

WHAT IS A NATURAL RESOURCE?



Overview

In this lesson, students will learn what a natural resource is and about natural resources in the local community.

Objectives

On successful completion of this lesson, students will be able to:

- describe what a natural resource is;
- identify and classify natural resources in the local community; and
- identify how natural resources are used in the local community.

Alaska Standards

Alaska Science Standards / Grade Level Expectations

- [3] SA1.1 The student demonstrates an understanding of the processes of science by asking questions, predicting, observing, describing, measuring, classifying, making generalizations, inferring, and communicating.
- [3] SA1.2 The student demonstrates an understanding of the processes of science by observing and describing the student's own world to answer simple questions.
- [3] SA2.1 The student demonstrates an understanding of the attitudes and approaches to scientific inquiry by answering "how do you know?" questions with reasonable answers.
- [3] SB1.1 The student demonstrates an understanding of the structure and properties of matter by classifying matter according to physical properties (i.e., color, size, shape, weight, texture, flexibility).

Alaska English / Language Arts Standards

W.3.2.a-d Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Alaska Mathematics Standards

2.MD.9 Collect, record, interpret, represent, and describe data in a table, graph or line plot.

Alaska Cultural Standards

[A] Culturally knowledgeable students are well grounded in the cultural heritage and traditions of their community.



WHAT IS A NATURAL RESOURCE?

UNIT 8: Natural Resources Lesson 19 — Grades 2-3 INSTRUCTIONS



[E] Culturally knowledgeable students demonstrate an awareness and appreciation of the relationships and processes of interaction of all elements in the world around them.

[E.2] Students who meet this cultural standard are able to understand the ecology and geography of the bioregion they inhabit.

Bering Strait School District Scope & Sequence

2nd grade sequence #9: Natural Resources

A. Understand what a natural resource is

D. Uses scientific processes and inquiry to directly support the concepts of the natural resources

3rd grade sequence #10: Conserving Natural Resources

A. Understand what a natural resource is

D. Understands how resources can be used wisely

E. Use scientific processes to directly support concepts on conserving natural resources

Materials

- Small cups of water (one per group of four students)
 - Small cups of soil (one per group of four students)
 - Pictures of the sun (one per group of four students)
 - Bags of air (one per group of four students)
 - Pictures of oil can (one per group of four students)
 - Rocks (one per group of four students)
 - Plastic plants (one per group of four students)
 - Plastic animals/insects (one per group of four students)
 - Student Worksheet: Which Natural Resources Do You Use?
 - Student Worksheet: Natural Resources Scavenger Hunt
- Optional:
- Student Worksheet: Natural Resources in Our Community

Multimedia

REACH Multimedia K-3: "Where Do Things Come From?"

Available at: www.k12reach.org



WHAT IS A NATURAL RESOURCE?

UNIT 8: Natural Resources Lesson 19 — Grades 2-3 INSTRUCTIONS



Additional Resources

Soil by Christian Ditchfield

Oil by Christian Ditchfield

Coal by Christian Ditchfield

Wood by Christian Ditchfield

Water by Christian Ditchfield

Natural Resources by Louise Spilsbury

Why Do We Need Water? By Kelley MacAulay

Why Do We Need Air? By Kelley MacAulay

Why Do We Need Soil? By Kelley MacAulay

Why Do We Need Rocks and Minerals? By Kelley MacAulay

My Light by Molly Bang

Living Sunlight: How Plants Bring The Earth To Life by Molly Bang

Buried Sunlight: How Fossil Fuels Have Changed the Earth by Molly Bang

Tundra Animals by Conner Dayton

Plants: Life from the Earth (Natural Resources) by Julie Kerr Casper, Ph.D

Forests: More than Just Trees (Natural Resources) by Julie Kerr Casper, Ph.D

Animals: Creatures that Roam the Planet (Natural Resources) by Julie Kerr Casper, Ph.D

Regional Wild America – Unique Animals of Alaska by Tanya Lee Stone

Activity Preparations

1. Read through the entire lesson, including the teacher background information in the Whole Picture section.
2. Students will be divided into small groups, about four students in each. Prepare for each group the following materials: a cup of water, a bag of air, a cup of soil, a rock, a toy animal (or a jar with a spider or insect in it), a plant, a picture of a can of motor oil, and a picture of the sun.
3. Make copies of the Student Worksheets: Which Natural Resources Do You Use? and Natural Resources Scavenger Hunt.
4. If using the optional homework, make copies of the Student Worksheet: Natural Resources in Our Community.

Whole Picture

What is a Natural Resource?

A natural resource is a raw material that comes from earth and is used to make the products people need for either food, shelter, clothing, or entertainment. Natural



WHAT IS A NATURAL RESOURCE?

UNIT 8: Natural Resources Lesson 19 — Grades 2-3 INSTRUCTIONS



resources include things like plants, soil, sunshine, water, fossil fuels, air, wildlife, metals, and minerals. For example, plants are used for food, medicine, animals are used for food, clothing, and art, and fossil fuels are used for energy, heating, and cooling.

Alaska has an abundance of natural resources: forests in the south, fossil fuels and minerals in the north and south central, also, wildlife and fish in both the interior and in the seas. In most Alaska Native villages around the state, people depend primarily on locally available natural resources to sustain themselves. Aside from supplemental foods purchased at the store, people depend on subsistence —harvesting foods directly from the earth. Subsistence foods are natural resources; they include berries, greens, sea weed, roots (collected for both food and medicinal purposes), and, animals like caribou, hare, and wolves (used for both food and fur), and marine mammals like seals, whales, and walrus (used for food, art, clothing, and traditional objects like skin boats and drums).

Natural resources are also used to make the processed materials people depend on for clothing, shelter, and energy. For example, consider the materials used to build a house: lumber, insulation, wiring, etc. Trees are milled to make the lumber; insulation is made from processed fossil fuels that have been turned into types of plastic; electrical wires are made from minerals mined from the earth; and fossil fuels are used for energy to heat and light the home.

In the past, Alaska Natives used only the natural resources directly locally available and used limited technology to extract them for food, shelter, and energy. Foods were harvested from the land in summer and stored for winter; people built their seasonal homes and moved based on food source availability, making seasonal homes both from and as a part of the land around them; and they used animal power for energy (e.g., dog teams for transportation and seal oil for light and heat). Today, modern conveniences make life in remote Alaska more comfortable, and people use imported materials to build their homes, clothe their bodies, and, supplement their diet. People also power their homes and vehicles using natural resources. Non-local food items are now found in village stores. For example, the materials people use to build their homes — lumber, insulation, electrical wires, etc. — are all processed materials imported from around and outside the state.

People could not survive without natural resources. Many Alaska Natives believe that all resources must be treated with respect; by showing respect, the resources will continue to be available for generations to come (Fienup-Riordan and Rearden, 2012; Kawagley et al., 2010). Take a walk around your village and identify the various natural resources people use regularly and directly (berries, other plants, wildlife, water, etc.). Notice,



WHAT IS A NATURAL RESOURCE?

UNIT 8: Natural Resources Lesson 19 — Grades 2-3 INSTRUCTIONS



too, the resources people depend on that have been imported (materials for housing, clothing, transportation, communication, etc.).

Vocabulary

natural resource – anything from the environment that can be used

fossil fuel – a resource that comes from the remains of living things that lived long ago

minerals – a solid object found in nature that has never been alive

renewable resource – a resource that can be replaced in a human lifetime

nonrenewable resource – a resource that when it is used up, will not exist again in a human lifetime

Activity Procedure

1. Organize the students into groups of four and give each group the following items: a cup of water, a bag of air (the students should focus on what is inside the bag, not the bag itself), a picture of the sun, a cup of soil, a rock, a plastic animal (or a jar with a spider or insect in it), a plant, and a picture of a can of motor oil. Ask the students: Where can we find all of these items? Let them discuss the question briefly within their group. If available, pair each group with an aide or other adult for help.
2. Explain to the students the items they were given are natural resources and that natural resources are all found on Earth. Hand out the STUDENT WORKSHEET: Which Natural Resources Do You Use? Briefly read the instructions and the labels in the circles, but do not give detailed instructions. Ask the students to fill out the sheet to the best of their ability.
3. After the students have completed their sheets, ask them to share what they have drawn and one way they use natural resources. Ask them to give examples of each type of natural resource. After the sharing time, tell the students they are going to be learning about natural resources and then introduce the vocabulary words. Give an example of each category of natural resource:
 - Air: People breathe air so they can live.
 - Water: Water is used to clean clothes.
 - Sun: The sun's warmth is used to grow plants.
 - Plants: A tree is a plant that can give shelter.
 - Animals: A caribou is an animal that I can eat.
 - Minerals: Copper is a mineral used to make pennies.
 - Fossil fuels: Oil is a fossil fuel that can be made into gasoline.
4. Explain to the students that they are going outside to do a scavenger hunt



WHAT IS A NATURAL RESOURCE?



for natural resources or things that use natural resources, with a partner. Give each pair of students the STUDENT WORKSHEET: Natural Resources Scavenger Hunt. Tell them they will have fifteen minutes to complete their hunt and they must stay within sight of an adult. They are to record the items they discover by drawing a picture or write down a brief note describing it.

5. After the students return to the classroom, or if there is a quiet place outside, have the students share what they found on the scavenger hunt. Give each pair of students an opportunity to share.
6. Assess student learning by asking:
 - What examples of natural resources did you find?
 - Which type of natural resources does it belong to? How do you know?
 - What are natural resources?
 - Could we survive without natural resources? How do you know?
 - Which resource is the most important? Why?
 - How do people use natural resources?
 - What is a renewable resource?
 - What is a nonrenewable resource?

Extension Activities

- Assign the Student Worksheet: Natural Resources in Our Community to complete at home. Worksheets should be returned to class the next day to share and discuss with the class.
- Have students identify a natural resource in the local environment. Have them describe who uses it, where it is found, when it is used, why it is used, and what are the ways in which it is used.
- Invite a culture knowledge bearer or elder to speak to the class about the traditional ways the local Native community used natural resources and how they are used now.



WHAT IS A NATURAL RESOURCE?

UNIT 8: Natural Resources Lesson 19 — Grades 2-3 INSTRUCTIONS



Answers

1. Group Activity - Where items can be found: all around, outside, in the environment, in the community, in the garden, at home, answers will vary.
2. Pre-assessment - Student Worksheet: How Do You Use Natural Resources: answers will vary.
3. Sharing of worksheets: answers will vary.
4. Student worksheet: Natural Resources Scavenger Hunt: answers will vary.
5. Sharing and discussion of Scavenger Hunt worksheet: answers will vary.
6. Student assessment of learning:
 - Examples of natural resources found: answers will vary depending upon what students found and recorded on their worksheets.
 - Type of natural resources it belongs to: order will vary but should include, plants, animals, air, water, sun, minerals, fossil fuels.
 - How you know: answers will vary; students should be able to give a reason for their response such as, a river is made of water, the wind is blowing air, a tree is a plant.
 - What are natural resources: anything from the environment that can be used.
 - Could we survive without natural resources: no, we need water, air, shelter, and food to survive which are all natural resources.
 - How you know: Answers will vary; may include; shelter is made of plants or minerals which are natural resources, water is a natural resource, we eat animals and plants which are natural resources.
 - Most important resource: None of them is most important; they are all important.
 - Why: Living things depend on many natural resources to survive.
 - How people use natural resources: For water, shelter, to breathe, to eat; answers will vary.
 - What is a renewable resource: things from the environment that can be replaced by nature and used again.
 - What is a nonrenewable resource: things from the environment that are limited in supply and cannot be replaced.



WHAT IS A NATURAL RESOURCE?

UNIT 8: Natural Resources Lesson 19 — Grades 2-3 INSTRUCTIONS



References

Fienup-Riordan, Ann, and Alice Rearden. (2012) *Ellavut: Our Yup'ik World and Weather. Continuity and change on the Bearing Sea Coast.* Seattle and London: University of Washington Press.

Kawagley, Angayuqaq Oscar, Norris-Tull, Delena, & Norris-Tull, Roger A. (2010). "The Indigenous Worldview of Yupiaq Culture." In R. Barnhardt & A. Kawagley (Eds.), *Alaska Native Education: Views from Within* (219–235). Fairbanks: Alaska Native Knowledge Network.



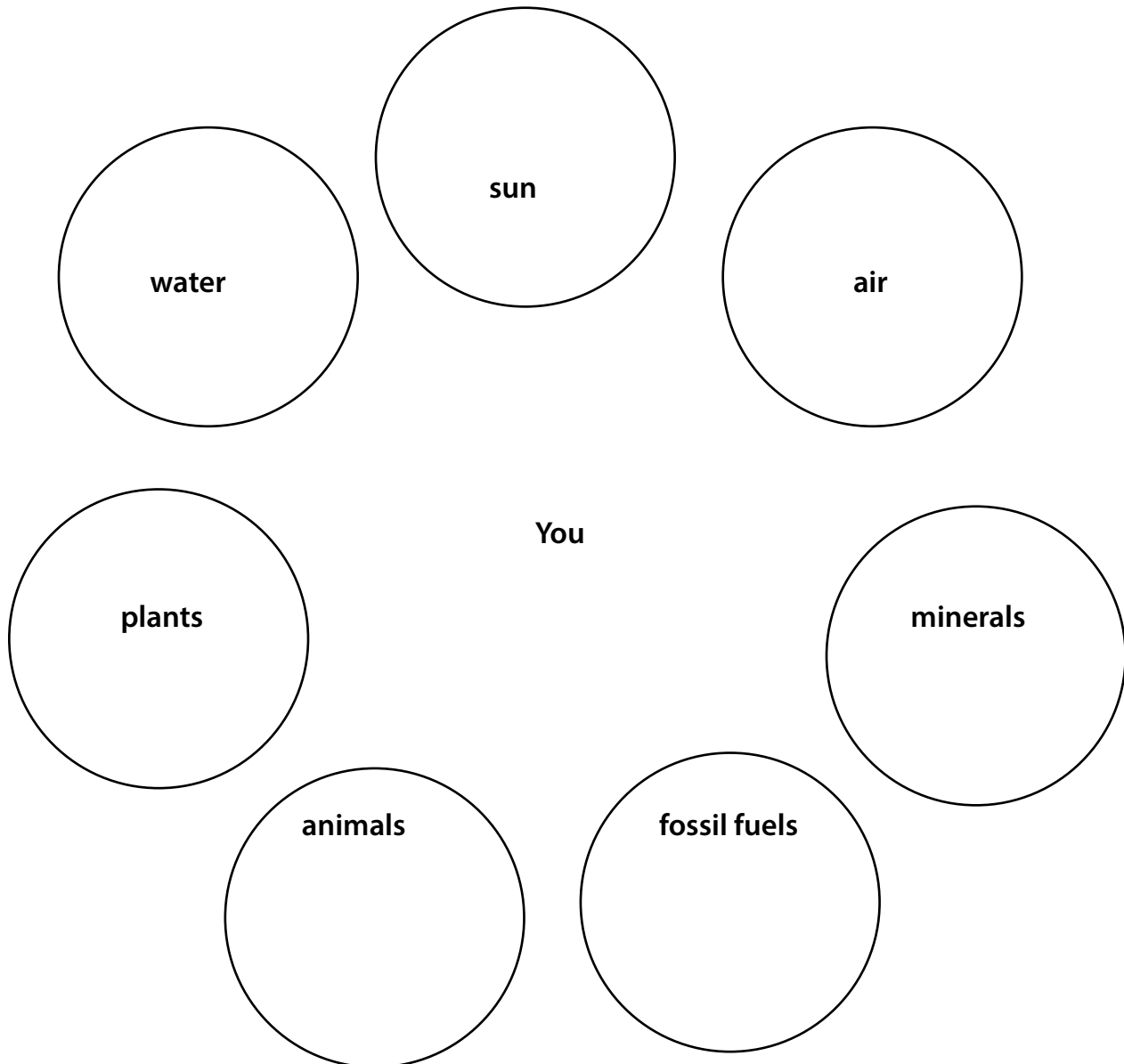
WHAT IS A NATURAL RESOURCE?



Student Worksheet: Which Natural Resources Do You use?

Name _____

The natural environment provides many natural resources for people. Natural resources are always found on Earth and may be renewable or nonrenewable. Natural resources are water, sun, air, plants, animals, rocks and minerals, and fossil fuels.



In the middle of the circles draw a picture of yourself. In each individual circle, draw a picture of how you think you use the named natural resource.








WHAT IS A NATURAL RESOURCE?



Student Worksheet: Natural Resources Scavenger Hunt

Name _____

What can you find in the local environment that are examples of these natural resources?
Draw a picture or write down all the examples that you find.

<p>Water</p> 	
<p>Sun</p> 	
<p>Air</p> 	
<p>Plant</p> 	
<p>Animal</p> 	
<p>Mineral</p> 	
<p>Fossil Fuel</p> 	

WHAT IS A NATURAL RESOURCE?



Student Worksheet: Natural Resources in Our Community

Name _____

1. Describe what a natural resource is:

A natural resource is anything found in the environment or on Earth that is used by people or the community. Answers may vary some in word usage and may include examples.

2. Complete the chart below by identifying the natural resources in the community and giving examples of how the community uses them. You may ask your parents or an adult to help you.

Answers will vary – examples given

Natural Resource	Community Use or Activity
water – river, ocean, rain	cooking, bathing, swimming, drinking, fishing, boating
sun – sunlight, warmth of sun, shadows (lack of sun)	sunbathing, drying fish, drying clothes, starting fires, growing plants
air – wind, leaves blowing in the wind, air we breathe, smoke	flying kites, flying airplanes, signaling with flags, smoke signals
plants – trees, grass, shrubs, sedges, flowers, berries, lichen, moss	eating plants, greenhouses, drying them, feeding them to animals
animals – caribou, moose, fox, hares, voles, whales, dogs, bumblebees	playing with them, eating them, clothing, transportation
minerals – rocks, soil, sand, pebbles, stones, diamonds, quartz	pounding them, planting, burying things, building walls, firepits
fossil fuels – gas cans, oil, gasoline, coal, propane tanks	driving four-wheelers, cooking, driving boats

WHAT IS A NATURAL RESOURCE?



Student Worksheet: Natural Resources in Our Community

- From the information in your chart, choose a natural resource. Identify the natural resource and the community use or activity. Create an illustration that displays community use of that resource.

Natural resource Answers will vary Community use Answers will vary

- Write a short description about your illustration.

Answers will vary depending on what is drawn, but the description should include the natural resources used and how the community uses the resources. More than one community resource or use may be described.

- How did you know how to classify your natural resource? State the reason for how or why you place it in the category you did.

Answers will vary depending on what natural resources the student used in the drawing. The response should indicated include a reasoned response for deciding how to classify the natural resource such as:

- The river is made of water, so the natural resource was classified as water.
- The natural resource is plants because a tree is a plant.



WHAT IS A NATURAL RESOURCE?



Student Worksheet: Natural Resources in Our Community

Name _____

1. Describe what a natural resource is:

2. Complete the chart below by identifying the natural resources in the community and giving examples of how the community uses them. You may ask your parents or an adult to help you.

Natural Resource	Community Use or Activity
water	
sun	
air	
plants	
animals	
minerals	
fossil fuels	





Student Worksheet: Natural Resources in Our Community

- From the information in your chart, choose a natural resource. Identify the natural resource and the community use or activity. Create an illustration that displays community use of that resource.

Natural resource _____ Community use _____

- Write a short description about your illustration.

- How did you know how to classify your natural resource? State the reason for how or why you place it in the category you did.

WHAT IS A NATURAL RESOURCE?

UNIT 8: Natural Resource
Lesson 19 — Grades 2-3
APPENDIX



WHAT IS A NATURAL RESOURCE?

UNIT 8: Natural Resource
Lesson 19 — Grades 2-3
APPENDIX

