

DIGITAL DISCOVERY WORKSHOPS

Teacher Toolkit: Ecosystem Investigators | Grades 3–8



PROGRAM OVERVIEW

Get familiar with the program content.

Program Description

Work together to create a virtual ecosystem model revealing how living and non-living parts connect and interact in an aquatic environment. Using your new knowledge about ecosystem interactions, become a wetland scientist and explore the relationship between organisms in a real pond sample. Can you help us determine if the wetland ecosystem is in balance?



Program Objectives

Model a wetland ecosystem to better understand the parts, connections and movement in the ecosystem.

Understand that energy flows from the sun, to producers, then consumers.

Practice observations of living organisms and recognizing identifying features.

Explain why wetlands are important and name ways that you can help keep wetlands healthy.

Program Key Words (English/Spanish)

Wetland/ el humedal

Ecosystem/ la ecosistema

Model/ el modelo

Producer/ el productor

Consumer/ el consumidor

Aquatic macroinvertebrate/ los macroinvertebrados acuáticos

Biotic/ biótico

Abiotic/ abiótico



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Program Outline

Subject to change

- Introduction of program and expectations.
- Introduce wetland.
- Create a model together of a wetland ecosystem.
- Make observations together of live macroinvertebrates:
 - Practice identifying macroinvertebrates using key features.
 - Explore roles of different organisms in the ecosystem.
- Discuss importance of wetlands.
- Program conclusion.

[View Supported NGSS](#)



BEFORE THE PROGRAM



LUMIO LESSON

Activity time: ~25 minutes.

- Provide the [Ecosystem Investigators Lumio Student Link](#) to each student. Students work on individual devices to explore vocabulary and activate prior background knowledge through a simple, interactive digital platform.
- If you'd like to customize the lesson or view your students' work, use the [Ecosystem Investigators Teacher Lumio Link](#) and save it to your library before sending out a new student link to your personalized lesson.
- [Learn more about Lumio here!](#)



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DISCUSSION PROMPTS

Use these prompts to lead an optional pre-program discussion and reflection in your class.

- Pick an ecosystem (i.e. desert, rain forest, ocean, etc.). Make a list of five things that are living and five things that are non-living in that ecosystem. What do the living and non-living things have in common? What makes them different from each other?
- What plants, animals and non-living things come to mind when you think of a wetland ecosystem? Draw a picture of your wetland ecosystem. Add arrows or lines between parts of the ecosystem that are connected. Add words or labels to explain your thinking.



DURING THE PROGRAM

Print the optional worksheet for your students to follow along with during the live presentation. The back of the worksheet includes additional prompts for after the program.

PRINTABLE WORKSHEET

- Ecosystem Investigators Printout: [Click to download](#), then print double sided.

AFTER THE PROGRAM

These optional extension resources can be used within the learning space, or shared with students to do at home with their families.

ACTIVITY GUIDES

- **Ecosystem Survey | Estudios del Ecosistema:** Conduct your own ecosystem survey at a park, yard, forest or beach near you to discover all the organisms that call a place home. Activity time: 30–60 minutes.
- **Earth Day Scavenger Hunt:** Explore an outdoor area near you to see what you can find. Activity time: 30–60 minutes.



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AFTER THE PROGRAM CONTINUED



ADDITIONAL RESOURCE

- **Loopy:** Create your own model of an ecosystem using Loopy, the digital tool we used during the program to create our virtual model of a wetland.

STEAM VIDEO AND GUIDE

- **Watershed Exploration (follow along video)| Exploración de Cuencas:** Use the guide or watch the 8-minute video to create your own watershed and learn more about water's role in the ecosystem. Activity time: 30–45 minutes.

READING LIST

- Check out the [Ecosystem Investigators reading list](#) for STEAM books related to the program themes.

For more activities with simple materials, check out the [Curiosity at Home / Curiosidad en Casa](#) web page. Explore activity sheets by age group and topic in both English and Spanish.



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