



WILD CLASSROOM

Conservation in the Classroom

Supplemental material packet



SUPERHERO MANGROVES

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2 pm ET/11 am PT

Recording available on the [Wild Classroom YouTube channel](#)

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Warm-up for students, with brainstorming questions to get them ready to watch



Wrap-up for students, with quiz questions to assess understanding after watching



Teacher guide containing optional discussion questions, helpful resources, and quiz key

SUPERHERO MANGROVES: Student Warm-Up

Get ready to watch the Conservation in the Classroom event by reading and brainstorming about the topic by using the questions below.

Read: Mighty Mangroves

Underline two or three phrases or sentences that you think are especially important.

Mangroves are a vibrant part of coastal wetlands on five continents. These trees grow in saltwater, with distinctive roots that sprawl above and below the waterline and in thick, muddy soils. Not only are they unparalleled at storing carbon, which helps fight the climate crisis, but they also sustain life for humans and for an array of animals and plants that live in oceans and rivers.

But mangroves face several threats, stemming from pollution to clearing for shrimp farming to palm oil production or other food production. An estimated 54% of mangrove loss in several Southeast Asian countries is due to shrimp farming. WWF is working around the world to restore landscapes where mangroves have been lost and support policies that protect them in the future.

(Source: [Mighty Mangroves](#), WWF)

Take a Guess

Mangroves have unique roots that often stick up above the soil. How could that structure be beneficial? Why might mangroves have this type of roots when most other trees do not? Hint: Think about where they live.

Consider

Our world relies on mangroves. Explain how each of the following might benefit from mangroves.

- fish
- humans
- the climate

Brainstorm

Even if you don't live anywhere near mangroves, how could you help protect them and other coastal ecosystems?

SUPERHERO MANGROVES: Student Wrap-Up

Answer the following quiz questions and prompts to show what you've learned after watching the Conservation in the Classroom event.

- 1) What is a propagule?
 - a. A mangrove branch with leaves
 - b. A type of fish common in mangrove swamps
 - c. A mangrove seedling with a protective covering
 - d. A root that grows above water

- 2) What unique part of mangroves is sometimes called a "snorkel" and can help them obtain oxygen?
 - a. Roots
 - b. Branches
 - c. Seeds
 - d. Leaves

- 3) Mangrove seedlings are most likely to survive if they grow in a different location from their parents and don't have to compete for resources. How do seedlings move to new locations?
 - a. They are carried by wind as they fall from the tree.
 - b. They are carried by water currents when they drop into the water.
 - c. Birds eat them and poop them out in different locations.
 - d. Humans move them by accident when they get stuck in the treads of their shoes.

- 4) Which of the following is a consequence of mangrove deforestation?
 - a. More "blue carbon" is stored
 - b. Floods are less likely to damage buildings
 - c. Many marine species lose their habitats
 - d. Improved water quality

5) How are mangroves adapted to survive in high-salinity (very salty) waters?

6) Name two threats to mangrove ecosystems.

7) Name one way that mangroves benefit coastal communities.

8) Emily gave suggestions as to how people can help protect mangrove ecosystems. Describe one of these actions that interested you and/or that you feel you could take on and then explain how it can help mangroves.

SUPERHERO MANGROVES: Teacher Guide

Use the discussion questions to further enhance student comprehension following the event viewing. For additional information on mangroves and their importance to biodiversity, please reference the list of articles, videos, and teaching materials in the additional resources section. Also included is the answer key to the student wrap-up quiz on the previous page.

Discussion Questions

- Why are mangrove forests sometimes called “superhero ecosystems”?
- How do mangroves protect humans from floods and hurricanes?
- What are some risks that mangroves face from climate change? What risks come from human actions like shrimp farming, land development, and pollution?
- How do mangroves help aquatic species? How do they help terrestrial species (species that live on land)?

Additional Resources

- Web page: [Mangroves may be one of nature’s best defenses against a changing climate](#)
- Video: [Age of change: How technology is helping restore mangrove forests](#)
- Web article: [Mighty Mangroves](#)
- Web article: [Mangroves as a solution to the climate crisis](#)
- Web article: [In Madagascar, restoring mangroves and building resilience](#)
- Video: [World Mangrove Day](#)
- [Deforestation Musical Chairs](#) (physical education activity)
- [Kahoot! Mangroves Quiz](#)

Student Wrap-Up Answer Key

1. C
2. A
3. B
4. C
5. Mangrove roots can secrete (get rid of) salt or block it from entering their cells.
6. Possible answers include aquaculture, especially shrimp farming, land development, climate change, sea-level rise, pollution, tourism, rice and palm oil agriculture, and industrial activities.
7. Possible answers include providing food, medicine, fibers, and wood; jobs such as fishing; tourism activities; and protection from storms and floods.
8. Students can educate themselves and others, raise awareness, choose sustainable seafood or mangrove honey, reduce plastic use, or practice responsible ecotourism.