Jan. Grade 2 Unit 3: Environments for Living Things

Content Area: **Science**
Course(s):
Time Period: **January**
Length: **6-8 Weeks**
Status: **Published**

Unit Overview

In this unit, students will:

- investigate what plants and animals need to live and grow;
- develop models to show how plants depend on animals;
- explore environments to identify observable patterns;
- observe plants and animals to compare diversity of life in water habitats;
- observe plants and animals to compare diversity of life in land habitats.

Enduring Understandings

Plants and animals have needs to live and grow.

Plants depend on animals for certain needs, and vice versa.

There is much diversity among living things.

Essential Questions

What do plants and animals need to live and grow?

What is the relationship between plants and animals in an environment?

What are the differences between life in the water and life on land?

Instructional Strategies & Learning Activities

- Unit 3: Environments for Living Things

  Assessment Guide

  Environments for Living Things: Unit Pretest (Editable)

The Unit Pretest for "Environments for Living Things" focuses on prerequisite knowledge. The test is composed primarily of DOK 1 items that evaluate student preparedness for the upcoming content.

- Unit 3: Environments for Living Things

  Teacher Edition

  Environments for Living Things: Integrating the NGSS* Three Dimensions of Learning

  This section details the Performance Expectations covered in the unit "Environments for Living Things."

- Unit 3: Environments for Living Things

  Teacher Edition

  Environments for Living Things: Differentiate Instruction

  This page provides differentiated support for this unit's Science & Engineering Leveled Readers, "How Do Living Things Survive in Their Environment ?" and "Meet the Amazing Monarch Butterfly."

- Unit 3: Environments for Living Things

  Teacher eBook

  Environments for Living Things: Unit Opener

  The Unit Opener introduces the unit "Environments for Living Things" and the unit project, Explore Plant Habitats.

- Unit 3: Environments for Living Things

  Teacher Edition

  Environments for Living Things: Unit Project: Explore Plant Habitats

  During the unit project "Explore Plant Habitats," children will:
  - Explore plant needs by planning and conducting an investigation.
  - Collect data to use as evidence to answer a question.
  - Construct an argument using evidence to support a claim.

- Unit 3: Environments for Living Things

  Assessment Guide

Environments for Living Things: Unit Test (Editable)

The Unit Test for "Environments for Living Things" assesses students' ability to apply knowledge to solve problems and explain phenomena in relation to the Performance Expectations associated with the unit. In this unit, children:

- investigate what plants and animals need to live and grow;
- develop models to show how plants depend on animals;
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- observe plants and animals to compare diversity of life in land habitats.

- Unit 3: Environments for Living Things

  Home Letter

  Environments for Living Things: Home Letter

  This is the home letter for the unit "Environments for Living Things."

- Unit 3: Environments for Living Things

  Student Edition

  Environments for Living Things: Unit At a Glance

  Unit at a Glance for "Environments for Living Things" includes the unit table of contents, unit vocabulary words, and the vocabulary game, Show the Word! In this unit, children will:

  - investigate what plants and animals need to live and grow;
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- Unit 3: Environments for Living Things

  Online Assessment

  Environments for Living Things: Unit Pretest

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- Unit 3: Environments for Living Things

Student eBook

Environments for Living Things: Unit Opener

The Unit Opener for "Environments for Living Things" introduces the unit project, Explore Plant Habitats. During this unit project, children will:

- Explore plant needs by planning and conducting an investigation.
- Collect data to use as evidence to answer a question.
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- Unit 3: Environments for Living Things

  Teacher Edition

  Environments for Living Things: 3D Unit Planning

  Planning resources are available for each lesson and hands-on activity in the unit "Environments for Living Things."

- Unit 3: Environments for Living Things

  Teacher Edition

Environments for Living Things: Connecting with NGSS

These opportunities for informal science learning provide local context and extend and enhance concepts from the unit "Environments for Living Things."

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Unit 3: Environments for Living Things

Teacher eBook

Environments for Living Things: Unit Project: Explore Plant Habitats

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  - Unit 3: Environments for Living Things

    Assessment Guide

    Environments for Living Things: Unit Test

    The Unit Test for "Environments for Living Things" assesses students' ability to apply knowledge to solve problems and explain phenomena in relation to the Performance Expectations associated with the unit. In this unit, children:
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    Unit 3: Environments for Living Things

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Online Assessment

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Unit 3: Environments for Living Things

Teacher Edition

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Unit 3: Environments for Living Things

Leveled Readers - Red

Extra-Support: How Do Living Things Survive in Their Environment?

The leveled reader "How Do Living Things Survive in Their Environment?" is designed for below-level readers and can be used to reinforce key concepts from the unit "Environments for Living Things."

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Unit 3: Environments for Living Things

Teacher Edition

Environments for Living Things: Unit Performance Task: Observe an Ant Farm

During the Performance Task "Observe an Ant Farm," children will carry out an investigation to observe animals (ants) in order to compare their lives within an ant farm habitat, and to identify how its shape and stability relate to its function.

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Unit 3: Environments for Living Things

You Solve It

City Habitats (Teacher)

Teacher support materials are available for "City Habitats." During this activity, students will observe and collect screenshots from five different urban habitats. They use a virtual field guide to collect evidence about the plants and animals in each type of habitat. The information is used to recognize patterns of living things in the natural world.

- Unit 3: Environments for Living Things

  You Solve It

  City Habitats

  In City Habitats, students observe and collect screenshots from five different urban habitats. They use a virtual field guide to collect evidence about the plants and animals in each type of habitat. The information is used to recognize patterns of living things in the natural world.

- Unit 3: Environments for Living Things

  Student Edition

  Environments for Living Things: Unit Performance Task: Observe an Ant Farm

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- Unit 3: Environments for Living Things

  Student eBook

  Environments for Living Things: Unit Review

  The Unit Review assesses student understanding of key ideas and concepts from the unit "Environments for Living Things."

- Unit 3: Environments for Living Things

  Teacher eBook

  Environments for Living Things: Unit Performance Task: Observe an Ant Farm

  During the Performance Task "Observe an Ant Farm," children will carry out an investigation to observe animals (ants) in order to compare their lives within an ant farm habitat, and to identify how its shape and stability relate to its function.

- Unit 3: Environments for Living Things

  Leveled Readers - Green

  Enrichment: Meet the Amazing Monarch Butterfly

  The leveled reader "Meet the Amazing Monarch Butterfly" is designed for above-level readers and can be used to extend key concepts from the unit "Environments for Living Things."

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  Teacher Edition

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- Unit 3: Environments for Living Things

  Student Edition

  Environments for Living Things: Unit Review

  The Unit Review assesses student understanding of key ideas and concepts from the unit "Environments for Living Things."

- Unit 3: Environments for Living Things

  Unit Project Worksheet

  Environments for Living Things: Unit Project: Explore Plant Habitats

  This is the Unit Project worksheet for "Explore Plant Habitats." During this project, children will:
  - Explore plant needs by planning and conducting an investigation.
  - Collect data to use as evidence to answer a question.
  - Construct an argument using evidence to support a claim.

  - Unit 3: Environments for Living Things

    Unit Project Worksheet

Environments for Living Things: Unit Project: Explore Plant Habitats (Editable)

This is the editable Unit Project worksheet for "Explore Plant Habitats." During this project, children will:

- Explore plant needs by planning and conducting an investigation.
- Collect data to use as evidence to answer a question.
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Unit 3: Environments for Living Things

Student eBook

Environments for Living Things: Unit Performance Task: Observe an Ant Farm

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Unit 3: Environments for Living Things

Leveled Readers Teacher's Guide

Topic 9: Environments for Living Things

The Leveled Readers Teachers Guide provides teaching strategies and support (as well as reproducible English and Spanish worksheets) for the Unit 3 readers "How Do Living Things Survive in Their Environment?" and "Meet the Amazing Monarch Butterfly." On-Level and Extra-Support worksheets focus on vocabulary development, while Enrichment worksheets reinforce and enrich content.

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Unit 3: Environments for Living Things

Unit Performance Task Worksheet

Environments for Living Things: Unit Performance Task: Observe an Ant Farm

This is the Unit Performance Task worksheet for "Observe an Ant Farm." During this task, children will carry out an investigation to observe animals (ants) in order to compare their lives within an ant farm habitat, and to identify how its shape and stability relate to its function.

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Unit 3: Environments for Living Things

Unit Performance Task Worksheet

Environments for Living Things: Unit Performance Task: Observe an Ant Farm (Editable)

This is the editable Unit Performance Task worksheet for "Observe an Ant Farm." During this task, children will carry out an investigation to observe animals (ants) in order to compare their lives within an ant farm habitat, and to identify how its shape and stability relate to its function.

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Unit 3: Environments for Living Things

Leveled Readers - Blue

On-Level: How Do Living Things Survive in Their Environment?

The leveled reader "How Do Living Things Survive in Their Environment?" is designed for on-level readers and can be used to enrich key concepts from the unit "Environments for Living Things."

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Unit 3: Environments for Living Things

Teacher eBook

Environments for Living Things: Unit Review

The Unit Review assesses student understanding of key ideas and concepts from the unit "Environments for Living Things."

Integration of Career Exploration, Life Literacies and Key Skills

	Different types of jobs require different knowledge and skills.
9.1.2.CAP.1	Make a list of different types of jobs and describe the skills associated with each job.
9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
	Critical thinkers must first identify a problem then develop a plan to address it to effectively solve the problem.
9.4.2.CT.1	Gather information about an issue, such as climate change, and collaboratively brainstorm ways to solve the problem (e.g., K-2-ETS1-1, 6.3.2.GeoGI.2).
9.4.2.CT.2	Identify possible approaches and resources to execute a plan (e.g., 1.2.2.CR1b, 8.2.2.ED.3).
9.4.2.CT.3	Use a variety of types of thinking to solve problems (e.g., inductive, deductive).

	Digital tools and media resources provide access to vast stores of information that can be searched.
9.4.2.IML.1	Identify a simple search term to find information in a search engine or digital resource.
CRP.K-12.CRP1	Act as a responsible and contributing citizen and employee.
CRP.K-12.CRP2	Apply appropriate academic and technical skills.
CRP.K-12.CRP4	Communicate clearly and effectively and with reason.
CRP.K-12.CRP5	Consider the environmental, social and economic impacts of decisions.
CRP.K-12.CRP6	Demonstrate creativity and innovation.
CRP.K-12.CRP7	Employ valid and reliable research strategies.
CRP.K-12.CRP8	Utilize critical thinking to make sense of problems and persevere in solving them.
CRP.K-12.CRP9	Model integrity, ethical leadership and effective management.
CRP.K-12.CRP12	Work productively in teams while using cultural global competence.

Technology and Design Integration

Students will interact with the SmartBoard, Ipads, chromebooks and document camera.

TECH.8.1.2	Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to create and communicate knowledge.
TECH.8.1.2.A.CS1	Understand and use technology systems.
TECH.8.1.2.B	Creativity and Innovation: Students demonstrate creative thinking, construct knowledge and develop innovative products and process using technology.
TECH.8.1.2.C	Communication and Collaboration: Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others.
TECH.8.1.2.E.CS1	Plan strategies to guide inquiry
TECH.8.1.2.F	Critical thinking, problem solving, and decision making: Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources.
TECH.8.1.2.F.CS1	Identify and define authentic problems and significant questions for investigation.

Interdisciplinary Connections

LA.RI.2	Reading Informational Text
LA.RI.2.1	Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.
LA.RI.2.2	Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.
LA.RI.2.3	Describe the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.
LA.RI.2.4	Determine the meaning of words and phrases in a text relevant to a grade 2 topic or

	subject area.
LA.RI.2.5	Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.
LA.RI.2.6	Identify the main purpose of a text, including what the author wants to answer, explain, or describe.
LA.RI.2.7	Explain how specific illustrations and images (e.g., a diagram showing how a machine works) contribute to and clarify a text.
LA.RI.2.8	Describe and identify the logical connections of how reasons support specific points the author makes in a text.
LA.RI.2.9	Compare and contrast the most important points presented by two texts on the same topic.
LA.RI.2.10	Read and comprehend informational texts, including history/social studies, science, and technical texts, at grade level text complexity proficiently with scaffolding as needed.

Differentiation

- Understand that gifted students, just like all students, come to school to learn and be challenged.
- Pre-assess your students. Find out their areas of strength as well as those areas you may need to address before students move on.
- Consider grouping gifted students together for at least part of the school day.
- Plan for differentiation. Consider pre-assessments, extension activities, and compacting the curriculum.
- Use phrases like "You've shown you don't need more practice" or "You need more practice" instead of words like "qualify" or "eligible" when referring to extension work.
- Encourage high-ability students to take on challenges. Because they're often used to getting good grades, gifted students may be risk averse.

- **Definitions of Differentiation Components**:

    - Content – the specific information that is to be taught in the lesson/unit/course of instruction.
    - Process – how the student will acquire the content information.
    - Product – how the student will demonstrate understanding of the content.
    - Learning Environment – the environment where learning is taking place including physical location and/or student grouping

Differentiation occurring in this unit:

See differentiation strategies suggested in the teacher's manual for struggling or advianced students.

Modifications & Accommodations

Refer to QSAC EXCEL SMALL SPED ACCOMMOCATIONS spreadsheet in this discipline.

Modifications and Accommodations used in this unit:

IEP and 504 plans will be utilized.

Benchmark Assessments

Benchmark Assessments are given periodically (e.g., at the end of every quarter or as frequently as once per month) throughout a school year to establish baseline achievement data and measure progress toward a standard or set of academic standards and goals.

Schoolwide Benchmark assessments:

Aimsweb benchmarks 3X a year

Linkit Benchmarks 3X a year

DRA

LInkit

Additional Benchmarks used in this unit:

DRA

AIMSweb

Formative Assessments

- Assessment allows both instructor and student to monitor progress towards achieving learning objectives, and can be approached in a variety of ways. **Formative assessment** refers to tools that identify misconceptions, struggles, and learning gaps along the way and assess how to close those gaps. It includes effective tools for helping to shape learning, and can even bolster students' abilities to take ownership of their learning when they understand that the goal is to improve learning, not apply final marks (Trumbull and Lash, 2013). It can include students assessing themselves, peers, or even the instructor, through writing, quizzes, conversation, and more. In short, formative assessment occurs throughout a class or course, and seeks to improve student achievement of learning objectives through approaches that can support specific student needs (Theal and Franklin, 2010, p. 151).

  Formative Assessments used in this unit:

- Teacher observation
- Questioning
- Whiteboard Response
- Think-Pair Share

- Classroom discussion
- Workbook pages
- Writing/Performance rubrics included in lesson

Pretest

Summative Assessments

summative assessments evaluate student learning, knowledge, proficiency, or success at the conclusion of an instructional period, like a unit, course, or program. Summative assessments are almost always formally graded and often heavily weighted (though they do not need to be). Summative assessment can be used to great effect in conjunction and alignment with formative assessment, and instructors can consider a variety of ways to combine these approaches.

Summative assessments for this unit:

Unit Test

Performance Task

Instructional Materials

HMH Science Dimensions teaching materials

Various hands on materials for labs

Leveled Readers

Student Workbook

Standards

LS2.A	Interdependent Relationships in Ecosystems
	Plants depend on animals for pollination or to move their seeds around.
	Structure and Function
	The shape and stability of structures of natural and designed objects are related to their function(s).