes **Teaching Tips and a lesson plan**.

FOCUS Question

How does the amount of sunlight in a day change during the four seasons?

Patterns



Visual Devices, such as **charts and graphs**, allow students to analyze and interpret visual information.

Each **FOCUS Question** is tagged with a Crosscutting Concept.

Math Moment

Apollo astronauts collected 380 kilograms of Moon rocks. One kilogram is equal to 2.2 pounds. How many pounds of Moon rocks did the astronauts collect?

Sidebars and special features stimulate critical thinking and discussion.

*Samples from the K–2 Unit
Earth, Moon, and Sun*

Be a Scientist!

The back cover of each FOCUS book includes an age-appropriate **activity prompt** that allows students to apply what they have learned and behave like a Scientist or an Engineer. With these open-ended, inquiry-based activities, students engage in critical thinking and discussion.

Be an Engineer!

Investigation Packs

Investigation Packs are **group science activities** that help students dig deeper into Science A-Z content. Reading resources called Investigation Files, or I.Files, feature high-interest, in-depth science content in an engaging design that combines informational text with compelling visuals, such as graphs, maps, and photographs. Students do a close reading of the I.File and then cite evidence to help them solve the Mystery File in each pack through group discussion.



Multiple I.Files at **3 reading levels** allow students to investigate high-interest science topics.



Mystery Files provide a whole-group culminating activity.

Science a-z 1154-160-0001-10001 **ADAPTATIONS**
Structural Adaptations

Name _____ Date _____
 Others on my ITeam _____
 Title of IFile _____

Key Question
 What makes a trait a structural adaptation?

My First Answer
 Explain what you know or think you know about the answer to the Key Question below, reading any of the I.Files.

My Key Words and Definitions
 List five words from your I.File that are important for understanding the topic. Then write a definition for each one in your own words.

Word	My Definition
1.	
2.	
3.	
4.	
5.	

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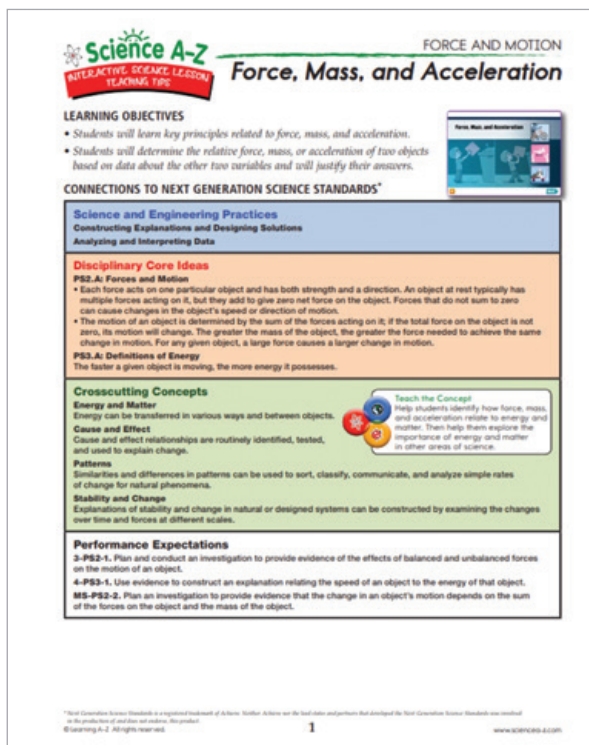
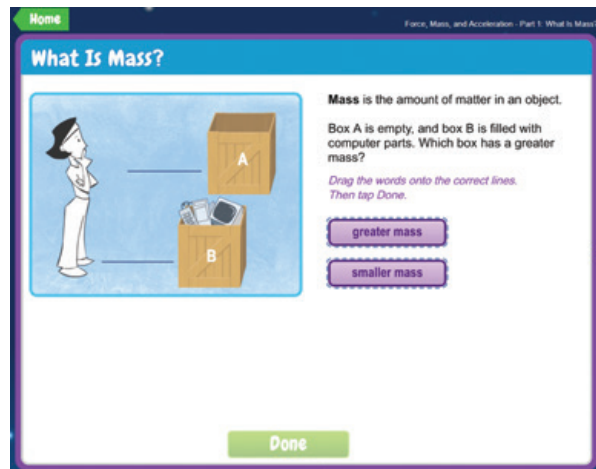
Student Response Sheets, provided for individual and team responses, encourage students to find and cite evidence.

Samples from the 5–6 Unit Adaptations

Interactive Science Lessons

Interactive Science Lessons give students a chance to be in the driver's seat while learning the fundamental concepts of science. These virtual lessons provide a road map for students as they explore important and sometimes complex ideas.

Each lesson offers **instruction, practice, and assessment** using text and accompanying audio. Practice slides provide immediate feedback and explanations of difficult concepts. Graphics, **animations, and simulated interactive experiments** and explorations help students visualize the content being presented.

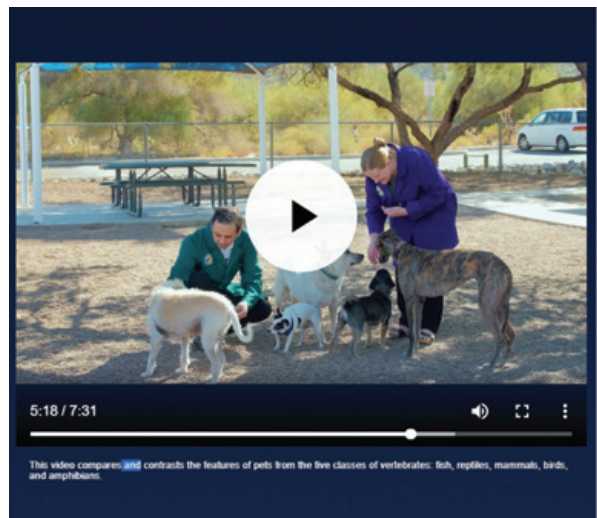


Teacher's Guides and Teaching Tips provide educators with options for integrating Interactive Science Lessons into their instruction. Connections to Science Standards and Science A-Z Units are included.

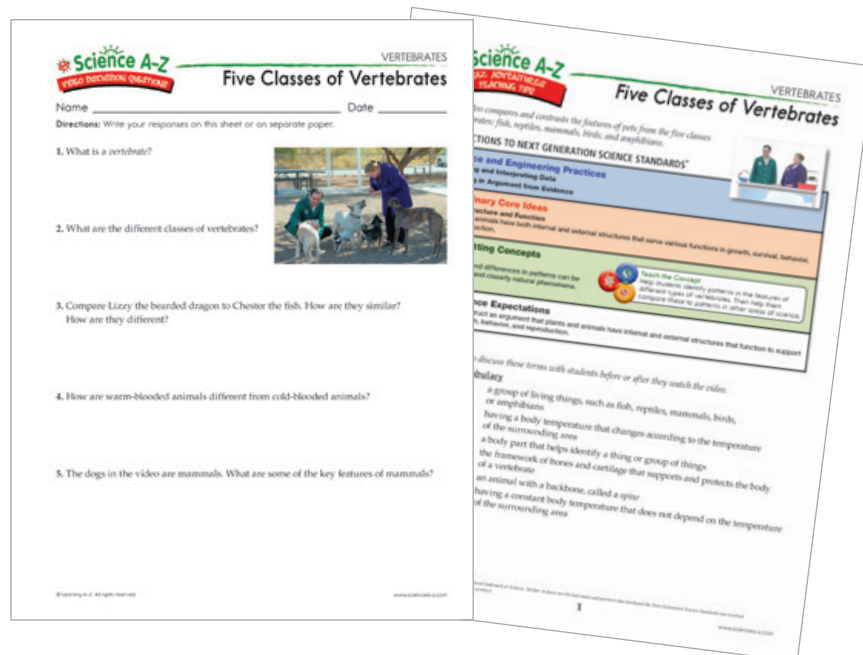
*Samples from the 5–6 Unit
Force and Motion*

SAZ Adventures

The SAZ Adventures video series features Doug and Jane in both the lab and a real-world setting to show students how the important concepts they are studying in the science unit apply to the real world around them.



These videos come with **Video Discussion Questions**, as well as **SAZ Adventures Teaching Tips** that provide standards connections, key vocabulary, and other instructional support.



Samples from the 3–4 Unit
 Vertebrates

Career Files and Quick Reads



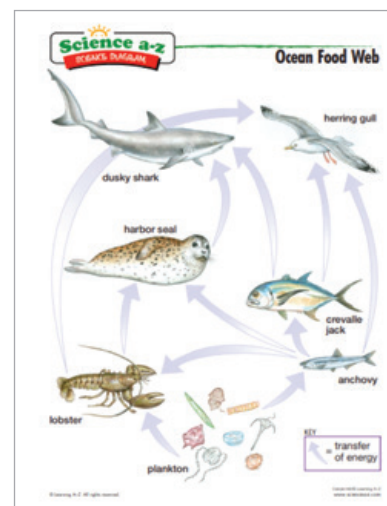
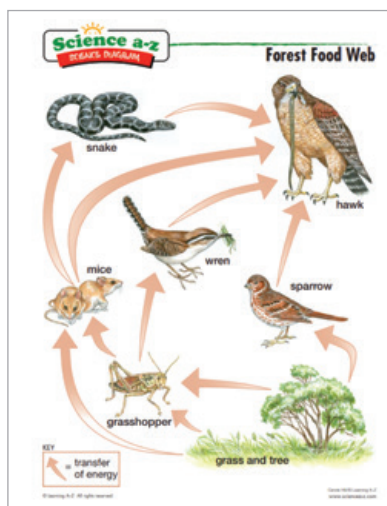
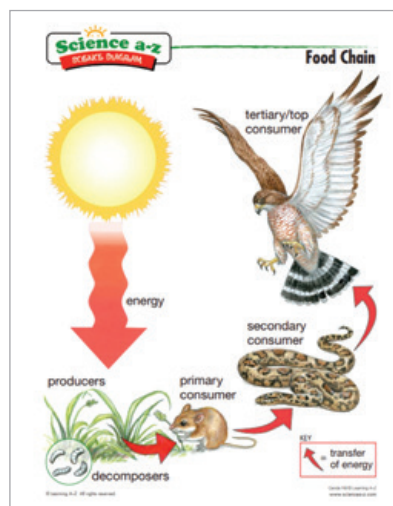
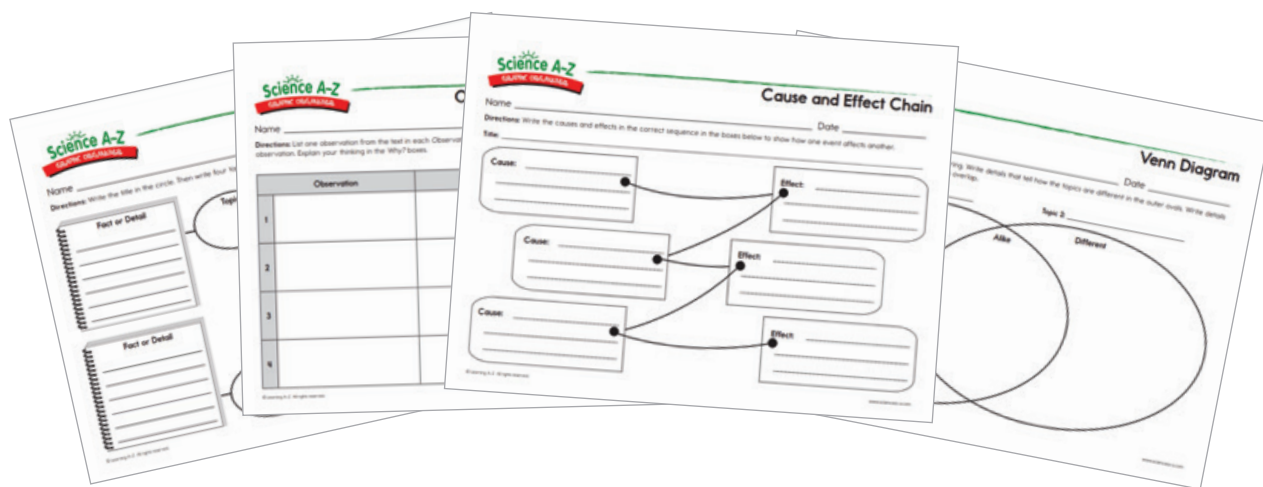
Career Files teach students about important jobs in science, and how science is used in other jobs. Careers with the STEM symbol focus on Science, Technology, Engineering, or Math. Each unit features 3 Career Files related to the unit topic.



Quick Reads provide short, informational texts about a variety of topics related to the unit theme. Every Quick Read is provided at 3 reading levels to allow teachers to differentiate for student reading level. Quick Reads are rich with visual devices and provide a Brain Check quick assessment of what students learn.

Graphic Organizers and Science Diagrams

Science A-Z Graphic Organizers support **content-area learning and reading comprehension**. The Graphic Organizers are organized by primary (K–2) and intermediate (3–6) grades. Science Diagrams serve as instructional tools that help students read and interpret visual devices, and build important skills in STEM fields. By studying science diagrams, students can visualize patterns, systems, cycles, scale, structures, and functions.



Samples from the 5–6 Unit Food Chains

Science Videos

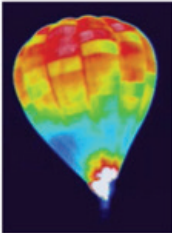
Science A-Z offers engaging and instructional Science Videos for kids that extend the core concepts of a unit, model real science in action, or serve as **virtual field trips**, helping students visualize ideas from Science A-Z instructional resources. The videos illustrate science concepts and practices, often showing STEM professionals in action.

Science A-Z SOLIDS, LIQUIDS, AND GASES
VIDEO DISCUSSION QUESTIONS **How Does a Hot-Air Balloon Work?**

Name _____ Date _____


Directions: Write your responses on this sheet or on separate paper.

1. What is the role of gas burners in a hot-air balloon?
2. Is a flying hot-air balloon filled with a solid, liquid, or gas? How do you know?
3. Look at the picture of the balloon taken with a heat-sensitive camera. What do the different colors show? How does the temperature of the air differ throughout the balloon?
4. How does heated air make a hot-air balloon rise?
5. How does a person safely land a hot-air balloon?



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Video Discussion Questions accompany each video to help foster critical thinking skills.



0:46 / 1:40

Air inside a hot-air balloon is heated with a burner. Hot air is lighter than cool air, so the hot air rises, making the balloon rise, as well. A heat-sensitive camera shows the location of the heated air at the top of the balloon.

*Samples from the 3–4 Unit
Solids, Liquids, and Gases*

Science in the News

Science in the News engages your students in the ever-changing world of science. Each issue features compelling news articles written at three reading levels to allow for differentiated instruction. Science in the News provides opportunities to teach **critical thinking, inquiry, and the life-long literacy skill of reading the news.**



Past editions from the **Science in the News** Archive provide additional reading resources for whole-group instruction or independent practice.

Letters to the Editor

Send comments, questions, or story ideas to scienceeditors@learninga-z.com.

Debates

Debates provide students with meaningful, interactive experiences that integrate science content, critical thinking, research, speaking, listening, and teamwork.

Debates require students to think and act as real scientists. After being presented with a realistic, yet fictional scenario, students consider arguments that are either for or against a proposal, take a position, and then defend it in a friendly, structured format.

Science a-z DEBATE ANIMALS
A Classroom Pet

Purpose
 To discuss whether an elementary school classroom should adopt a class pet

Background
 All animals share similar needs—food, air, water, and shelter. When deciding whether to adopt a class pet, students must consider how to meet these needs as well as the needs of the people in the school.

Set the Scene
 Mr. Doglover's class has been learning about animals. Mr. Doglover decides that adopting a class pet would be a great way to teach the students about an animal's needs.

The students think adopting a pet is a great idea. The principal and the school custodian are worried, though. They decide to meet with Mr. Doglover as soon as possible to decide what to do.

The Idea
 Mr. Doglover's class should adopt a class pet.

Why students might like this idea:

- Having a pet in the classroom will teach students about animal needs.
- The students can help take care of the pet and learn to be responsible.
- If an animal such as a lizard is chosen as the pet, students can learn about less familiar animals.

DEBATE
The Idea: Mr. Doglover's class should adopt a class pet.

We can learn a lot about what animals need.

Pets need love.

Who will care for the pet on weekends?

Caring for a pet will be fun.

Pets make me sneeze.

Science a-z DEBATE ANIMALS
A Classroom Pet

The Idea: Mr. Doglover's class should adopt a class pet.

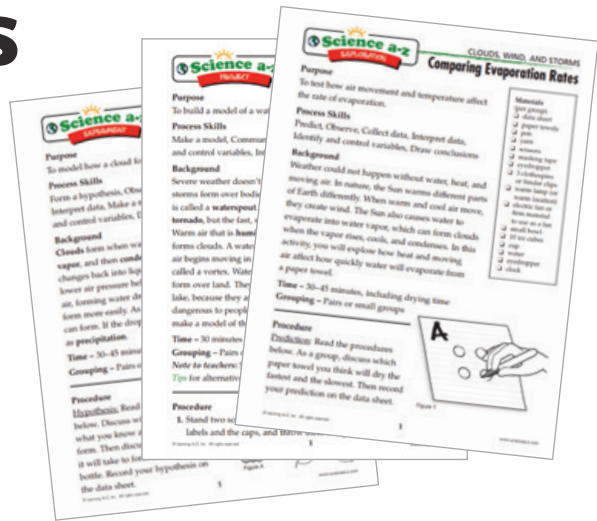
I like this idea because:

I do not like this idea because:

Samples from the K–2 Unit
 Animals

Process Activities

Science A-Z **Process Activities** provide opportunities to apply important unit concepts and develop scientific practices through hands-on science activities and fun experiments. Students learn to read, think, write, speak, and behave as real scientists. Teaching Tips help guide science instruction.



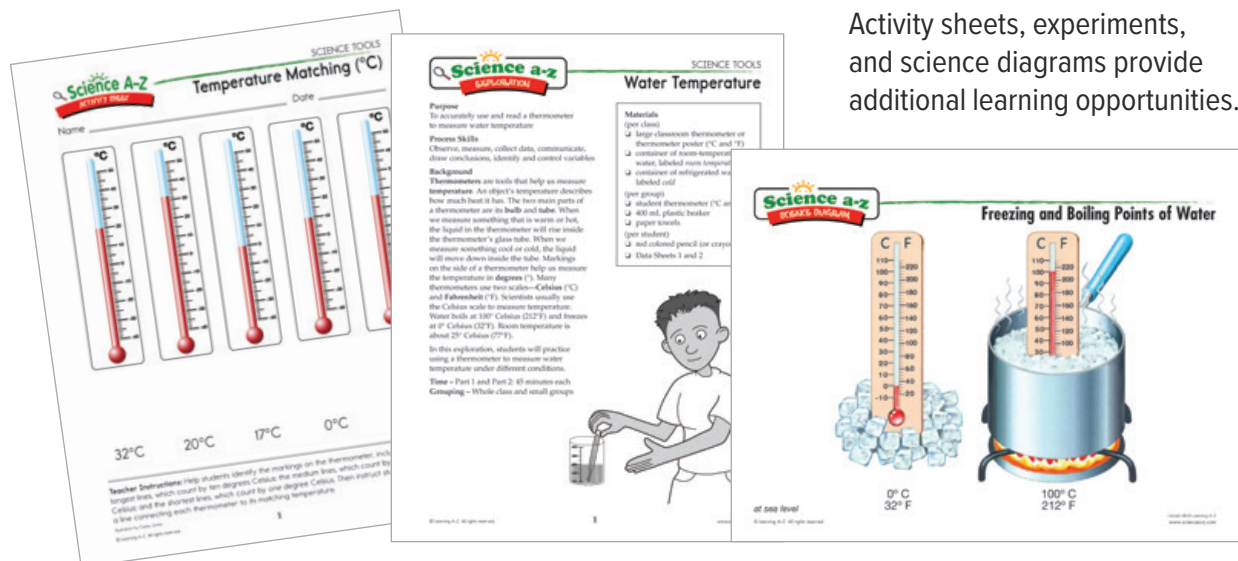
Samples from the 3–4 Unit Clouds, Wind, and Storms

Process Science

Materials are offered at 3 reading levels.



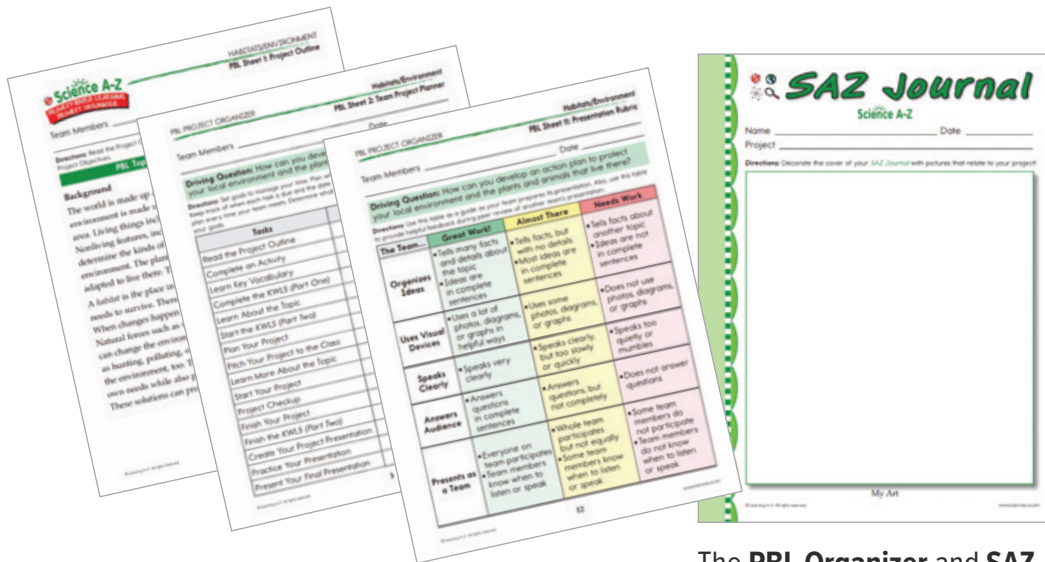
Activity sheets, experiments, and science diagrams provide additional learning opportunities.



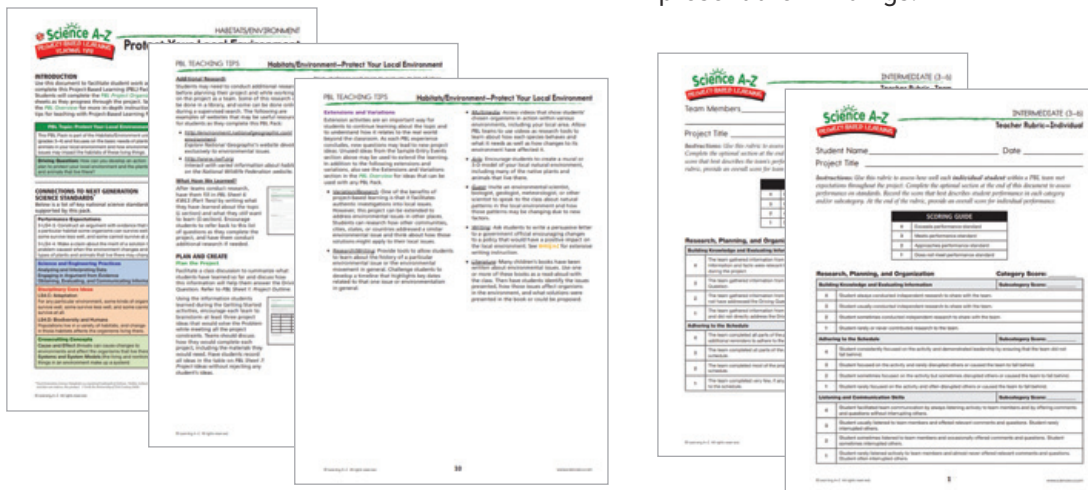
Samples from Tools > Thermometers

Project-Based Learning Packs

Project-Based Learning (PBL) Packs are inquiry-based student science projects and activities that promote creativity, collaboration, and critical thinking. Resources encourage students to work in teams to investigate an overarching science question or to design solutions for an engineering challenge.

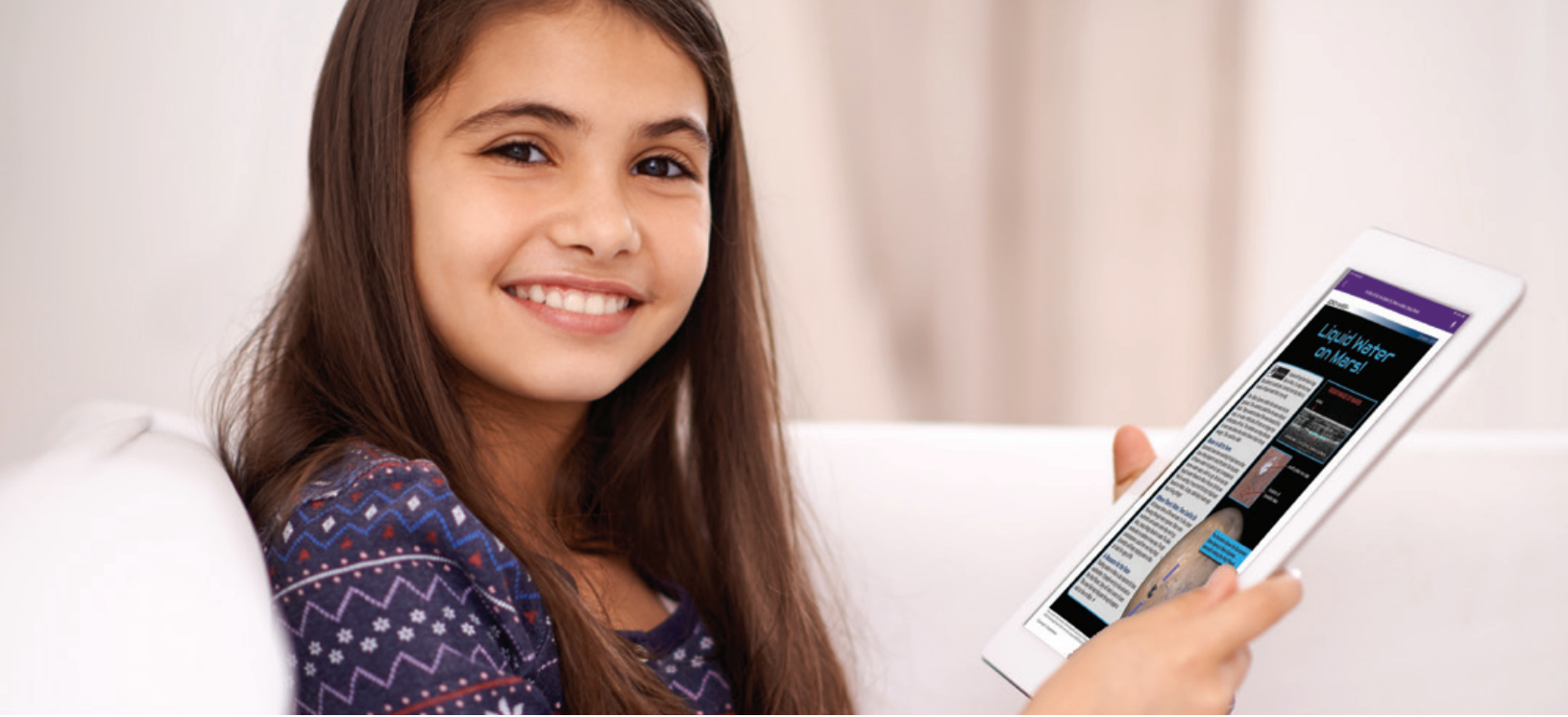


The **PBL Organizer** and **SAZ Journal** help students plan their research, record data, and present their findings.



PBL Teacher Tips provide teachers with an organized lesson plan, connection to standards, and other helpful information for using PBLs. **Individual and Team Rubrics** are provided to enable teachers to easily assess student and team work.

*Samples from the 3–4 Unit
Habitats / Environment*



Kids A-Z Student Portal

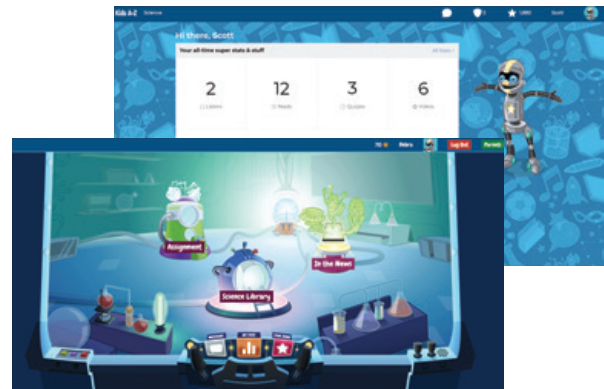
An Interactive eLearning Experience for Students

Kids A-Z is a secure online portal that makes it easy for students to access developmentally appropriate eLearning resources in class, at home, or on the go. The Science Library allows students to read and explore on their own. Skill-building tools, built-in incentives and rewards, and two age-appropriate designs motivate and engage students. Teachers also use the portal to manage student learning, assign resources, and monitor student progress.



Online and Mobile Access

Students can access assignments and resources from any computer or use the free mobile app to connect from any mobile device.

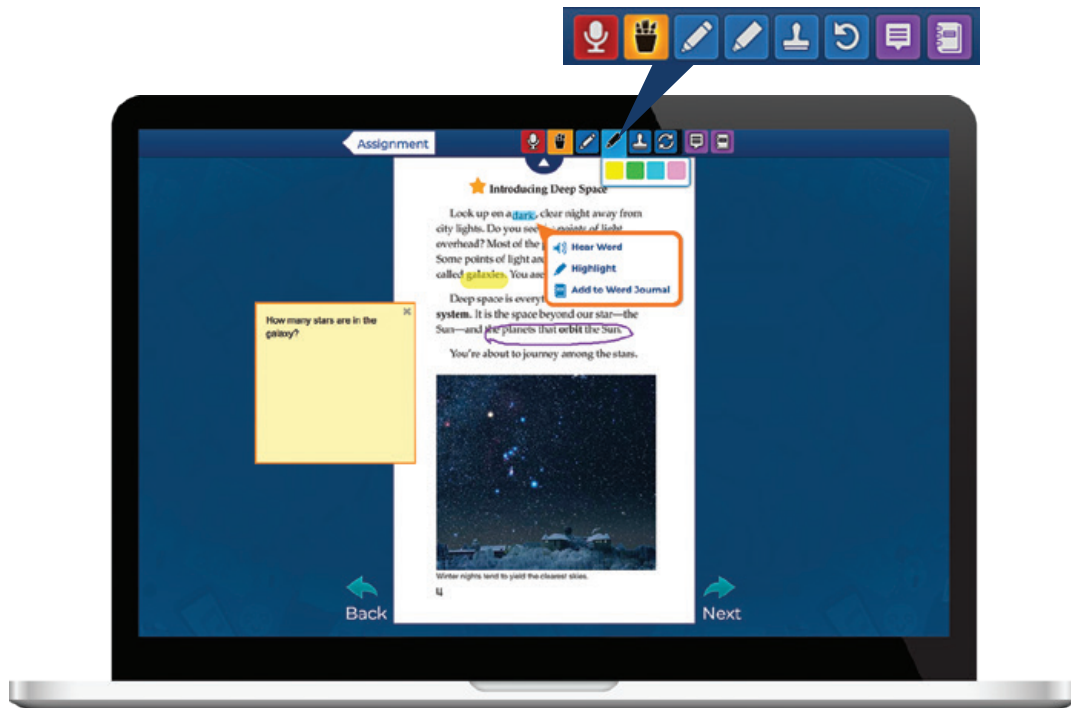


Two Age-Appropriate Designs

Teachers choose the interface their students see: a space theme for younger students, or a customizable design for older students.

Interactive Annotation, Journaling, and Recording Tools

In addition to interactive science content, Kids A-Z features digital annotation, journaling, and recording tools that promote higher-order thinking and build 21st century skills.



As students read on Kids A-Z, they can:

- Highlight and annotate the text
- Use stamping tools to make quick notes
- Attach notes to a page with questions or observations on their reading
- Create a journal of newly learned vocabulary
- Maintain a journal of written reflections
- Record themselves reading aloud and send the recording to their teacher

Built-In Rewards and Incentives

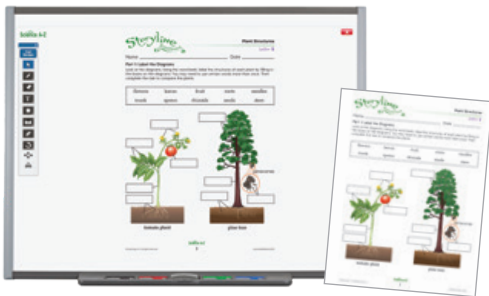
Customizable student avatars, badges, and other incentives encourage and motivate students to complete more assignments and activities to improve their skills.





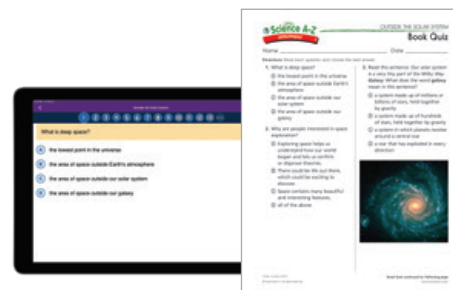
Digital and Printable Assessments

Digital and printable assessments help educators gauge student mastery of science content, monitor student progress, and inform instruction.



Storyline Assessments

Every Storyline contains an assessment at the end of each lesson and a final, cumulative assessment.



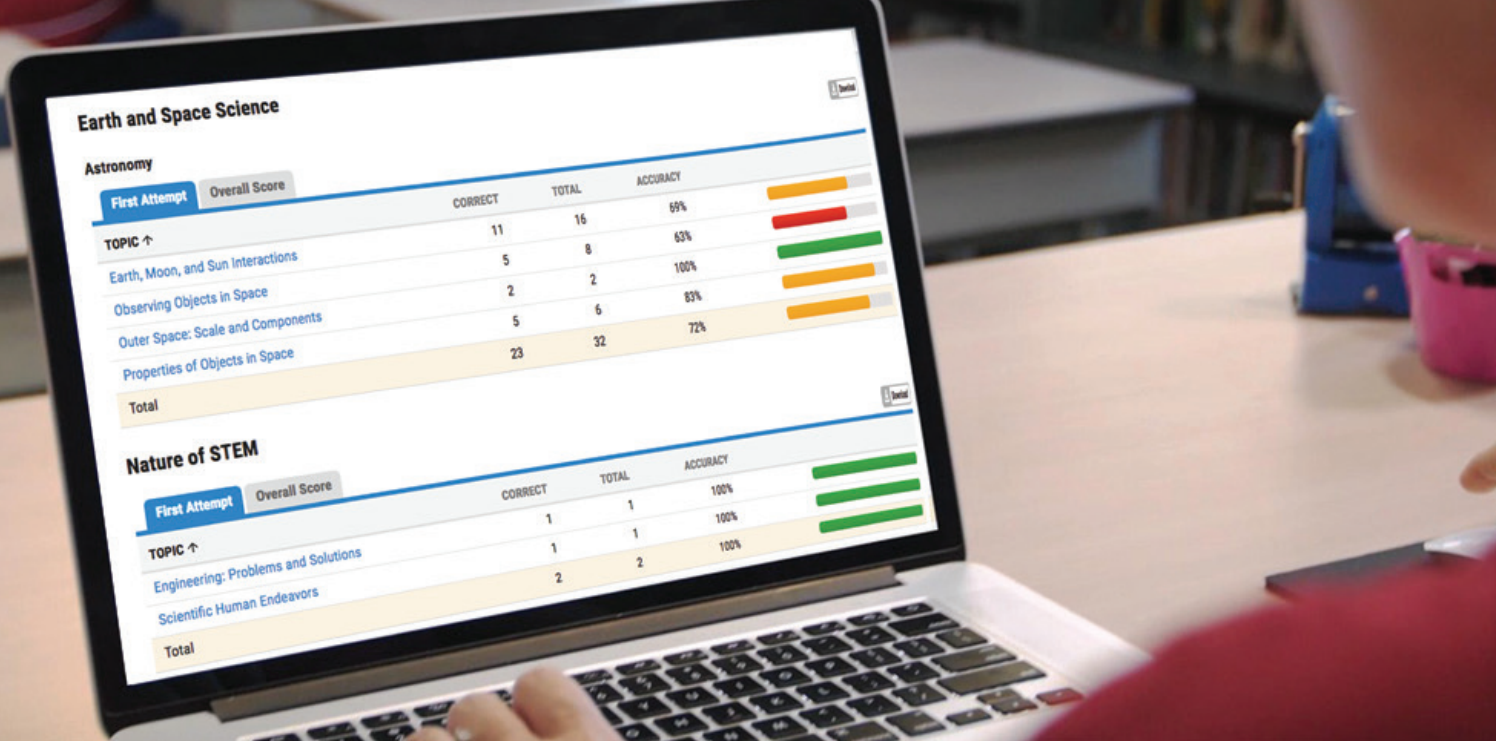
Comprehension Quizzes

Each Unit Nonfiction Book and FOCUS Book includes a Comprehension Quiz to help gauge student learning.



Additional Assessments

Assessments are also included in Interactive Science Lessons and Project-Based Learning Packs.



Online Reporting

Digital reports help educators monitor individual student, whole-class, and school-wide understanding of science content and ELA skills to determine future instructional needs.



Class



Individual

Comprehension Skills Download

SKILL ↑	CORRECT	TOTAL	ACCURACY
Cause and Effect	3	4	75%
Compare and Contrast	4	4	100%
Interpret Visual Devices	3	5	
Main Idea and Details	13	18	
Make Inferences and Draw Conclusions	4	6	
Vocabulary	5	5	
Total	32	42	

Science Question Types Download

SKILL ↑	CORRECT	TOTAL	ACCURACY
Data Analysis	1	3	33%
Inferential	10	13	77%
Literal/Recall	17	22	77%
Vocabulary	4	4	100%
Total	32	42	76%

Reports on **Science Topics**, **Science Questions**, and **Reading Comprehension** help inform instruction.

Multiple Delivery Formats for in Class, at Home, and on the Go

Fit Every Learning Style and Every Instructional Model

Science A-Z supports all instructional models by delivering standards-aligned, developmentally appropriate content in online, mobile, printable, and projectable formats.

In addition, Science A-Z allows students to easily access developmentally appropriate science content in class, at home, and on the go, helping educators strengthen the connection between what is being taught and what students are practicing.



Printable



Projectable



Online



Mobile



Professional Learning and Curriculum Services

Ensure that your Learning A-Z products are implemented efficiently, effectively, and consistently with Professional Learning and Curriculum Services from Learning A-Z.

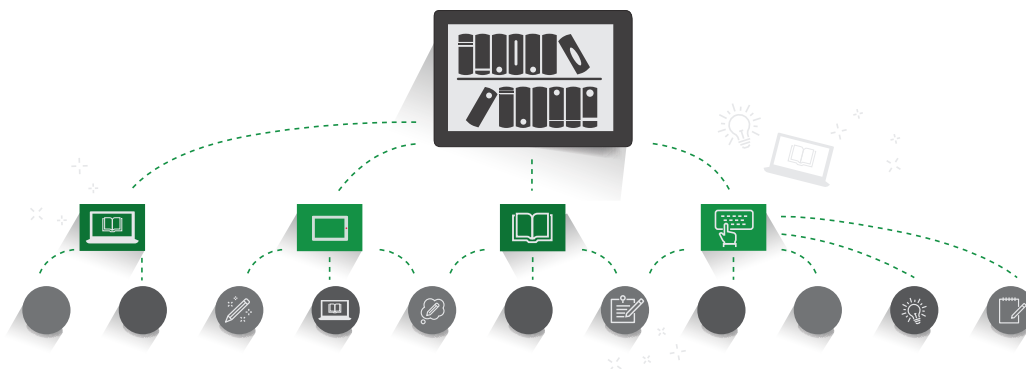
Professional Learning Services

In addition to complimentary professional learning for all customers, we offer a variety of custom Professional Learning Services to build capacity in educators and administrators, including:

- On-Site Workshops
- Live and Recorded Webinars
- Train-the-Trainer Programs

Curriculum Services

Get a customized curriculum solution tailored to your district's needs with our **Resource Mapping** service. Let our team of academic and curriculum experts identify and strategically integrate Learning A-Z resources directly into your curriculum documents. We'll save you time, so you can focus on driving positive student outcomes.



Awards and Recognition

Science A-Z continues to earn numerous educational technology awards.

CODiE Award Winner

- Best Science Instructional Solution: **Science A-Z** (2018)



BESSIE Award Winner

- Early Elementary, Science Website: **Science A-Z** (2018, 2019)
- Upper Elementary, Science & Literacy Website: **Science A-Z** (2018, 2019)



The EdTech Cool Tool Award Finalist

- Content Provider Solution: **Science A-Z** (2018, 2019)
- Science Solution: **Science A-Z** (2018)



Tech Advocate Award Finalist

- Best STEM/STEAM Education App or Tool: **Science A-Z** (2018, 2019)



EDDIE Award Winner

- Early Elementary, Science Website: **Science A-Z** (2018)
- Upper Elementary, Science & Literacy Website: **Science A-Z** (2018)
- Multi-Level, Science Website: **Science A-Z** (2018)



Contact your local Learning A-Z representative to learn more!

Call: 866-889-3731 | Email: sales@learninga-z.com

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