

Introduction

Bees are vital pollinators and play an integral role to the environment. Bees' habitats play a vital role in their success. This lesson plan allows students to analyze what makes a high-quality bee habitat and to examine some of the challenges bees are facing.

Learning Objectives

After the lesson, the students should be able to:

- Define what a habitat is.
- Explain what makes up a good habitat for bees.
- Design their own habitat that will be successful for bees colonies.
- Propose and design solutions for problems facing bee colonies.

Key Terms

- Habitat
- Habitat Loss
- Ecosystem
- Niche

Time Requirement

2 or 3 class periods (could be on separate days)
With extension: 1 additional class period

Grade Level

Grades 6th to 8th grade (with possible modifications for upper and lower grades)

Teacher Preparation

- Shoe boxes
- Sand/soil
- Felt
- Construction paper
- Glue
- Colored pencils
- Tooth picks
- Pipe cleaners
- Printed Student Handout
- Any other miscellaneous materials for students to build their habitat
- Printed article **What kinds of landscapes keep bees healthy?** from *Science Journal for Kids* (if reading in class)

Lesson Plan

1 HOOK

PART 1: WHAT IS A HABITAT?

- Introduce students to the term “habitat”. Explain that this is where an organism lives. They can think of the habitat as the animal’s address. Some organisms are very particular about their habitat, while others not so much. At this point, depending on the grade level, you can differentiate between a habitat and a niche. A niche includes all of the roles that the organism plays in the environment.
- Watch together the video **Habitat management boosts Kirtland’s warbler numbers** by Michigan Wildlife Council (3 min). Ask the students to describe the Kirtland’s warblers’ habitat.
- Watch the video **Ground Bees** by Town and Country Pest Solutions (2 min). What can they tell about the habitat of these bees?

Duration: 10 minutes

PART 2: READING ACTIVITY

- Introduce students to bee population decline and some of the threats bees are facing.
- Watch together the video **Bumblebee Decline** by Severson Dells Nature Center (5 min).
- Discuss that bees are declining rapidly all over the world for multiple reasons but some of the main reasons are lack of high-quality habitat.

Duration: 15 min

2 READING ASSIGNMENT

- Individually or in groups, have the students read the article **What kinds of landscapes keep bees healthy?** published in *Science Journal for Kids*.
- Discuss as a class and make sure they understand the graphs.
- Answer the assessment questions at the end of the article. (A teacher’s key is available from the article’s page online.)

Duration: 30-40 min

3 HANDS ON ACTIVITY: BUILD A HABITAT

The goal of this activity is for students to design a model of high-quality bee habitats using a variety of materials. The activity can take place either outdoors, or indoors! You can ask students to bring in supplies such as shoeboxes.

- Break students up into groups of 2-4. They will be working together to build a bee habitat. This project can also be done individually.
- Your students will use the student handout to determine what materials they need for their project.
- After building their habitat, each group can present it to the class.

Duration: 40-50 min

Distance Learning Modifications

- If participating in this activity at home, students can draw their habitats instead of physically building them.
- They can use an app such as **Flipgrid** to record their presentations.

Citizen Science Extension

Students can participate in a citizen science project about pollinators. Find recent recommendations about active projects at Penn State University's Center for Pollinator Research:

Resources and Outreach: Citizen Science

Credit

This lesson is based on the teaching resource **Will the Bees Like it Here?** from Penn State University, Department of Entomology. Visit their **website** for more teaching resources about pollinators.