

# Biomes of the World: Wetlands



**Grade Level:** 3-5

**Time Needed:** See procedures (estimates)

## Overview:

This biome unit is about wetlands, and their various types. As always, feel free to use only the materials that work for your needs in your classroom or home. If there is a wetland near you, it would be a great learning experience to plan a field trip to it either as an introductory or a culminating activity.

## Essential questions:

How are wetlands important in our modern, industrialized world?

What can we do to help preserve our local wetlands?

## Standards:

### NCSS:

- ESS2.C: The Roles of Water in Earth's Surface Processes Nearly all of Earth's available water is in the ocean. Most fresh water is in glaciers or underground; only a tiny fraction is in streams, lakes, wetlands, and the atmosphere. (5- ESS2-2)

- ESS3.C: Human Impacts on Earth Systems Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air, and even outer space. But individuals and communities are doing things to help protect Earth's resources and environments. (5-ESS3-1)

### **International Baccalaureate Science Standards Middle Years Program:**

- consider science as a human endeavour with benefits and limitations
- develop skills to design and perform investigations, evaluate evidence and reach conclusions
- develop sensitivity towards the living and non-living environments
- reflect on learning experiences and make informed choices

### **Objectives:**

- Identify the different types of wetlands
- Explain how wetlands act as a filter for water used by living things
- Identify animals and plants that live in the different types of wetlands
- Create information products about specific wetlands
- Design ways to help preserve wetlands

### **Materials:**

#### **General information:**

- Wetland Ecosystems Are Nature's Sponge!  
<https://www.youtube.com/watch?v=zSaYuWevq0Q&t=32s>
- Types of Wetlands | Swamp-Marsh-Bog-Fen  
<https://www.youtube.com/watch?v=KluWVxd49Bg>
- Why Are Wetlands Important | Wetland | The Planet Voice  
<https://www.youtube.com/watch?v=L8o-JZQuQ84>

### Hands-On Science Activity

- Nature Activity: Wetland Experiment

<https://www.youtube.com/watch?v=iybGSxibHW4>

### Group Projects:

- The Okavango Delta is a biodiversity hotspot

<https://kids.mongabay.com/activity-imagine-life-as-an-animal-in-the-okavango-delta/>

- Animals of the Okavango Delta

<https://afrika-junior.de/content/animals/animals-okavango.html>

- Kakadu National Park: <https://kakadu.gov.au/discover/highlights/amazing-facts/>

- Animals <https://kakadu.gov.au/discover/nature/animals/>

- Plants <https://kakadu.gov.au/discover/nature/plants/>

- Birds <https://kakadu.gov.au/discover/nature/birds/>

- Everglades National Park for Kids <https://www.nps.gov/ever/learn/kidsyouth/index.htm>

- Kids Discover: The Everglades

<https://online.kidsdiscover.com/unit/wetlands/topic/the-everglades>

- <https://www.evergladesliteracy.org/instructional-resources>

- Additional Instructional Resources: 3rd-5th GRADE

<https://www.evergladesliteracy.org/instructional-resources> (scroll down for grade levels)

- Botany and Beyond <https://www.evergladesliteracy.org/third-grade>

- Species Survival <https://www.evergladesliteracy.org/fourth-grade>

- Wildlife in Trouble <https://www.evergladesliteracy.org/fifth-grade>

- Pantanal facts for kids <https://kids.kiddle.co/Pantanal>

- Mongabay Kids: Tag: Pantanal <https://kids.mongabay.com/tag/pantanal/>

- The fauna and flora of the Pantanal [https://pantanal.ch/en/fauna\\_en.html](https://pantanal.ch/en/fauna_en.html) (this site is massive)

- The Six Biggest Animals in the Pantanal.  
<https://www.destinationwildlife.com/blog/the-six-biggest-animals-in-the-fabulous-pantanal>
- The Animal Adventure in the Pantanal  
<https://storybee.app/story/animal-adventure-in-pantanal-664b7f99dfd7dd5532f818e8>
- Danube Delta facts for kids [https://kids.kiddle.co/Danube\\_Delta](https://kids.kiddle.co/Danube_Delta)
  - Danube Delta: Europe's Unrivaled Wetland  
<https://rewildingeurope.com/landscapes/danube-delta/>
  - 20 Interesting Facts About The Danube Delta
  - <https://blog.untravelledpaths.com/blog/20-interesting-facts-about-the-danube-delta/>
- Sundarbans National Park facts for kids  
[https://kids.kiddle.co/Sundarbans\\_National\\_Park](https://kids.kiddle.co/Sundarbans_National_Park)
  - Sundarbans Mangrove Forest  
<https://www.kidzherald.com/sundarbans-mangrove-forest/>
  - Sundarbans National Park  
[https://wiki.kidzsearch.com/wiki/Sundarbans\\_National\\_Park](https://wiki.kidzsearch.com/wiki/Sundarbans_National_Park)
  - 15 Interesting Facts You Must Know about Sundarban Forest  
<https://www.sunderbannationalpark.in/blog/interesting-facts-about-sunderban-forest/>
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- **Preservation of wetlands:**
  - Join the Fun: Visit Henri Heron's Louisiana Wetlands!  
<https://www.lacoast.gov/new/Ed/ActivityBooks/ChildrenActivityBook.pdf>
  - Wetland Community Building  
<https://www.teacherspayteachers.com/FreeDownload/Wetland-Community-Building-10730811>

- Mentor Marsh: History, Tragedy, Recovery
  - <https://www.youtube.com/watch?v=ay8K4QVjT2E>
- **Extra activities:**
  - Water cycle mobile <https://kids.mongabay.com/water-cycle-mobile/>
  - Interactive Froggy Fun and Games  
<https://allaboutfrogs.org/funstuff/java/index.html>
  - US Fish & Wildlife Service: Wetlands Coloring Book (digital and printable)  
<https://digitalmedia.fws.gov/digital/collection/document/id/147>
- **Educator Information:**
  - Wetlands and Wonder. A great companion to the book Last Child in the Woods.  
<https://www.youtube.com/watch?v=iX5yT7QSyC4>

### Hook:

Take a field trip to a local wetland, preferably with a guide, if there is one.

OR...

Choose one or two of the following videos as introduction to the unit.

- Wetland Ecosystems Are Nature's Sponge!  
<https://www.youtube.com/watch?v=zSaYuWevq0Q&t=32s>
- Types of Wetlands | Swamp-Marsh-Bog-Fen  
<https://www.youtube.com/watch?v=KluWVxd49Bg>
- Why Are Wetlands Important | Wetland | The Planet Voice  
<https://www.youtube.com/watch?v=L8o-JZQuQ84>

Ask students to name any local wetlands and if they can identify the type.

### Activity 1. Experiment

- Be sure you have all the materials needed as explained in the video.
- Show the following video.
  - Nature Activity: Wetland Experiment  
<https://www.youtube.com/watch?v=iybGSxibHW4>
  - Be sure to tell students that they need to watch very carefully so they can perform the same experiment.
- In pairs or units of 3, allow the students to perform the experiment shown in the video and walk around observing, but not telling students how to do it.
- Post-activity discussion:
  - Did you perform the experiment correctly?
  - Did you get the same results as the woman in the video? Why or why not?
  - How do wetlands help our communities and environments?

### Activity 2. Wetland study.

- Depending on the size of your class, divide it into 6 or 7 groups. If you use 7, be sure one of the groups consists of the most self-motivated students.
  - Be sure to have materials available for projects
- Give each group one of the following world wetlands along with the URL's included for their research.
  - If you have 7 groups, give the most motivated group a local wetland to research on their own. You may need to help them figure out contacts for this if it is not online.
  - Ask each group to make a poster or travel brochure about their wetland and include the following information:
    - A map of the wetland and its surrounding territory
    - Photos of plants and animals that live in it
    - Any interesting facts they found out about it (they can do their own research here if they are familiar with research)

- Any problems associated with it
    - Any programs attempting to solve the problems
  - Okavango Delta
  - Kakadu National Park
  - Everglades National Park
  - The Pantanal
  - Danube Delta
  - Sundarbans National Park
  - Your closest local wetland
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- When they are finished, display their products and allow time for them to explore each others' work.
    - Discuss similarities and differences in the various locations.
    - Discuss the problems each area may be experiencing and what the local people are doing about it.
  - A sample rubrics for evaluating the project if you choose to grade this product:  
<https://www.teacherspayteachers.com/Product/Biomes-Project-Presentation-Rubric-Science-Research-IB-PYP-7903046>
  - <https://www.teacherspayteachers.com/Product/Science-Rubric-for-Use-With-Amplify-Science-4808532> self evaluation
  - <https://www.teacherspayteachers.com/Product/Poster-Rubric-4277167>

Here are some projects students can engage in if they finish their poster or brochure early:

- Water cycle mobile <https://kids.mongabay.com/water-cycle-mobile/>
- Interactive Froggy Fun and Games <https://allaboutfrogs.org/funstuff/java/index.html>
- US Fish & Wildlife Service: Wetlands Coloring Book (digital and printable)  
<https://digitalmedia.fws.gov/digital/collection/document/id/147>



### Activity 3. Preservation of wetlands.

- Ask what kinds of problems exist for wetlands today, based on their project work.
- Either read this aloud with the book on the screen or make copies for everyone.
  - Keep in mind, there are activities in the book. They are pretty easy, especially for older kids, so you might want to concentrate on the message and let the students do the activities on their own time.
  - Join the Fun: Visit Henri Heron's Louisiana Wetlands!
  - <https://www.lacoast.gov/new/Ed/ActivityBooks/ChildrenActivityBook.pdf>
- Once you have read the book and discussed ways to help, do the following simulations about community building to preserve wetlands. Be sure to have all the materials needed beforehand.
- Wetland Community Building  
<https://www.teacherspayteachers.com/FreeDownload/Wetland-Community-Building-10730811>
  - Be sure to discuss the debriefing questions
- For a real example of wetlands restoration, view the following video: Mentor Marsh: History, Tragedy, Recovery <https://www.youtube.com/watch?v=ay8K4QVjT2E>
  - This marsh is on the edge of Lake Erie, which supplies water to people from eastern Michigan to western New York. How did cleaning up the marsh impact all the inhabitants of this area?
  - If you have an example from your local area, show it instead of this, but ask the same question.