

SUBJECT AREAS:

Natural Science

ACTIVITY DESCRIPTION:

Observing, organizing, information, inferring, identifying relationships and patterns, predicting.

OBJECTIVES:

Students will: (1) take inventory of the plants and animals that live on, in, and around trees; (2) identify ways those animals and plants depend on trees for survival and, in turn, influence the trees; (3) Investigate how buildings provide a habitat for plants, animals, and people.

MATERIALS:

Paper and pencil; clipboards or cardboard with paper clips (optional: field guides for trees, shrubs, insects, or birds; hand lenses; bug boxes; binoculars).

GRADE/LEVEL:

Upper Elementary School (12-14)

DURATION:

Preparation time: 15 min.
Activity time: 50 min.

PLACE:

Classroom, School yard, etc.

AUTOR:

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Trees as Habitats and their influence in the Ecosystem

INTRODUCTION:

From their leafy branches to their tangled roots, trees provide a habitat for a host of plants and animals. A habitat is the place where a plant or animal gets all the things it needs to survive, such as food, water, shelter, and space for having and raising offspring. A habitat may be 100 square miles (259 km²) of grassland for a lion or a single plant for an insect. A tree may serve as part of an organism's entire habitat. For example, an oak tree may provide food for squirrels and nest sites for crows. But lichens and moss get everything they need from growing right on the tree.

In this activity, your students will discover how plants and animals depend on trees in many ways.

BACKGROUND:**Procedure:**

Find an area with several trees (any size) or shrubs that the students can examine. If you do not have access to trees or scrubs, use buildings instead. Buildings are predominant structures of an urban environment, and they provide a habitat for many plants and animals (especially people) The teacher will use this short time (5-10 minutes) to explain the steps for this activity

➤ Show the students a picture of a tree, and ask them to name that might depend on the tree. List their answers on chalkboard.

➤ Tell the students that they are going to study a tree to find out which plants and animals depend on it or use it in some way. Explain that they should try to determine which animals (including humans) only visit tree, and which plants or animals actually live on it or in it. They should watch for clues and signs such as chewed leaves, holes in the bark, or carved initials. They should be sure to record where on the tree they find either living things or signs of life.

If you do not have access to trees or shrubs use buildings instead. Buildings are the predominant structures of an urban environment, and they provide a habitat for many plants and animals (especially people). Have students consider buildings they are familiar with, such as houses or apartment buildings, a parent's office building, or a community center. Ask them to think of all plants that grow on the inside (house plants, potted trees, mold, mildew) or the outside (moss, grass, lichens) of such buildings. Ask them to name all the animals that make their homes on the inside (people, cats, dogs, goldfish, cockroaches, mice, houseflies) or outside (birds, ants, bees) of those buildings. Have them consider how all those living things depend on the building and how those things, in turn, affect both the buildings and the people living in them.

- Tell the students that they are going to work individually or in teams to study a tree to find out which plants and animals depend on it or use it in some way. Also some of them also can investigate the plant and animal life inside and outside a building habitat.
- Explain that they should try to determine which animals (including humans) only visit the tree, and which plants or animals actually live on it or in it. They should be sure to record where on the tree they find either living things or signs of life. Also if you do not have access to trees or shrubs, then they can investigate the plant and outside a building habitat (school, nature center, or home). They should consider what environmental conditions in the building attract and support those organisms.
- Pass out paper, pencils, clipboards, and hand lenses or bug boxes. Take the students outside and have them examine the environment. Encourage them to draw pictures of all of the plants and animals they find, especially those they cannot identify. You may also want to give them binoculars so they can get a closer look at life in the treetops.
- Back in the classroom, have students organize their collected information into a booklet or portfolio, or in any other style. You might suggest organizing the data by plants, insects, or birds; by where on the tree the organism is found (roots, trunk, or leaves); by whether it lives on the tree or just visit, inside or outside a building; or by any other means. Encourage students to set up charts, tables or graphs that illustrate their findings.
- Have students or teams present their data to the rest of the group. You can record each group's data on the chalkboard and, set up tables or graphs that summarize the entire group's findings afterward.

FUN FACTS:

- *Around 27,000 trees are cut down each day;*
- *The world's oldest tree was around when the pyramids were built;*
- *Trees are Crucial for Human Survival (Humans are highly dependent on trees for survival. Trees provide humans with oxygen, food, clothes, shelter, and even medicine for illnesses. Also, trees protect the environment from natural calamities like storms and droughts).*
- *Trees Highly Influence the Ecosystem of an Area (A study has found that adding a single tree to a pasture can increase the number of bird species from near zero to eighty. Other than birds, squirrels, bats, bees, fireflies, and many other animals and insects can thrive in the green area and help the whole environment thrive).*

ASSESSMENT:

Ask the students to write answers to the following questions and discuss with them the?

What did you find on the trees?

How might the tree be affected by the plants and animals that live on it?

Which of these organisms seemed to harm the tree? Why do you think so?

Do any of the plants and animals you observed seem to benefit the tree?

How can environmental conditions in buildings attract and support the growth and life of plants and animals within it? and how those things, in turn, affect both the buildings and people living in them?

EVALUATION:

Ask students to write a report (individually or in groups) that discusses how different plants and animals depend on the tree or building they investigated?