

Meet a Plant



Grade: 1-4

Length: 30 minutes

Big Ideas: Investigation

Topic: Observation

Summary: Students will explore local plants. In partners, one student will lead a blindfolded student to a plant, where the blindfolded student will meet the plant and make as many observations about it as they can. Based on these observations, the blindfolded student will then try to find the plant they met, this time also using their sight. Afterwards, students will draw their plant, including all of their observations.

Scroll to the bottom for a Try This At Home activity.

Standards:

Kindergarten Strand K.2 Living Things and Their Surroundings

Living things (plants and animals, including humans) depend on their surroundings to get what they need, including food, water, shelter, and a favorable temperature. The characteristics of surroundings influence where living things are naturally found. Plants and animals affect and respond to their surroundings.

Standard K.2.1: Obtain, evaluate, and communicate information to describe patterns of what living things (plants and animals, including humans) need to survive. Emphasize the similarities and differences between the survival needs of all living things. Examples could include that plants depend on air, water, minerals, and light to survive, or animals depend on plants or other animals to survive. (LS1.C)

Standard K.2.2: Obtain, evaluate, and communicate information about patterns in the relationships between the needs of different living things (plants and animals, including humans) and the places they live. Emphasize that living things need water, air, and resources and that they live in places that have the things they need. Examples could include investigating plants grown in various locations and comparing the results or comparing animals with the places they live. (LS2.B, ESS3.A)

First Grade Strand 1.2: The Needs of Living Things and Their Offspring

Living things (plants and animals, including humans) depend on their surroundings to get what they need, including food, water, shelter, and a favorable temperature. Plants and animals have external features that allow them to survive in a variety of environments. Young plants and animals are similar but not exactly like their parents. In many kinds of animals, parents and offspring engage in behaviors that help the offspring to survive.

Standard 1.2.2: Construct an explanation by observing patterns of external features of living things that survive in different locations. Emphasize how plants and nonhuman animals, found in specific surroundings, share similar physical characteristics. Examples could include that plants living in dry areas are more likely to have thick outer coatings that hold in water, animals living in cold locations have longer and thicker fur, or most desert animals are awake at night. (LS1.A, LS1.D)

Standard 1.2.3: Obtain, evaluate, and communicate information about the patterns of plants and nonhuman animals that are alike, but not exactly like, their parents. An example could include that most carrots are orange and shaped like a cone but may be different sizes or have differing tastes. (LS3.A, LS3.B)

Second Grade Strand 2.2: Living Things and Their Habitats

Living things (plants and animals, including humans) need water, air, and resources from the land to survive and live in habitats that provide these necessities. The physical characteristics of plants and animals reflect the habitat in which they live. Animals also have modified behaviors that help them survive, grow, and meet their needs. Humans sometimes mimic plant and animal adaptations to survive in their environment.

Standard 2.2.2 Plan and carry out an investigation of the structure and function of plant and animal parts in different habitats. Emphasize how different plants and animals have different structures to survive in their habitat. Examples could include the shallow roots of a cactus in the desert or the seasonal changes in the fur coat of a wolf. (LS1.A, LS4.A, LS4.D)

Third Grade Strand 3.2: Effects of Traits on Survival

Organisms (plants and animals, including humans) have unique and diverse life cycles, but they all follow a pattern of birth, growth, reproduction, and death. Different organisms vary in how they look and function because they have different inherited traits. An organism's traits are inherited from its parents and can be influenced by the environment. Variations in traits between individuals in a population may provide advantages in surviving and reproducing in particular environments. When the environment changes, some organisms have traits that allow them to survive, some move to new locations, and some do not survive. Humans can design solutions to reduce the impact of environmental changes on organisms.

Standard 3.2.4: Construct an explanation showing how variations in traits and behaviors can affect the ability of an individual to survive and reproduce. Examples of traits could include large thorns protecting a plant from being eaten or strong smelling flowers to attracting certain pollinators. Examples of behaviors could include animals living in groups for protection or migrating to find more food. (LS2.D, LS4.B)

Fourth Grade Strand 4.1: Organisms Functioning in Their Environment

Through the study of organisms, inferences can be made about environments both past and present. Plants and animals have both internal and external structures that serve various functions for growth, survival, behavior, and reproduction. Animals use different sense

receptors specialized for particular kinds of information to understand and respond to their environment. Some kinds of plants and animals that once lived on Earth can no longer be found. However, fossils from these organisms provide evidence about the types of organisms that lived long ago and the nature of their environments. Additionally, the presence and location of certain fossil types indicate changes that have occurred in environments over time.

Standard 4.1.1: Construct an explanation from evidence that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction. Emphasize how structures support an organism’s survival in its environment and how internal and external structures of plants and animals vary within the same and across multiple Utah environments. Examples of structures could include thorns on a stem to prevent predation or gills on a fish to allow it to breathe underwater. (LS1.A)

Essential Questions:

- How can we make good observations?

Enduring Understandings:

- The scientific process starts with observation.

Objectives:

Students will...

- Make at least 5 observations about a plant using their senses (except taste and sight).
- Draw and label a picture of their plant with their observations.

Materials:

- Blindfolds (e.g. bandanas) (1 per 2 students)
- Area with plants (e.g. schoolyard)
- Paper (1 per student)
- Writing utensils (e.g. crayons, markers, colored pencils)
- Field guides (optional)

Key Vocabulary:

- Observation: Something that is learned through our senses.

Procedure:

1. Take students to an area with plants. This could be the schoolyard, a nearby park, or an undeveloped area.
2. Divide the class into pairs. Hand out a blindfold to one person in each pair.
3. Have the person that can see guide their blindfolded partner to a plant (e.g. tree, shrub, or grass). The partner that is blindfolded must use their senses other than sight (and taste) to make at least 5 observations about the plant (e.g. texture of the bark or stem). After making observations, have the seeing partner lead the blindfolded partner back to the starting location – only then can they remove the blindfold.

4. Let the students that were blindfolded try to find which plant they just met.
5. Have students switch with their partners and meet a different plant.
6. Ask students to draw (and label depending on their abilities) their plant and include their observations.

Additional Activities/Extensions:

For Teachers and Try This At Home: Students can create field guides or simplified keys or charts for the plants that grow in the area they visited, and they can use those to identify their plants or plants found by others.

Older students can draw and label the structures of their plants, and explore how these structures help plants adapt to living in their environments -- i.e., short, widespread root systems for gathering rainwater, or long taproots for gathering water deep in the ground; thorns for protection; pollen for reproduction, etc.