

WETLANDS

Getting Ready

You will need these materials from your kit:
video, Fabulous Wetlands
Wetlands Cards
Wetland Key Chart

You will also need the following things which are not in your kit:
a VCR and television
a paper and pen or pencil

Introduction

You're probably hearing lots about wetlands these days. Wetlands are in the spotlight in local and international news. Just what is a wetland and why are they getting so much attention? The following activities will help you answer that question.

Activity 1: Fabulous Wetlands

If you have access to a VCR, play the video Fabulous Wetlands. As you watch it, look for answers to these questions.

1. *According to Bill Nye, what is a wetland?*

2. *What are three things that wetlands do for us?*
 - a.

 - b.

 - c.

Activity 2: Startling Statements

Most people would find many of the following facts about water, wetlands, or the water planet new and perhaps surprising. How many of these questions can you answer? (You'll find the answers at the end of the chapter)

1. About ____% of the species listed by the Federal Government as threatened or endangered depend heavily on wetlands during their life cycle.

- a. 50%
- b. 25%
- c. 35%

2. Native Americans used the juice from the wetland plant, horsetail, as a(n) ____.

- a. eyewash
- b. seasoning
- c. painkiller

3. You can waste ____ gallons of water by letting it run while you wash dishes.

- a. 5 gallons
- b. 15 gallons
- c. 30 gallons

4. Which U.S. state has the largest number of acres of wetlands?

- a. Alaska
- b. Florida
- c. Louisiana

5. World population increased by ____ million in 1990.

- a. 6
- b. 12
- c. 96

6. Which of the following are wetland plants?
- a. watermelons
 - b. onions
 - c. cranberries
7. True or false: Israel has wetlands. _____
8. Urban (city) areas have lost _____% of their original wetlands.
- a. 70-75%
 - b. 65-70%
 - c. 90-98%
9. Sphagnum moss is a wetland plant which has had many uses. Which of these has it NOT been used for?
- a. diapers
 - b. food
 - c. heating fuel
10. True or false: Most of the snakes that live in our nation's swamps are poisonous.
11. Wetlands cover 1/3 of this Scandinavian country. Its name means wet, low-lying land.
- a. Finland
 - b. Iceland
 - c. Denmark
12. Wetlands in the continental U.S. continue to be destroyed at a rate of _____ acres per year.
- a. 1000 to 2000 acres
 - b. 5000 to 10,000 acres
 - c. 300,000 to 500,000 acres

13. Of all the commercial fish, sportfish, and shellfish harvested in U.S. waters, what percentage of them live in coastal wetlands for at least part of their lives?

- a. 25%
- b. 50%
- c. 65%

14. All together, the residents of Washington State place a total of about ____ pounds of hazardous waste in the garbage each year. Most of this goes to landfills.

- a. 2000 pounds
- b. 10,000 pounds
- c. 15 million pounds

15. If the liquid which drains from a landfill is discovered to be toxic, we would hope it could be collected so that surrounding soil and water would not be contaminated. What percentage of U.S. landfills have no way of collecting toxic liquid?

- a. 10%
- b. 35%
- c. 95%

16. Less than ____% of the total land area in the U.S. is considered wilderness.

- a. 5%
- b. 10%
- c. 15%

Startling Statements collected by Megan McCarthy, Kingston Junior High, Kingston, Washington.

Activity 3: Many Kinds of Wet Places

Take out the Wetlands Cards and Wetland Key Chart. These cards represent different kinds of places, each with its own specific kinds of soils, plants and water chemistry. Yet each is considered to be a wetland.

3. What do all these places have in common?

4. Follow the arrows on the wetland key chart to match each wetland card with its name. Whenever the arrow forks, use the information on the wetland card to help you choose which arrow to follow. On your paper, make a chart like the one below to record your answers:

Card #1 _____
Card #2 _____
Card #3 _____
Card #4 _____
Card #5 _____
Card #6 _____
Card #7 _____
Card #8 _____
Card #9 _____
Card #10 _____

These wetland cards represent just a few of the many types of wetlands that exist. For simplicity, most wetlands scientists today use a classification scheme for wetlands habitats called the Cowardin system, named for the scientist who developed it. Under the Cowardin system, there are five basic types of wetlands:

Marine: seawater wetlands undiluted by fresh water

Estuarine: (ES-choo-a-reen) wetlands in estuaries--areas where saltwater and freshwater mix

Riverine: (RIV-er-reen) freshwater wetlands associated with rivers or streams

Lacustrine: (La-KUS-tren) freshwater wetlands associated with lakes or ponds

Palustrine: (Pa-LUS-tren) all other freshwater wetlands (freshwater marshes, swamps, bogs, etc.)

(The above definitions are quoted from At Home with Wetlands: a Landowners Guide, Publication 90-31, produced by the Washington State Department of Ecology, August 1990.)

Try your hand at classifying the wetlands cards using the Cowardin classification system.

5. *Which of the wetland cards would be classified as marine?*

6. *Which are estuarine?*

7. *Which are riverine?*

8. *Which are lacustrine?*

9. *Which are palustrine?*

Answer Key

Startling Statements

(Sources of facts in parentheses)

1. About **35%** of the species listed by the Federal Government as threatened or endangered depend heavily on wetlands during their life cycle. (Discover Wetlands: a Curriculum Guide, Washington State Department of Ecology.)

2. Native Americans used the juice from the wetland plant, horsetail, as an **eyewash**. (Discover Wetlands)

3. You can waste **30 gallons** of water by letting it run while you wash dishes. (Water Currents, Coop. Exten. Publication, 12/91)

4. **Alaska** has the most acres of wetlands, then Florida and Louisiana. (Wading into Wetlands, Ranger Rick's Nature Scope)

5. World population increased by **96 million** in 1990. (50 More Things You Can Do to Save the Earth, Earthworks)
6. **Cranberries** are wetland plants. (Wading Into Wetlands)
7. It's **true**. Israel does have wetlands. (Wading Into Wetlands)
8. Urban areas have lost **90-98%** of their original wetlands. (Washington Wetlands, Washington State Department of Ecology)
9. Sphagnum moss is a wetland plant that has been used for many things, but it has never been used for **food**. (Discover Wetlands)
10. **False**. Most of the snakes that live in our nation's swamps are not poisonous. (Wading Into Wetlands)
11. Wetlands cover 1/3 of **Finland**. A fen is another name for a wet, low-lying area. (Wading Into Wetlands)
12. Wetlands in the continental U.S. continue to be destroyed at a rate of **300,000 to 500,000 acres** per year. (Washington Wetlands)
13. **65%** of all commercial fish, sportfish, and shellfish harvested in U.S. waters depend upon coastal wetlands for at least part of their lives. (Discover Wetlands)
14. In Washington State we currently place a total of about **15 million pounds** of hazardous waste in our garbage each year. Most of this goes to landfills. (Water Currents)
15. **95%** of U.S. landfills have no way of collecting toxic liquid that may drain from the landfill. (50 More Things . . .)
16. Less than **5%** of the total land area in the U.S. is considered wilderness. (50 More Things . . .)

Many Kinds of Wet Places

1. sandy beach (marine)
2. scrub-shrub (palustrine)
3. aquatic bed (lacustrine)
4. wet meadow (palustrine)
5. mudflat (marine)
6. tidal fresh water marsh (riverine)
7. forested (palustrine)
8. seagrass (marine)
9. bog (palustrine)
10. emergent saltmarsh (estuarine)