

NEW FOR THE 2026-27 SCHOOL YEAR

Kindergarten Science Scope and Sequence

COMPLETE PHENOMENA-BASED
SCIENCE CURRICULUM MADE EASY

- ✓ PHENOMENA-BASED
- ✓ OPEN-AND-GO LESSONS
- ✓ HANDS-ON INVESTIGATIONS
- ✓ AVAILABLE IN 50+ LANGUAGES
- ✓ ASSESSMENTS & PROGRESS MONITORING



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Ready to
teach lesson
slides

The screenshot shows the Inquisitive lesson interface for the unit '3. Inheritance and Variation of Traits'. The main content area displays a grid of eight dog faces with the question 'How are dogs the same and different?' overlaid. Below this grid are three smaller preview cards for the lesson slides. The right sidebar contains the following sections:

- Lesson Overview**: This lesson begins with a visit to the dog park—a virtual one. Students meet a variety of dogs, and note their common features and their distinct differences. They learn that these features are called traits, and that the differences between traits are called [Read More](#).
- Lesson Materials Calculator**: How many students are in your class? (30) [Save Class Size](#)
- Materials List**:

Apple	30
Knife - sharp	1
Recording sheet	30
Ruler	10
Toothpick	30
- NGSS Performance Expectations**: [3-LS3-1](#)
- Science and Engineering Practices (SEPs)**: [Analyzing and Interpreting Data](#)
- Disciplinary Core Ideas (DCIs)**: [Variation of Traits](#), [Inheritance of Traits](#)
- Crosscutting Concepts (CCCs)**: [Patterns](#)

Phenomena-based Learning

Each lesson is anchored in a compelling phenomenon that gives students a meaningful reason to investigate, ask questions, and make sense of the world around them.

Designed for three-dimensional learning, students integrate Science and Engineering Practices, Disciplinary Core Ideas, and Crosscutting Concepts as they gather evidence, collaborate, develop explanations, and design solutions.

The result is science learning that is rigorous, relevant, and engaging for every learner.

The screenshot displays a lesson interface. On the left, a large image shows silhouettes of children playing tug-of-war against a sunset background. A white text box in the center of the image asks, "Can a game of tug-of-war end in a draw?". Below the image is a purple "Next" button. On the right, a sidebar contains several sections: "Lesson Overview" with a brief description and a "Read More" link; "Lesson Materials Calculator" with a form to input class size and a table showing materials (Hair dryer: 8, Ping-pong ball: 8); "Standards" with a list of curriculum standards including NGSS, Idaho, and various performance expectations and practices. Annotations with arrows point to these sections: "Digital slides with embedded stimuli & printables" points to the main image area; "Teacher guide" points to the Lesson Overview; "Materials calculator" points to the Lesson Materials Calculator; and "Standards alignment" points to the Standards section.

Digital slides with embedded stimuli & printables

Teacher guide

Materials calculator

Standards alignment

Can a game of tug-of-war end in a draw?

Next

Lesson Overview
This lesson introduces students to the phenomenon of the game of tug-of-war with an intriguing image and a fun, virtual tug-of-war interactive. The interactive challenges students to create a balanced forces situation in an informal and intuitive way before it
[Read More](#)

Lesson Materials Calculator
How many students are in your class?
- 30 + Save Class Size

Hair dryer 8
Ping-pong ball 8
[Help us improve! Share your feedback on our lesson materials calculator here](#)

Standards
Click on your curriculum to view the full list of standards covered by this Lesson.

NGSS Idaho

NGSS Performance Expectations
3-PS2-1

Science and Engineering Practices (SEPs)
Planning and Carrying Out Investigations
Connections to Nature of Science (NOS)
Scientific Investigations Use a Variety of Methods
Disciplinary Core Ideas (DCIs)
Types of Interactions
Forces and Motion
Crosscutting Concepts (CCCs)
Cause and Effect

HQIM and Standards-aligned

Inquisitive provides coherent, standards-aligned instruction designed to build knowledge and skills. Comprehensive state-specific crosswalks provide lesson-by-lesson evidence of alignment, while embedded assessments, differentiation strategies, accessibility supports, and research-based instructional practices help every student access grade-level learning.

Every lesson includes ready-to-teach digital slides, embedded stimuli, printable resources, teacher guidance, modeled responses, background science, and a materials calculator. Everything teachers need to deliver high-quality science instruction, simply open and go.

The screenshot shows a digital interface for a science activity. On the left, a purple sidebar contains a '2 Assign' button and navigation arrows. The main content area is titled 'Activity 2' and features a purple box with text: 'All materials are made of something called **matter**. Matter is anything that takes up space.' To the right of this box, it says 'Milk is one kind of material.' and 'A glass pitcher is another kind of material.' Below these, a central image shows various materials: a glass pitcher, a bowl of soil, a bottle of water, a paperclip, and pencils. Below the image are two input boxes with the questions: 'How are the materials the same?' and 'How are they different?'. On the right side of the interface, there is a sidebar with sections: 'Core Activity' (with a link 'Learn about Differentiation with Inquisitive'), 'Time' (20 mins), 'Teaching Notes' (with instructions on how to use the activity), 'Answers', 'Se Pedagogical Model', and 'Activity Materials'. At the bottom right, there are buttons for 'Next' and 'Exit'.

Hands-On Science That Builds Sensemaking

Hands-on investigations combine easy-to-source materials with engaging digital interactives, helping teachers spend less time preparing and more time teaching.

Students ask questions, make observations, gather evidence, test ideas, and develop explanations as they make sense of real-world phenomena. They learn science by thinking and acting like scientists and engineers, not simply watching science happen. Optional grade-level kits and refill kits make implementation even easier. Each kit is designed to support a class of up to 30 students.

The screenshot displays the Inquisitive app interface. On the left, a lesson titled "6 Assigned" explains that matter is composed of tiny particles. It features three panels: "Sólido" (Solid), "Líquido" (Liquid), and "Gas". Each panel includes an illustration of particles and a description in Spanish. The "Sólido" panel shows particles packed closely together. The "Líquido" panel shows particles in a more disordered, sliding arrangement. The "Gas" panel shows particles widely spaced and moving freely. A sidebar on the right, titled "Translate", lists various languages including English, Spanish, Arabic, Armenian, Bengali, and Chinese (Simplified). A black arrow points to the "Translate" icon in the sidebar, with the word "Translate" written next to it. At the bottom of the lesson content, a small button indicates "translated by Google".

Toda la materia está compuesta de diminutos **partículas**. Son demasiado pequeños para ser vistos excepto con un microscopio muy potente. Incluso el grano de arena más diminuto está compuesto de partículas aún más diminutas.

Sólido

En un sólido, las partículas están muy unidas. Viben, pero no pueden moverse de su lugar.

Líquido

En un líquido, las partículas son no tan apretado como en un sólido. Pueden deslizarse uno al lado del otro.

Gas

En un gas, las partículas están mucho más separadas que en un sólido o un líquido. Pueden moverse con libertad y rapidez.

Translate

Available in 50+ Languages

Equity, Access, and Differentiation

Built-in scaffolds, differentiation strategies, and culturally responsive content help reduce barriers to rigorous science learning while keeping students engaged in shared phenomena, investigations, and evidence-based thinking.

Language and accessibility supports are embedded directly into lessons, including text-to-speech, assistive technology compatibility, WCAG compliance, and translation into 50+ languages. These integrated supports help more students access grade-level science while giving teachers practical tools to respond to diverse learning needs.

Assign activities as you teach

Materials in water and soil can change the traits of plants. Weather can also affect their traits.

Read about the examples below. Then draw and label a picture to answer each *What if?* question.

Strong wind has caused this tree to grow sideways.

Lack of rainfall has caused parts of these plants to become brown.

What if the wind was less strong? What would the tree look like?

What if enough rain did fall? What would the corn plants look like?

Responses

Responses

Core Activity ①

[Learn about Differentiation with Inquisitive](#)

Time 10 mins

Teaching Notes

Answers

5e Pedagogical Model

Level of student attainment & observations of student performance

Recommendations for Support

Next

Real-time student responses

Student performance expectations and recommendations for support

Check for Understanding in Real-Time

Live student responses provide immediate insights into student thinking, enabling teachers to identify misconceptions, adjust instruction, and facilitate meaningful student discussions and collaborations.

For instructional leaders, this means formative data is captured in the moment, supporting evidence-based decisions at the classroom and grade level, not just at the end of a unit.

Assign digitally or print in 50+ languages.

The screenshot displays the Inquisitive assessment interface. The main area shows a question: "9. Which of these are light sources? Choose all correct answers." with options: Sun (checked), Lamp (checked), Eye (unchecked), and Water (unchecked). Below this is question 10: "A person shines a flashlight into a dark closet to find a pair of shoes. Describe the path of light that lets the person see the shoes. Use the word **reflect** in your answer." The right sidebar shows the "Unit Quiz 1" results, including a "Show Answers" button and a "Digital Grade Book" section. An arrow points from the "Assign" button to the text "Assign digitally or print in 50+ languages." Another arrow points from the "Digital Grade Book" section to the text "Auto-graded assessment data is displayed in a digital grade book."

1 Part 7 of 8 Assign

9. Which of these are light sources? Choose all correct answers.

Sun

Lamp

10. A person shines a flashlight into a dark closet to find a pair of shoes. Describe the path of light that lets the person see the shoes. Use the word **reflect** in your answer.

9. Which of these are light sources? Choose all correct answers.

Sun

Lamp

Eye

Water

Unit Quiz 1

Unit Quiz Activity

Answers

9. Which of these are light sources? Choose all correct answers.

2 points

Show Answers

10. A person shines a flashlight into a dark closet to find a pair of shoes. Describe the path of light that lets the person see the shoes. Use the word **reflect** in your answer.

Example Answer 4 points

Light from the flashlight travels to the shoes. The shoes reflect the light. Some of the reflected light travels to the person's eyes. Then the person sees the shoes.

Activities

Teaching Sequence

Students 0/20

Translate

Give us Feedback

Settings

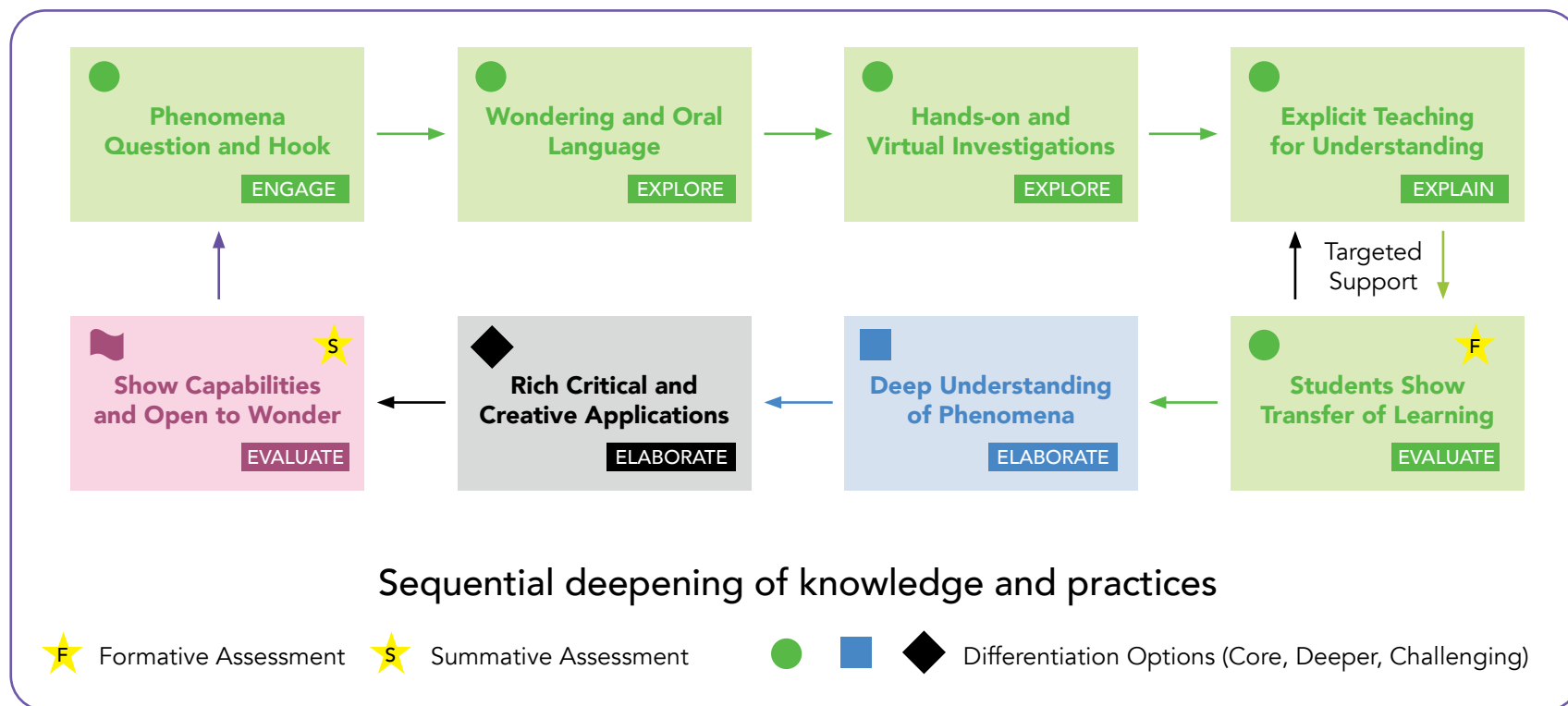
Auto-graded assessment data is displayed in a digital grade book.

Assessment and Standards Mastery

Formative and summative assessments include 3D performance tasks and auto-graded end-of-unit assessments.

Results are summarized in a digital grade book with recommendations for support, giving teachers clear next steps for instruction.

Assessment items are mapped to specific Performance Expectations, so districts can track standards mastery and support MTSS and RTI documentation needs.



Pedagogical Model of Lessons

Every lesson is built around the research-based 5E instructional model, guiding students through engagement, exploration, explanation, elaboration, and evaluation.

High-impact teaching strategies and visible thinking activities support student-centered sensemaking, conceptual understanding, and knowledge transfer while helping all learners access rigorous science learning.

PreK

K

1

2

3

4

5

PHYSICAL SCIENCE



Pushes and Pulls
Explore pushes and pulls



Forces and Interactions
Compare strength and direction



Waves: Light and Sound
Make sound and light travel



Structure of Matter
Describe and change materials



Forces and Interactions
Balanced and unbalanced forces



Energy
Motion, collisions, and transfer



Gravity
Apply force ideas to earth and space

LIFE SCIENCE



Living Things
What makes something alive



What Living Things Need
Needs of plants and animals



Structure and Function
Parts that help survival



Interdependent Relationships
Habitats and food



Inheritance and Variation
Life cycles and traits



Structure and Function
Food energy & cycling through ecosystems



Matter and Energy
Internal systems and senses

EARTH & SPACE SCIENCE



Weather
Observe local weather



Weather and Climate
Describe weather patterns



Space Systems
Patterns of the sun, moon, and stars



Processes That Shape Earth
Fast and slow land change



Weather and Climate
Predict patterns and climate



Earth's Changing Surface
Weathering, erosion, and mapping



Earth's Systems
Interacting Earth systems

ENGINEERING DESIGN

Engineering design is integrated across all grades as students ask questions, design and test solutions, and use evidence to improve their ideas.

Knowledge Builds Year After Year

Across every discipline, students revisit core science ideas with increasing depth. They move from observing familiar phenomena to investigating patterns, developing models, using evidence, and explaining complex systems.

Kindergarten

LIFE SCIENCE



Interdependent Relationships in Ecosystems

Where do plants and animals live and why do they live there?

5 lessons + assessment

PHYSICAL SCIENCE



Forces and Interactions: Pushes and Pulls

What happens if you push or pull an object?

4 lessons + assessment

EARTH AND SPACE SCIENCE



Weather and Climate

How does weather change and why do we need to know about it?

5 lessons + assessment

ENGINEERING DESIGN



Build Me a House

Why is the shape of something important?

2 lessons + assessment

Anchor Question: Where do plants and animals live and why do they live there?



Lesson 1

Staying Alive!



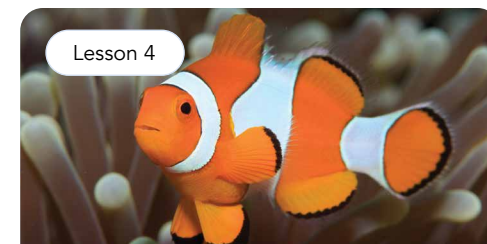
Lesson 2

What Do Plants Need?



Lesson 3

Change, Change, Change!



Lesson 4

This is Home

Phenomena & Learning Targets

Do all animals need water?

- Identify living things and nonliving things.
- State that animals need food and water to survive.
- Describe the foods that different animals eat.

What keeps plants alive?

- Identify the needs of plants to live and grow.

What does a weaverbird weave?

- Give an example of a living thing changing its environment and explain how and why it is doing so.
- Use evidence (in images) to decide whether an animal or plant is changing its environment.

Why do fish live in the sea?

- Describe the relationships between living things, the resources they need to survive, and where they live.
- Use a model to describe how the needs of living things are met by the places in which they live and the resources found in those places.

Performance Expectations

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive.

K-ESS2-2 Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs.

K-ESS3-1 Use a model to represent the relationship between the needs of different plants and animals (including humans) and the places they live.

Science & Engineering Practices

Analyzing and Interpreting Data

Analyzing and Interpreting Data

Engaging in Argument from Evidence

Developing and Using Models

Disciplinary Core Ideas

LS1.C Organization for Matter and Energy Flow in Organisms

LS1.C Organization for Matter and Energy Flow in Organisms

ESS2.E: Biogeology
ESS3.C: Human Impacts on Earth Systems

ESS3.A: Natural Resources

Crosscutting Concepts

Patterns

Patterns

Systems and System Models

Systems and System Models

Anchor Question: What happens if you push or pull an object?

Lesson 5



Helping Earth

Lesson 1



Push and Pull

Lesson 2



Speed it Up! Slow it Down!

Lesson 3



Which Way?

Phenomena & Learning Targets

Does our trash harm Earth?

- Describe how people affect the land, water, air, and other living things in the local environment
- Communicate solutions that will reduce the impact of humans.

How do you make a funny face?

- Understand that pushes and pulls are used to start and stop the motion of objects.
- Identify and classify pushes and pulls.

Can an elephant move a tree?

- Demonstrate how pushes and pulls of different strengths can cause the speed of objects to change.

How does a ball move?

- Demonstrate how pushes and pulls can cause the direction of objects to change.
- Explain that when objects collide, objects will move in different directions.

Performance Expectations

K-ESS3-3 Communicate solutions that will reduce the impact of humans on the land, water, air, and/or other living things in the local environment.

K-PS2-1 Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.

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Science & Engineering Practices

Obtaining, Evaluating, and Communication Information

Planning and Carrying out investigations

Planning and Carrying out investigations

Planning and Carrying Out Investigations

Disciplinary Core Ideas

ESS3.C: Human Impacts on Earth Systems
ETS1.B: Developing Possible Solutions

PS2.A: Forces and Motion

PS2.A: Forces and Motion
PS3.C: Relationship Between Energy and Forces

PS2.A: Forces and Motion
PS2.B: Types of Interactions

Crosscutting Concepts

Cause and Effect

Cause and Effect

Cause and Effect

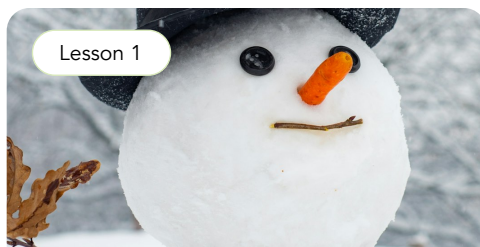
Cause and Effect

Anchor Question: What is the weather and how does weather affect us?



Lesson 4

Does it work?



Lesson 1

What is Weather?



Lesson 2

Watching the Weather



Lesson 3

Weather Warning!

Phenomena & Learning Targets

Can you move a toy without touching it?

- Understand that there are several ways to solve a problem.
- Analyze data from a design solution and draw a conclusion.
- Explain how changing the force acting on an object changes the speed of its motion.

What's the weather like today?

- Observe the current local weather.
- Describe the weather as a combination of different conditions at a particular time.

How does the weather change?

- Recognize the symbols used to depict weather.
- Understand that the weather changes daily.
- Record weather over time and look for patterns.

What is severe weather?

- Ask questions about severe weather in their local area.
- Describe how people plan and prepare for severe weather.

Performance Expectations

K-PS2-2 Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.

K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time.

K-ESS2-1 Use and share observations of local weather conditions to describe patterns over time.

K-ESS3-2 Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.

Science & Engineering Practices

Analyzing and Interpreting Data

Analyzing and Interpreting Data

Analyzing and Interpreting Data

Asking Questions and Defining Problems
Obtaining, Evaluating, & Communicating Info

Disciplinary Core Ideas

ETS1.A: Defining and Delimiting Engineering Problems
PS2.A: Forces and Motion

ESS2.D: Weather and Climate

ESS2.D: Weather and Climate

ESS3.B: Natural Hazards
ETS1.A: Defining and Delimiting Engineering Problems

Crosscutting Concepts

Cause and Effect

Patterns

Patterns

Cause and Effect

Anchor Question: Why is the shape of something important?

Lesson 4

**Sunlight Warms Earth****Phenomena & Learning Targets****What happens when the sun shines?**

- Describe the warming effect of the sun on Earth's surface.

Lesson 5

**Shelter from the Sun****What can we do when it's too sunny?**

- Explain negative effects from too much sunlight and heat.
- Plan, design, and build a structure to provide shade and protection from the sun's light and heat.

Performance Expectations

K-PS3-1 Make observations to determine the effect of sunlight on Earth's surface.

K-PS3-2 Use tools and materials provided to design and build a structure that will reduce the warming effect of sunlight on an area.

Science & Engineering Practices

Planning and Carrying Out Investigations

Constructing Explanations and Designing Solutions

Disciplinary Core Ideas

PS3.B: Conservation of Energy and Energy Transfer

PS3.B: Conservation of Energy and Energy Transfer

Crosscutting Concepts

Cause and Effect

Cause and Effect

Lesson 1

**What is a House?****Phenomena & Learning Targets****What should a house do?**

- Identify that a house is designed to protect us from heat, cold, wind and rain.
- Explore and consider the different materials used to build houses.
- Generate a design of a "dream" house.

Performance Expectations

K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.

Science & Engineering Practices

Asking Questions and Defining Problems

Developing and Using Models

Disciplinary Core Ideas

ETS1.A: Defining and Delimiting Engineering Problems

ETS1.B: Developing Possible Solutions

Crosscutting Concepts

N/A

Structure and Function

Lesson 2

**I'll Huff and I'll Puff!****What type of house can't be blown down by a wolf?**

- Develop a simple model of a house.
- Test and evaluate their model.
- Understand the importance of the materials used in helping the shape and stability of a structure.

K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.



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inquisitive

Our commitment is simple: universal access for all students, with thoughtfully designed lessons that save teachers time.

Inquisitive is a complete, phenomena-based PreK–5 science curriculum, aligned to the NGSS and state standards.

It's designed to delight and engage students while supporting all learners with 50+ languages in digital, print, and text-to-speech formats.

Teachers save time with open-and-go lessons, built-in guidance, rich stimuli, hands-on and virtual investigations, and auto-graded assessments.

Affordable and accessible, Inquisitive brings high-quality science learning to every school.

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