

FRIENDS OF THE
MISSISSIPPI RIVER

ONLINE LESSON
SERIES:
WADE INTO
WETLANDS



2020

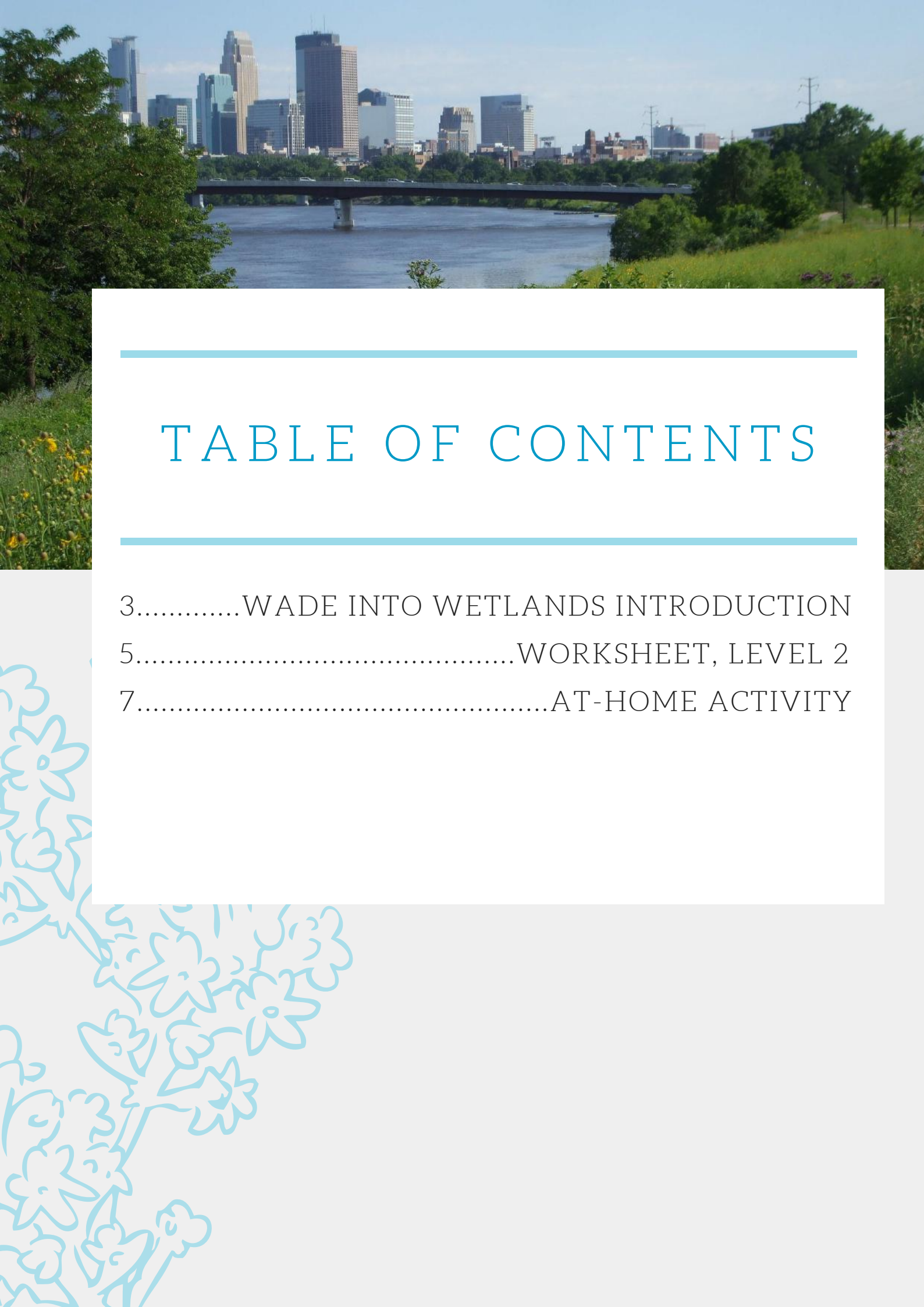


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INTRODUCTION

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 (www.fmr.org/news/2020/07/28/wade-wetlands-online-lesson).

An **ecosystem** is made up of the living and non-living things that interact with each other in a specific area. **Wetlands** are **transitional ecosystems**, meaning they exist as both **terrestrial** (land) and **aquatic** (water) ecosystems and are covered by fresh water for most or part of the year (www.epa.gov/wetlands/what-wetland). There are many different types of wetlands that have different names. Some common names you may have heard include swamps, mangroves, estuaries, marshes, deltas or mudflats. Each of these wetlands has its own description and characteristics, but they all have an amazing diversity of plant and animal life, some that are found in no other habitat on earth!

We have four main types of wetlands in Minnesota: swamps, marshes, bogs and fens. **Swamps** have water in them year round, and their main plant life is **woody species**, which are plants that produce wood. In other words, swamps are forests that are always flooded. **Marshes** also have water present all year long, but marshes do not have trees. Their plant life is mostly **grasses** (which have narrow leaves and round stems), **rushes** (which have round stems) and **sedges** (which mostly have triangular stems). An easy way to remember the difference between rushes and sedges is the rhyme



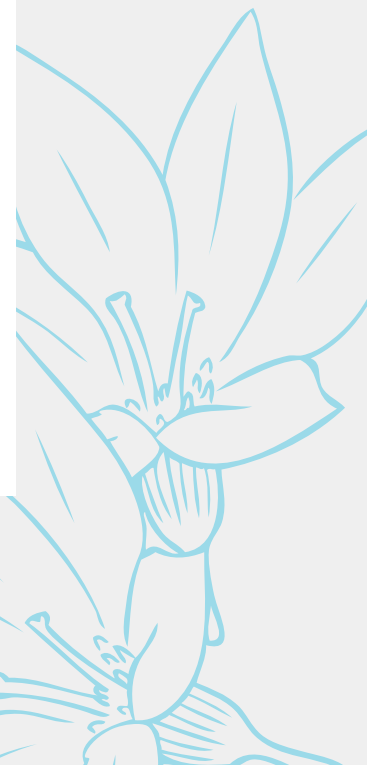
“sedges have edges.”

Bogs and **fens** both have plant life that is largely comprised of mosses; both often do not have visible amounts of standing water. The difference between the two is that bogs only receive water from **precipitation** (rain or snow) whereas fens have a source of water flowing into or through them (www.dnr.state.mn.us/wetlands/index.html).

A wide variety of plants can grow in wetlands, and many of these plants are only found in wetlands. A good example is Minnesota’s state flower, the showy lady slipper. This flower is a rare orchid that is only found in swamps, fens and bogs in North America. Due to the wide range of plants and constant presence of water that can support a large food web and offer protection from predators, wetlands also support a large amount of wildlife. Birds may stop in wetlands during migration due to an abundance of food. Similarly, other wildlife species may raise young in wetlands not only for the ease of finding food but also for the protection that water provides from predators, many who can not swim or travel across water easily.

Wetlands are important not only to plants and wildlife but also to humans. We depend on wetlands because they act as sponges to soak up extra water from rainstorms and spring snow melt. Because they soak up water, wetlands help to prevent the flooding of roads and neighborhoods, which often occurs due to of urban expansion and climate change (www.nrdc.org/stories/flooding-and-climate-change-everything-you-need-know). Wetlands have also been shown to help clean pollutants from water in a variety of ways; thus, wetland plants are vital in helping to keep our waters clean. These are just a few of the many reasons that wetlands are important enough to be protected by federal law.

In this lesson, we will explore the different wetlands in Minnesota, what makes them so special and why they are incredibly important not only to maintain a healthy environment but also to keep us safe and healthy.



WADE INTO WETLANDS: LEVEL 2

1. What are the different types of wetlands and how do they differ?
2. What are two ways that wetlands are important to wildlife?
3. How are wetlands important to humans, particularly considering the changing climate?

4. What makes wetlands so important for water quality?

5. What are some threats to wetlands?



WADE INTO WETLANDS: AT-HOME ACTIVITY

MATERIALS

- A funnel, the top 1/3 of a plastic bottle or anything plastic shaped into a funnel
- Scraps of paper to represent trash, food coloring to represent road salt or anything you can find that can represent water pollution when mixed with water
- A variety of materials from around your home that can fit into the funnel to act like a filter for water, like paper towels, foam or small pieces of fabric
 - Container to catch water
 - A large container • Water

DIRECTIONS

1. Collect your materials and fill your large container halfway with water.
2. Add the materials you have collected to represent water pollution to the container, make sure to note down what each material represents.

3. Your funnel represents an area of land that is a wetland. Add the materials you found to your funnel that might be able to filter water.
4. Hold your funnel over your water catching container and carefully pour some of the polluted water through it. What happened? What was “cleaned” out of your polluted water and what did the “cleaning”?
5. Try it again to see if you can clean the water better than your first try.

