

Topic: Native or Exotic?

Alabama Science Standard(s)

Kindergarten

K: Ecosystems: Interactions, Energy, and Dynamics: Structures and Processes 3: Use data from observations to distinguish characteristics of living and nonliving things.

K: Ecosystems: Interactions, Energy, and Dynamics: Structures and Processes 4: Use observations to determine patterns of what plants and animals (including humans) need to survive, including light, water, and nutrients.

K: Ecosystems: Interactions, Energy, and Dynamics: Interdependent Relationships 5: Gather information from observations and media to explain how plants and animals can provide for their needs by changing their environment.

K: Ecosystems: Interactions, Energy, and Dynamics: Interdependent Relationships 6: Use models of natural habitats to represent the interdependence among plants and animals native to their community.

K: Earth and Human Activity: Human Impact 11: Identify a problem and design possible solutions that lessen the human impact on the local environment.

- K-ESS3-1: Use a model to represent relationships in the natural world.
- K-ESS2-2: Construct explanations about patterns in the natural world.

Grade 1

1: Waves and their Applications in Technologies for Information Transfer: Wave Properties 1: Carry out investigations to provide evidence that the vibrations of matter can make sound and sound can make matter vibrate.

1: From Molecules to Organisms: Structures and Processes: External Structures 5: Use information from observations to explain how various external features help living things survive, grow, and meet their needs.

- 1-LS1-1: Use materials to design solutions that help living things survive.
- 1-LS3-1: Make observations to describe patterns of plants.

Grade 2

2: Ecosystems: Interactions, Energy, and Dynamics: Interdependent Relationships 5: Plan and carry out an investigation, using one variable at a time, to determine how each variable affects plant growth.

2: Ecosystems: Interactions, Energy, and Dynamics: Biodiversity 7: Obtain information to explain that there are many different kinds of living things that exist in habitats on land and in water.

2: Earth's Systems: Changes Over Time 10: Use a variety of sources to provide evidence that Earth's events can occur slowly or rapidly.

2: Earth's Systems: Human Impact 11: Evaluate multiple solutions designed to slow or prevent wind or water from changing the shape of Earth's surface.

- 2-LS2-1: Plan and conduct investigations of plants and animals in different places.
- 2-ESS2-2: Develop a model to represent how land and plants change over time.

(Focus: observing plants, sorting, patterns, human impact, and care for the environment)

Lesson Objective:

Students will be able to:

- Observe and describe plants around their school.
- Sort plants into “native” (from Alabama) or “non-native/exotic” (from somewhere else).
- Explain, using simple language, how people can help or hurt plants and habitats.
- Understand that too many of one plant can be a problem for other plants.

Background:

Some plants grow naturally in Alabama's forests, fields, and wetlands. These plants are called native plants. Native plants belong here and help keep Alabama's land healthy.

Other plants were brought to Alabama by people from other places. These plants are called exotic or non-native plants. Some non-native plants grow very fast in Alabama's warm weather and rich soil.

In nature, plants, animals, bugs, weather, and soil work together to keep Alabama's ecosystems in balance. Native plants grow with insects and animals that help control how much they spread.

When a plant comes from far away, it may not have insects or animals in Alabama to slow its growth. This can cause the plant to spread too quickly and push out native Alabama plants. When this happens, animals may lose their food and homes.

People help shape Alabama's environment by the plants they choose to grow. Choosing native Alabama plants helps protect local animals, soil, and water.

Vocabulary:

- Native** – a plant that grows naturally in Alabama
- Exotic / Non-native** – a plant brought from another place
- Ecosystem** – living and nonliving things that work together

Academic Language:

Grade K-2 (can be aligned to other grades/subjects)	Length of Lesson: 2 class periods	Materials: Photographs of plants Real plants
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ADVANCED PREPARATION:

1. Collect or photograph 3–5 common plants (mix of native and non-native if possible).
2. Prepare picture cards or simple plant ID sheets (instead of full field guides).
3. Pre-select safe areas of the schoolyard for exploration.

INSTRUCTIONS:

First Class Period: Classroom Exploration

1. Plant Introduction (Whole Group)
 - Show real plants or photos.
 - Ask:
 - “What do you notice?”
 - “Where do you think this plant grows?”
2. Sorting Activity (Small Groups)
 - Give each group:
 - Plant pictures or samples
 - A simple chart with two columns:
 - Grows in Alabama
 - Came from somewhere else
 - Read plant facts aloud as needed.
3. Discussion
 - Talk about why some plants grow better than others.
 - Introduce the idea that too many of one plant can cause problems.

Second Class Period: Schoolyard Walk

1. Outdoor Observation
 - Walk to 2–3 areas of the campus.
 - Students:
 - Look, point, and count different plants.
 - Draw one plant they see.
2. Quick Check
 - Ask:
 - “Do we see many different plants or mostly the same?”
 - “What animals might like these plants?”
3. Return & Chart
 - Create a class chart:
 - Native Plants We Saw
 - Non-native Plants We Saw

EVALUATION:

Teacher observation during:

- Sorting activities
 - Discussions
- Why is it good to have many kinds of plants?
What happens if one plant takes over?
How can people help plants and nature?

Student product:

- Drawing of a plant with a simple sentence:
 - “This plant grows in Alabama.”
 - OR “This plant came from somewhere else.”

EXTENSION:

1. Invite a local gardener, farmer, or extension agent to talk about plants.
2. Create a class mural of native Alabama plants.
3. Read a picture book about plants or habitats.
4. Connect to social studies by discussing how people choose what to plant.

ALABAMA in 5: Turtles

Turtles live in Alabama’s forests, fields, ponds, and wetlands. Many turtles in Alabama are native animals, which means they belong here and depend on the land around them.

Turtles need plants to survive. Plants give turtles food, shade, and places to hide. Leaves and grasses help turtles stay cool and safe. Bugs and small animals that live near plants are also food for turtles.

When non-native plants grow too fast, they can take over areas where turtles live. These plants can cover the ground and push out native plants. When this happens, turtles may have trouble finding food, moving safely, or finding good places to live.

People help shape Alabama’s environment by the plants they choose to grow. When people plant native Alabama plants, they help protect turtle habitats and keep nature in balance.

REFERENCES:

Alabama Wildlife Federation. (n.d.). *Learn about Alabama's native plants*. Retrieved from <https://alabamawildlife.org/learn-about-alabamas-native-plants/>

Alabama in 5: Turtles (Box Turtle, Gopher Tortoise)