

FRIENDS OF THE
MISSISSIPPI RIVER

OUTDOOR
ACTIVITY:
INVASIVE SPECIES



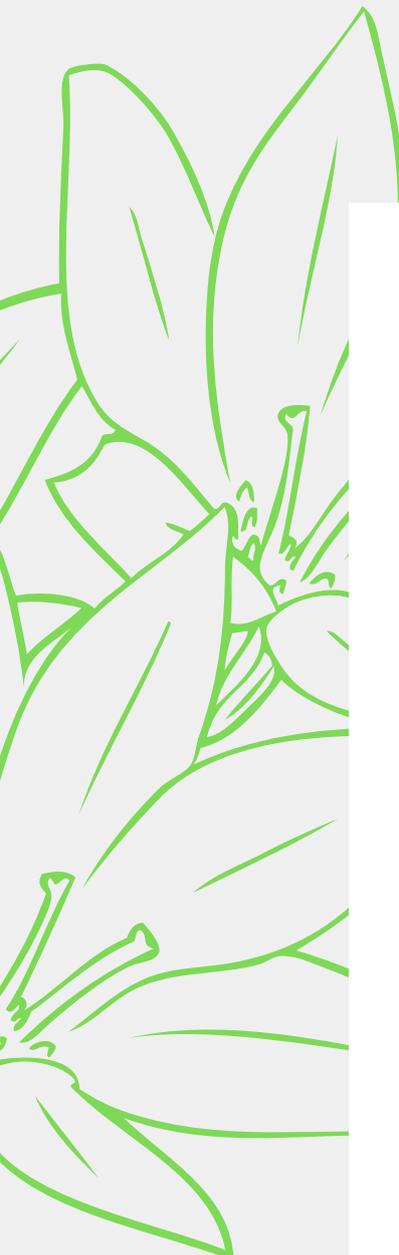
2020

INTRODUCTION

Friends of the Mississippi River engages people to protect, restore, and enhance the Mississippi River and its watershed in the Twin Cities region. This in-person classroom lesson has been adapted for homeschooling and remote teaching. This lesson also has a corresponding video and presentation that can be found on the FMR website (<https://fmr.org/events-online-education-watersheds101>), and other educator resources can be found on our Online Environmental Education with FMR Facebook Group (https://www.facebook.com/groups/202957270996905/?source_id=81498431082).

A **biome** is a community of living things that have been shaped by the physical environment they exist in. There are both **terrestrial biomes**, on land, and **aquatic biomes**, on or under water. A tropical rainforest, for example, is a terrestrial biome that is rainy, has lots of moisture and is very warm. These defining aspects of a tropical rainforest's physical environment have made a home for lots of plants, insects and animals that love moisture, warm weather and can live in tall trees. Biomes are large, and can contain many smaller habitats within them. A **habitat** is the natural environment where a particular living thing lives. A living thing's habitat is the area where it can find food, shelter, protection and others of its kind.

An **ecosystem** is made up of the living and non-living things that interact with each other in a specific area. In other words, an ecosystem can be made up of overlapping habitats. In a healthy ecosystem, the living and non-living things exist in balance with one another. It rains enough for the plants grow, some animals eat the plants, and some animals eat other animals.



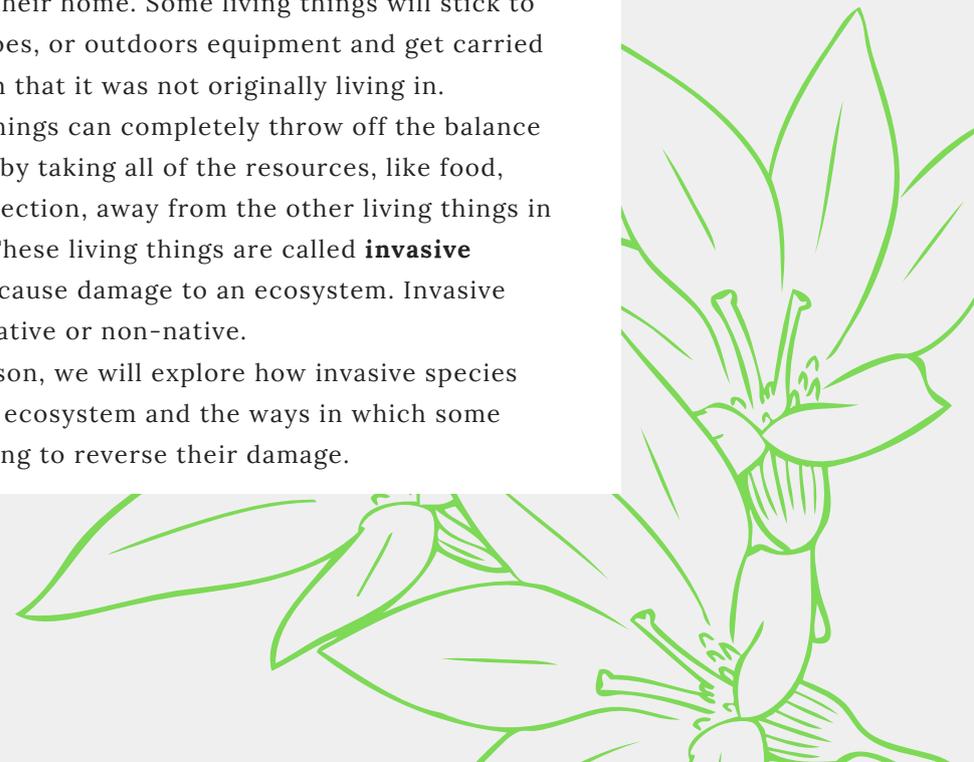
Let's think about a pond ecosystem that could be found in Minnesota. At our pond, great blue herons, turtles, minnows and mosquitos can be found at different times of the year. In this ecosystem, minnows eat mosquito larvae, and turtles eat minnows. One year, there are a lot of turtles at the pond, and they eat a large amount of minnows. Because there are not as many minnows eating the mosquito larvae, there might be more mosquitos at the pond that year. The next year, very few turtles visit the pond because some of them got eaten by herons and the weather was too dry and hot for the turtles to reproduce. Fewer minnows are eaten by turtles, and therefore, more minnows are eating mosquito larvae. This year, there will probably be less mosquitos at the pond. This is how an ecosystem changes year to year, but still stays in balance on its own.

Herons, turtles, minnows, and mosquitos are all native to Minnesota. A **native** species is a living thing that is found in an ecosystem due to natural processes. No humans brought a native species to an ecosystem, it happened on its own over thousands and thousands of years.

Sometimes a new living thing is brought into an ecosystem on purpose or by accident. A **non-native** species is not originally part of the ecosystem it is currently living in. This can happen when people plant an exotic plant in their yard because it looks nice, and the plant spreads into the woods near their home. Some living things will stick to your clothes, shoes, or outdoors equipment and get carried to a new location that it was not originally living in.

Some living things can completely throw off the balance of an ecosystem by taking all of the resources, like food, shelter, and protection, away from the other living things in the ecosystem. These living things are called **invasive species** and can cause damage to an ecosystem. Invasive species can be native or non-native.

In today's lesson, we will explore how invasive species can take over an ecosystem and the ways in which some people are working to reverse their damage.



PLANT I.D. JOURNAL

Please take the CDC recommendations seriously and only go outside if you feel comfortable doing so and can stay six or more feet away from others. Please also wash your hands as soon as you return to your home and always let an adult know about your plans to be outside.

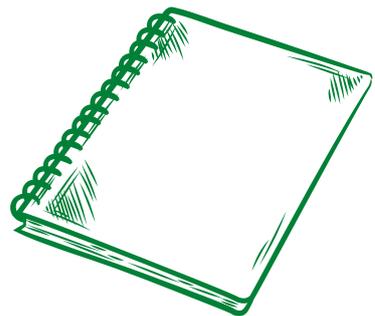
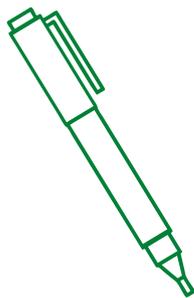
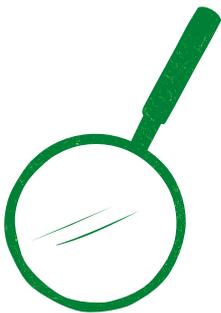
MATERIALS

- Paper or notebook
- Clipboard, book, or anything hard you can use to support your paper while you are outside
 - Something to write with
- Crayons, colored pencils, or markers
 - Something to sit on (optional)



DIRECTIONS

1. Go into your backyard, side yard, boulevard, or area near your home that has plants growing in it that you can return to.
2. Find a spot to sit where you have an up-close view of plants. Take five minutes to observe your surroundings carefully. Even if it only looks like grass at first, how many different things can you notice about where you are sitting?
3. After five minutes of observation, begin to write your first journal entry. Write the date, time and your location at the top of the page. What is the environment like? Are you in the shade or sun? Is the soil wet, dry, rocky, sandy, or clay? Use all of your senses to describe the environment.
4. Next, look closely at the plants. How many different kinds of leaves are there? What colors do you see? Are there different kinds of grasses? How many kinds of plants can you count?



5. Choose one plant to draw in your notebook. Make close up and detailed drawing so that someone could use your drawing to find the plant again. You do not have to be good at drawing to make an accurate sketch of your plant!



6. After your drawing, make a note about how this plant compares to other plants where you are sitting. Are there a few of your plants? Are there big patches of it? Does it take up all of the space or very little? do you see any bugs on it, holes in the leaves, or anything eating it?

7. With your information, go back inside and start to research the plant you chose in books or online. Do your best to identify the name of the plant you found. An adult can help you with your research if you get stuck. Remember to search for plants in Minnesota or the midwest to help narrow down your search.

8. In your journal, answer the following questions:

- a. What is the name of your plant?
- b. Is it native or non-native to your area?
- c. Is it invasive or non-invasive in your area?
- d. Do your findings surprise you, or do they reflect your observations?

9. Return to the same spot and make a journal entry for a new plant every week or two. If you run out of plants in your area, find a new spot to sit and start again. By the end of the season, you will have observed many changes in your yard and identified the native, nonnative and invasive species that live in your yard and neighborhood.

10. Let us know what you found on our Online Environmental Education with FMR Facebook group, we would love to see it!
<https://www.facebook.com/groups/202957270996905/>

