

NEW FOR THE 2026-27 SCHOOL YEAR

Grade 1 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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NEW FOR THE SCHOOL YEAR
★ ★ ★
26/27
★ ★ ★
NEW FOR THE SCHOOL YEAR

inquisitive

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. A navigation bar at the top includes 'Lesson', 'Stimulus', and 'Printables'. To the right, the 'Lesson Overview' section describes the lesson's focus on dog traits. Below this is a 'Lesson Materials Calculator' with a table of materials and their quantities. Further down, 'NGSS Performance Expectations' are listed, including '3-LS3-1'. The interface also shows 'Science and Engineering Practices (SEPs)', 'Disciplinary Core Ideas (DCIs)', and 'Crosscutting Concepts (CCCs)'. A sidebar on the right contains a 'Variation of Traits' section with a 'Read More' link and a 'Patterns' section.

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

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 of 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; "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 divided into sections. The top section has 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.' with an image of a glass pitcher. Below this, a central box contains images of various materials: a bundle of spaghetti, a blue bucket of soil, a water bottle, a paperclip, and several colored pencils. To the left of this central box, text says 'Your teacher will give you some different materials to explore. Touch and feel each material. Then talk about the questions.' Below this text are two input boxes: 'How are the materials the same?' and 'How are they different?'. On the right side of the interface, there is a sidebar with a 'Core Activity' section, a 'Teaching Notes' section with instructions, and a 'Teaching Sequence' section. At the bottom right, there are buttons for 'Next' and 'Exit'.

2 Assign

All materials are made of something called **matter**. Matter is anything that takes up space.

Milk is one kind of material.

A glass pitcher is another kind of material.

Your teacher will give you some different materials to explore. Touch and feel each material. Then talk about the questions.

How are the materials the same?

How are they different?

Core Activity

Learn about Differentiation with Inquisitive

Time 20 mins

Teaching Notes

Read the information in the purple box, and then ask students to name anything they see around them that is matter. All answers are correct here. Acknowledge and elaborate on their responses to include a variety of solids and liquids around the classroom. Include their clothing and parts of their bodies (skin, hair, bones, blood, tears, etc).

(You may like to narrow the focus of these questions by selecting just two or three things to compare. For example, "how are the paperclips different to the pencils? How are they the same?")

Answers

Se Pedagogical Model

Activity Materials

Next

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 all matter is composed of tiny particles. It features three panels illustrating the states of matter: Solid (Sólido), Liquid (Líquido), and Gas (Gas). Each panel includes a diagram of particles and a descriptive text box in Spanish. The Solid panel shows particles packed closely together. The Liquid 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 50+ 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. Vibran, 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

Activity 7

Core Activity ⓘ

[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." Below the question are four options: Sun, Lamp, Eye, and Water. The Sun and Lamp options are marked with green checkmarks, indicating they are correct. The Eye and Water options are marked with red X's, indicating they are incorrect. Below the question is a text input field for 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. It includes a "Teaching Sequence" section with icons for Activities, Teaching Sequence, Students (0/20), and Translate. Below this is the "Answers" section, which shows the question and the correct answers (Sun and Lamp). A "Show Answers" button is visible. At the bottom of the sidebar, there are links for "Give us Feedback" and "Settings".

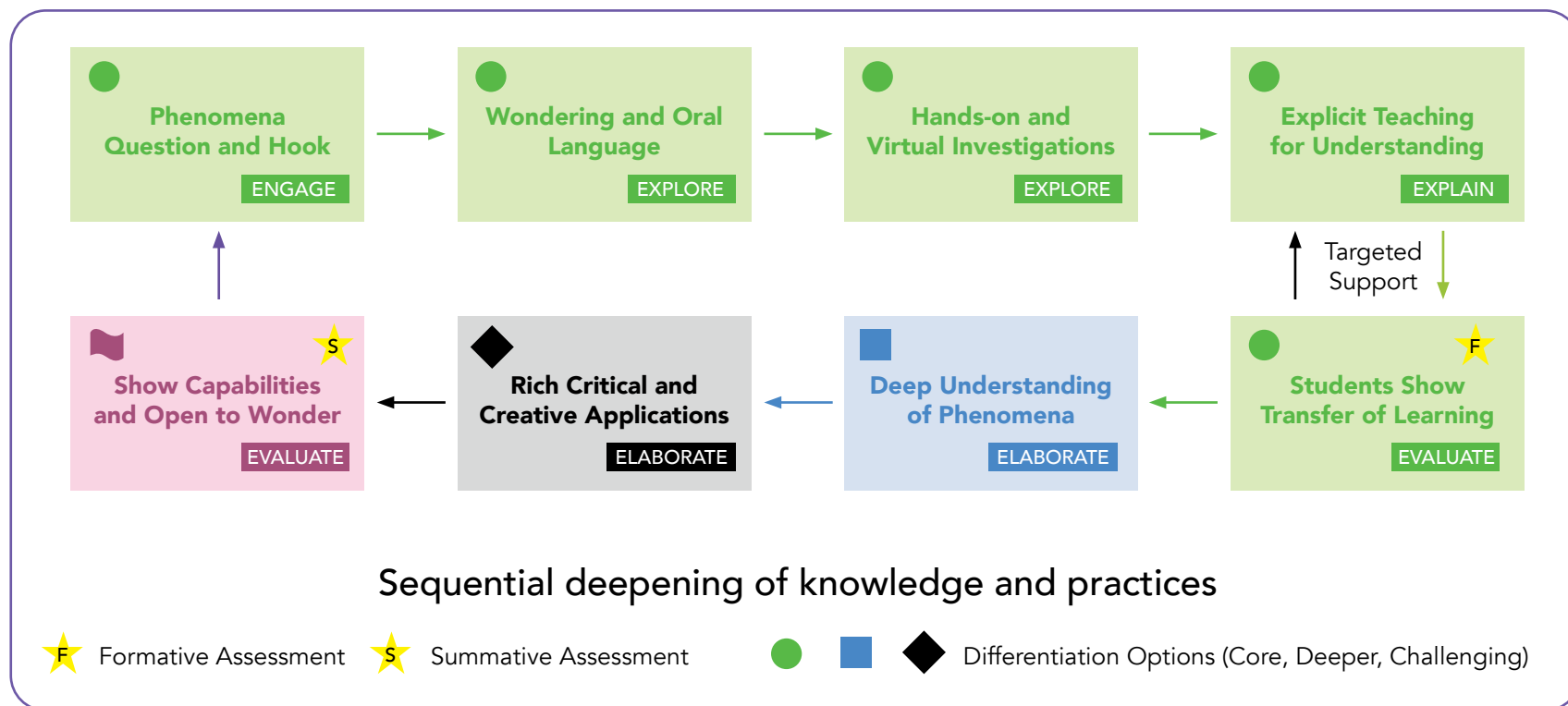
Auto-graded assessment data is displayed in a digital grade book.

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.

Grade 1

LIFE SCIENCE



Structure, Function, and Information Processing

*How do external parts and behaviors help animals and plants survive and grow?
Are young plants and animals exactly like their parents?*

8 lessons + assessment

PHYSICAL SCIENCE



Waves: Light and Sound

*What happens when things vibrate?
What happens when there is no light?*

7 lessons + assessment

EARTH AND SPACE SCIENCE



Space Systems: Patterns and Cycles

What objects are in the sky and how do they seem to move?

4 lessons + assessment

ENGINEERING DESIGN



Farm to Family

How can we protect living things?

3 lessons + assessment

Anchor Question: How do plants and animals survive and grow?

[View Unit Online](#)


Lesson 1

How Useful!



Lesson 2

Plant Parts



Lesson 3

Scaredy Cat!



Lesson 4

Mimic Nature

Phenomena & Learning Targets

Can we name an animal by its body parts?

- Identify that animals use their body parts in different ways.
- Identify that animals use their body parts to survive and grow.

What makes a plant a plant?

- Identify that plants have different external structures (parts).
- Identify that plants use these external structures to survive and grow.

What do different sounds make you do?

- Identify that animals have body parts that capture and convey different kinds of information needed for growth and survival.
- Identify that animals respond to these stimuli with behaviors that help them survive.
- Identify that plants also respond to some external stimuli.

Could you swim better if you had duck feet?

- Identify that plants and animals use their body parts to survive and grow.
- Use materials to design a solution to a human problem that mimics how plants or animals use their external parts.
- Recognize the shape and stability of structures of natural and designed objects relate to their function.

Performance Expectations

1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

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1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

1-LS1-1 Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs.

Science & Engineering Practices

N/A

N/A

N/A

Constructing Explanations and Designing Solutions

Disciplinary Core Ideas

LS1.A: Structure and Function

LS1.A: Structure and Function

LS1.D: Information Processing

LS1.A: Structure and Function
LS1.D: Information Processing

Crosscutting Concepts

Structure and Function

Structure and Function

Structure and Function

Structure and Function



Lesson 5

Offspring

Lesson 6

Are We Alike?

Lesson 7

Plants Have Parents Too

Lesson 8

Same but Different**Phenomena & Learning Targets****How do parents help their babies survive?**

- Identify behaviors of parents and offspring that help the offspring survive.
- Read grade-appropriate texts and use media to obtain scientific information.
- Determine patterns in the natural world.

How do babies look like their parents?

- Explain that young animals are very much, but not exactly like, their parents.

Do plants have moms and dads?

- Determine that young plants are similar but different from the adult version of the same plant.

Do all tigers look the same?

- Explain that types of plants or animals are recognizable as similar but can also vary in many ways.

Performance Expectations

1-LS1-2 Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.

1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

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1-LS3-1 Make observations to construct an evidence-based account that young plants and animals are like, but not exactly like, their parents.

Science & Engineering Practices

Obtaining, Evaluating, and Communicating Information

Constructing Explanations and Designing Solutions

Constructing Explanations and Designing Solutions

Constructing Explanations and Designing Solutions

Disciplinary Core Ideas

LS1.B: Growth and Development of Organisms

LS3.A: Inheritance of Traits

LS3.A: Inheritance of Traits

LS3.B: Variation of Traits

Crosscutting Concepts

Patterns

Patterns

Patterns

Patterns

Anchor Question: How can I make sound? What happens when there is no light?

Lesson 1



Good Vibrations

Lesson 2



Move to the Sound

Lesson 3



Sound Signals

Lesson 4



Turn on the Light!

Phenomena & Learning Targets

How can you make sound?

- Identify what happens when materials vibrate.
- Investigate materials and their relationship with sound.
- Determine that vibrating materials make sound.

Can sound make things move?

- Identify what happens to materials when sound is played.
- Investigate sound and its relationship to materials
- Determine that sound can make materials vibrate.

Can we use sound to send a message?

- Identify that devices allow us to communicate.
- Design and build a device that uses sound to communicate.
- Determine communication means to send and receive.

What do we need to be able to see?

- Identify that light can cause objects to be seen.
- Investigate what happens when objects are illuminated.
- Determine that some objects give off their own light and others can be seen if light is available.

Performance Expectations

1-PS4-1 Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.

1-PS4-1 Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.

1-PS4-4 Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

1-PS4-2 Make observations to construct an evidence-based account that objects in darkness can be seen only when illuminated.

Science & Engineering Practices

Planning and Carrying Out Investigations

Planning and Carrying Out Investigations

Constructing Explanations and Designing Solutions

Constructing Explanations and Designing Solutions

Disciplinary Core Ideas

PS4.A: Wave Properties

PS4.A: Wave Properties

PS4.C: Information Technologies and Instrumentation

PS4.B: Electromagnetic Radiation

Crosscutting Concepts

Cause and Effect

Cause and Effect

N/A

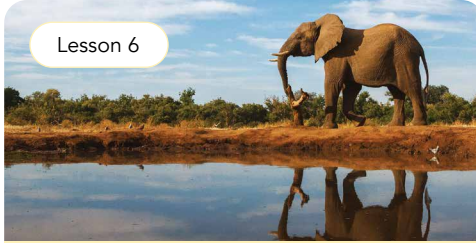
Cause and Effect

Lesson 5



Beam of Light

Lesson 6



Mirror Mirror

Lesson 7



Light Signals

Phenomena & Learning Targets

What happens when we shine a light on an object?

- Identify that a beam of light shines in one direction.
- Investigate what affects a beam of light has on objects made from different materials.
- Determine that some objects allow all light to pass through, some allow a portion of the light to pass through, and some block light and create shadows.

Can light bounce?

- Identify a beam of light can reflect off objects.
- Investigate what effects a beam of light has on objects made from different materials.
- Determine that some objects allow light to bounce off them and light their surrounding space.

Can we use light to send a message?

- Identify what devices allow us to communicate using light.
- Design and build a device that uses light to communicate.
- Determine communication means to send and receive information using light.

Performance Expectations

1-PS4-3 Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.

1-PS4-3 Plan and conduct investigations to determine the effect of placing objects made with different materials in the path of a beam of light.

1-PS4-4 Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

Science & Engineering Practices

Planning and Carrying Out Investigations

Planning and Carrying Out Investigations

Constructing Explanations and Designing Solutions

Disciplinary Core Ideas

PS4.B: Electromagnetic Radiation

PS4.B: Electromagnetic Radiation

PS4.C: Information Technologies and Instrumentation

Crosscutting Concepts

Cause and Effect

Cause and Effect

N/A

Anchor Question: What objects can I see in the sky?



Lesson 1

The Sun is Out



Lesson 2

Bright Moon



Lesson 3

Starry, Starry Night



Lesson 4

Daylight and Nighttime

Phenomena & Learning Targets

Is the sun always in the same place in the sky?

- Identify that when the sun appears in the sky, it is daylight.
- Observe, describe, and predict the pattern of motion of the sun as it appears in the sky.

When can we see the moon?

- Identify that the moon appears brighter when it is nighttime.
- Identify that the moon can appear at different times during the day and night.
- Observe and describe that the moon's position in the sky appears to move.

How do we see stars?

- Understand that the appearance of stars in the sky can be observed and predicted.
- Identify that stars (other than our own sun) are visible at night but not during the day.

Why go to bed when it's not dark?

- Identify there is more daylight in summer.
- Identify there is more nighttime in winter.

Performance Expectations

1-ESS1-1 Use observations of the sun, moon, and stars to describe patterns that can be predicted.

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1-ESS1-1 Use observations of the sun, moon, and stars to describe patterns that can be predicted.

1-ESS1-2 Make observations at different times of year to relate the amount of daylight to the time of year.

Science & Engineering Practices

Analyzing and Interpreting Data

Analyzing and Interpreting Data

Analyzing and Interpreting Data

Planning and Carrying Out Investigations

Disciplinary Core Ideas

ESS1.A:
The Universe and Its Stars

ESS1.A:
The Universe and Its Stars

ESS1.A:
The Universe and Its Stars

ESS1.B: Earth and the Solar System

Crosscutting Concepts

Patterns

Patterns

Patterns

Patterns

Anchor Question: How can we protect living things?

Lesson 1

Food, Glorious Food

Lesson 2

In the Making

Lesson 3

It's in the Design**Phenomena & Learning Targets****Where does your food come from?**

- Recognize that plants and animals can be used as food.

Where do your clothes come from?

- Identify items engineered and produced from fibers sourced from plants and animals.

What can we make to protect an animal?

- Identify a need or problem which needs a solution
- Develop and evaluate a simple design solution to the problem.

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.

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.

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.

Science & Engineering Practices

Asking Questions and Defining Problems

Asking Questions and Defining Problems

Developing and Using Models

Disciplinary Core Ideas

ETS1.A: Defining and Delimiting Engineering Problems

ETS1.A: Defining and Delimiting Engineering Problems

ETS1.B: Developing Possible Solutions

Crosscutting Concepts

N/A

N/A

Structure and Function



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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.

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