



Creation Station Activity: Who Lives Here?

Type of Teacher Tool: Pick from Whole Class and Small Group

Targeted Grade Level(s): 5-8

Targeted Curriculum Areas: Life Science / STEAM

Essential Question: Why do we need bugs in our yards?

Learning Objectives:

The learner will:

1. identify the needs of insect pollinators.
2. compare human and insect needs.
3. analyze and explain biodiversity.
4. create drawn plans for a small garden that meets the needs of local pollinators.

Featured National Standards:

1. Next Generation Science Standards
MS-LS2-5. Evaluate competing design solutions for maintaining biodiversity and ecosystem services.
2. National Core Arts Standards
Visual Arts-Creating, 6th VA:Cr1.1.6a
Combine concepts collaboratively to generate innovative ideas for creating art.

Resources/Materials Needed:

1. Videos from Educate.Today
 - [Nature 18: Planting for a Pollinator Garden](#)
 - [Nature 15: How Native Plants Help Pollinators](#)
 - [Nature 8: The Life Cycle of a Monarch Butterfly](#)
 - [Nature 7: Helping Create a Healthy Habitat for the Monarch Butterfly](#)
 - [Nature 6: Celebrate the Earth with Insects: Mosquitos and Monarchs–Insect Ecology and Eco-Sense](#)
2. Books for research on the topic: Suggested titles
 - [Attracting Native Pollinators: The Xerces Society Guide, Protecting North America's Bees and Butterflies, 2011](#) by The Xerces Society (Author), Dr. Marla Spivak (Foreword).
 - National Audubon Society Field Guide to Insects and Spiders: North America (National Audubon Society Field Guides) by National Audubon Society.
 - [National Geographic Pocket Guide to Insects of North America, 2016](#) by Arthur V. Evans, Jared Travnicek.

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- National Wildlife Federation(R): Attracting Birds, Butterflies, and Other Backyard Wildlife, Expanded Second Edition (Creative Homeowner) 17 Projects & Step-by-Step Instructions to Give Back to Nature, 2019 by David Mizejewski (Author).
3. Blank Venn Diagrams
 4. Notebooks and pencils, art supplies.
 5. Handheld magnifying glasses.

Teacher Instructions:

1. Animals come in many shapes and sizes, inhabit different places, and live in different ways. **Biodiversity** is the term that describes the many different species sharing one habitat. Understanding what makes a species special and where and how it lives are important if people are to learn to conserve and co-exist with wildlife. Explain that the students will be comparing what they need to survive with what they discover about insects needs, and then examining ways to encourage biodiversity on a small scale.
2. Plan a short walk to a nearby garden or wild area. Ask the students to bring their notebooks, pencils, and magnifying glasses. The notebooks should be set up so the students can use a whole page for each thing they observe. Explain to them that they will be looking for insect life in the garden, and they are to examine 4 different creatures by observing them with the magnifier and recording the following: Quick sketch with notations about color, size, and anything unusual they find (super large antennae...). They should note brush or cover for insects, nearby water, where the insect is hanging out, possible things the insect might use for food. You might want to model a journal observation page ahead of time. (Example attached)
3. Set up small group research stations with the reference materials, and give the students time to look up their insects, possibly identify them, and make further notes about habitats, food, etc. This is also a good place to use the videos that have a lot of information on this topic, as part of their reference materials. They can view in small groups if possible or as a class. They should collaborate and help each other.
4. Ask students to set up a Venn diagram with one side labeled “Basic Needs Humans,” and one side labeled “Basic Needs Insects.” Using their notes and background knowledge about human needs they can begin to fill out the diagrams. Again, it’s okay if they collaborate; they will learn from each other.
5. Whole group discussion: lead the talk to the basic needs of living organisms. Ask the students what would happen if they did not have food or water available. Ask the same questions about insects. Ask which were most common and which were one of a kind. Tell them their project will be to design a small garden, or even a garden in pots, that will provide everything most insects need to survive. This is the graded portion of the lesson so consider using a rubric that measures the things you are emphasizing such as the knowledge of biodiversity, basic needs of living creatures, best practice for nurturing biodiversity, etc. Give them art supplies and again they can use the reference materials to help with their design.

Extension Activity:

1. Design and build shelters that are appropriate for insects.

Assessment/Evaluation Option

1. Rubric to evaluate understanding of the concepts in the standards as shown in their garden plans and notebooks.