



Moira Abbott, *Mangroves*, c. 1980.

Inspiration Artists: Moira Abbott, Margaret Barwick, Teresa Grimes, Olly & Suzi, Chris Mann, Shakir Husein

Age Range: Secondary +

Subject Area: Environmental Science

MANGROVES



**NATIONAL
GALLERY** | CAYMAN
ISLANDS

DART



In This Packet

In this lesson, students will learn about mangroves and why they are environmentally significant.

Local artists' depictions of mangroves are included. Students will also find fun activities and quizzes throughout the packet with art activities at the end.



Margaret Barwick, *Mangrove Swamp*, 1977.

What are mangroves?

Mangroves are short, tropical trees that grow along the coast in salt and brackish water.

Mangroves' roots grow closely together, appearing as an overlapping network. The roots are typically visible above the water level, growing upward into a dense thicket of leaves at the top of the tree.

Mangroves can be found all over the world in tropical and sub-tropical regions as they prefer warm water. There are many species of mangroves, but in Cayman four types are found: red, black, white and buttonwood.

Mangroves are extremely important ecosystems and you will learn more on the next page.



Source, and to read more on mangroves: <http://doe.ky/wp-content/uploads/2018/02/Wetlands-Leaflet-Feb-2016.pdf>
<https://oceanservice.noaa.gov/facts/mangroves.html>

Why are mangroves important?

Mangroves are significant for many reasons.

They help to slow climate change: Mangroves transform the greenhouse gas carbon dioxide (CO₂) into oxygen. They absorb CO₂ as they grow, locking it in and turning it into the oxygen that we breathe.

They act as a nursery for young species: Many different creatures can be found living in the mangroves. Thanks to those latticed roots in shallow water, mangroves are a great place for young marine creatures to shelter from larger predators as they grow. A number of bird species also use mangroves to nest and raise their young, including Cayman Parrots and White-Crowned Pigeons. Mangroves are sites of incredible biodiversity and form a wonderfully protected habitat for many creatures.

They slow down water currents: Mangroves create something like a natural wall that slows down water currents as waves approach the shore; this helps to reduce the uplift of sediment and keep the water crystal clear. It also protects the land from dangerous storm surges.



Source: <http://doe.ky/wp-content/uploads/2018/02/Wetlands-Leaflet-Feb-2016.pdf>

Fun Facts About Mangroves

1. When looking at red mangroves, you may notice yellow -orange leaves dotting the expanse of green leaves. Red mangroves absorb excess salt into a few "sacrificial leaves" which are then dropped to rid the tree of extra salt.

2. Booby Pond in Little Cayman, a protected mangrove wetland habitat, has one of the largest breeding colonies of Red-footed Boobies in the Caribbean.

3. It is very difficult for mangroves to grow back in their original place after they are removed. Once they are gone, ocean currents reshape the coastline, making it difficult for mangroves to regrow.



Source: <http://doe.ky/wp-content/uploads/2018/02/Wetlands-Leaflet-Feb-2016.pdf>
<https://scienceline.org/2014/01/floridas-extraordinary-mangroves/>

<https://www.conservation.org/blog/6-things-you-need-to-know-about-mangroves-but-never-thought-to-ask>

Mangrove Species

Examples of species found in Cayman's mangrove habitats include:



West Indian Whistling Duck



Nudibranch



Snowy Egret



Spiny Lobster



Moon Jellyfish

Mangroves Pop Quiz!

Time to test your knowledge. Fill in the blanks on these sentences.

1. Mangroves absorb this greenhouse gas and transform it into oxygen:

_____.

2. There are four types of mangroves in Cayman. They are red, _____, white and buttonwood.

3. Mangroves help to slow down water

_____.

4. Mangroves prefer _____ water over

_____ water.

Answers:
1. Carbon Dioxide (CO₂)
2. Black
3. Currents
4. Warm; Cold

Mangroves in Local Art

You have already seen paintings of mangroves by local artists Moira Abbott and Margaret Barwick on the first two pages of this packet. Here are more mangrove paintings created by artists in Cayman.



Teresa Grimes, *East of Palmetto Point (Barkers Plein Air Series, c. 2012.*



Olly & Suzi, *Mangroves, c. 1990.*

Mangroves in Local Art



Chris Mann, *Mangrove III*, 2005.



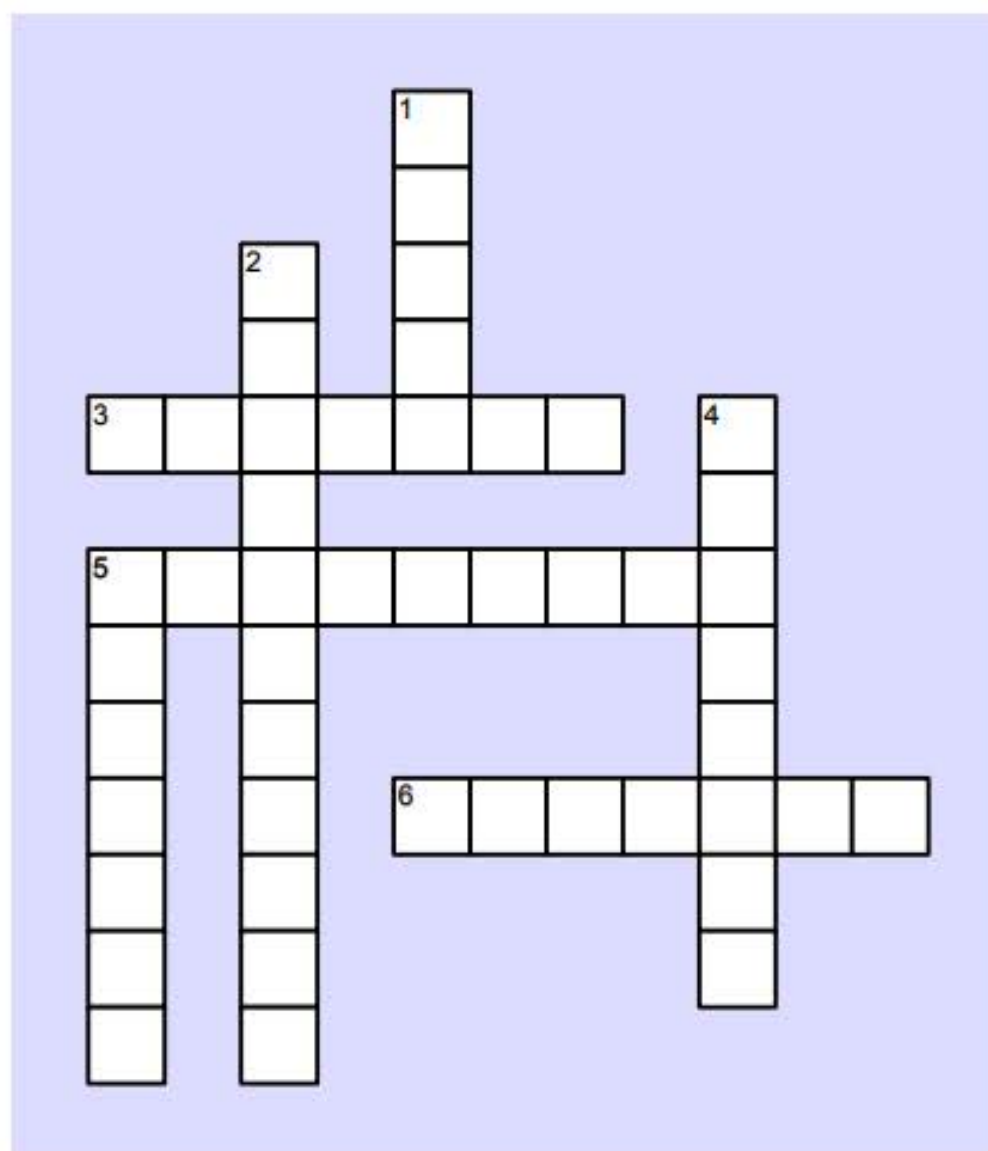
Shakir Husein, *Untitled Figure on Dock*, 1984.

Mangroves Crossword Puzzle

Complete the crossword puzzle with vocabulary in this lesson. Check your answers on the next page.

crossword puzzle

Mangroves Crossword



across:

- 3: An ocean animal that has a long body, a hard shell, and a pair of large claws and that is caught for food.
- 5: The local artist who painted 'Mangrove III'.
- 6: A painting, sculpture, photograph, etc., that is created to be beautiful or to express an important idea or feeling.

down:

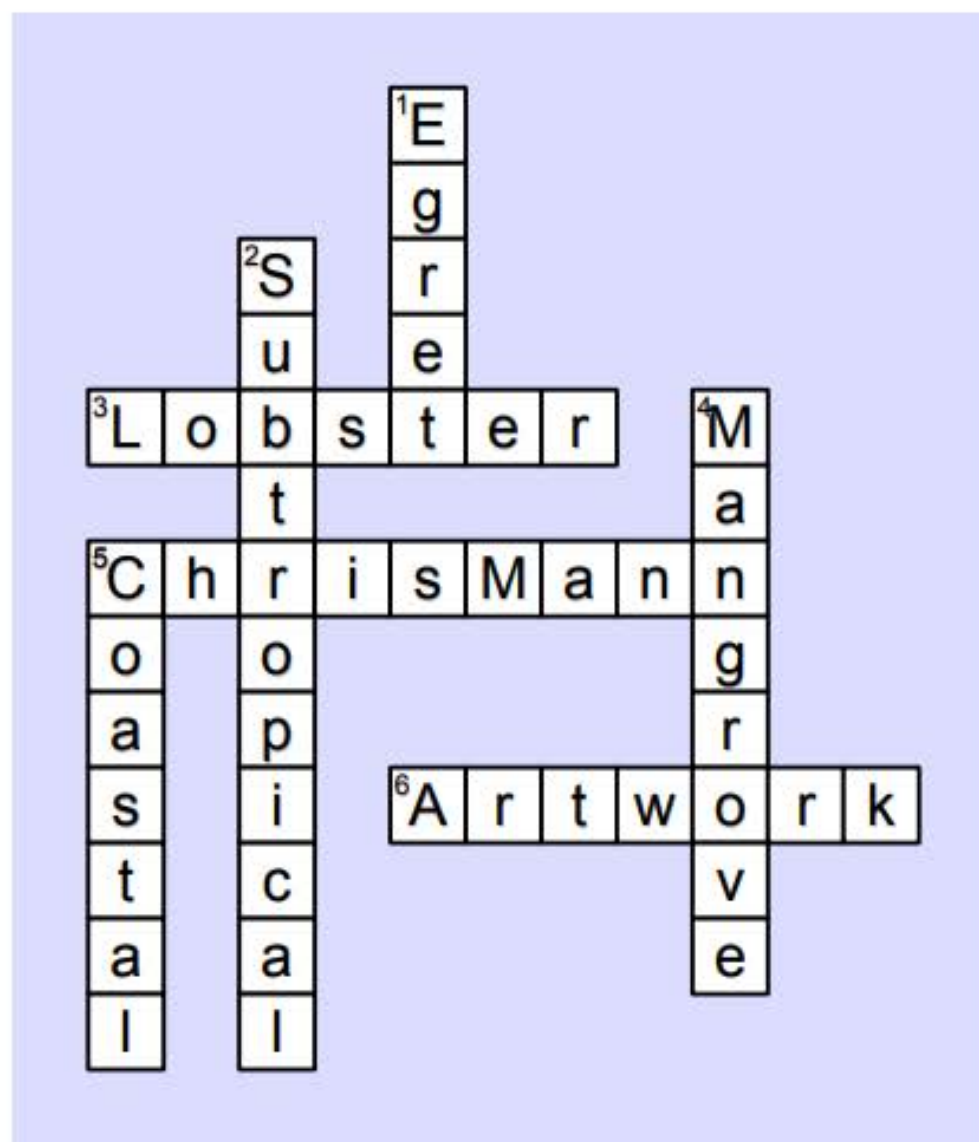
- 1: A large, long-legged bird that has a long neck and bill and usually white feathers.
- 2: Relating to or living in an area that is close to tropical parts of the world.
- 4: Coastal wetland found in tropical and subtropical regions.
- 5: The land along or near a sea or ocean.

Crossword generator: <https://www.edu-games.org/word-games/crosswords/crossword-maker.php>

Mangroves Crossword Puzzle - Answers

crossword puzzle

Mangroves Crossword



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Art Activity:

Make your own mangroves

Materials:

- Paper
- Cotton swabs
- Rubber band or string
- Paint - No paint? No problem! Find a recipe for homemade paint using common kitchen supplies here: <https://www.smartschoolhouse.com/diy-crafts/make-homemade-paint>
- Pencil
- Coloured pencils, markers or crayons

Step 1: Gather together about eight cotton swabs and tie them together securely using a rubber band or piece of string. Set aside.

Step 2: On your paper, paint the roots and branches of a mangrove tree or a group of mangroves. If you want, you can sketch an outline first. Take a look at our local artists' artworks to remember the correct shape.

Step 3: Once you have your roots and branches, dip your bundled cotton swabs into green paint (green is the usual colour of mangrove leaves, but you can use any colour if you want to get creative).

Step 4: Press your cotton swabs down onto the paper at the top of tree to create bunches of leaves. Continue this process, making sure the leaves look full and dense.

Step 5: Let your paint dry, then use your pencil, crayons or markers to sketch animals you might see in the mangroves. Go back to pages 5 and 6 if you need a reminder of what animals you could include.



Art Activity:

Four mangroves

Materials:

- Paper
- Paint - No paint? No problem! Find a recipe for homemade paint using common kitchen supplies here: <https://www.smartschoolhouse.com/diy-crafts/make-homemade-paint>
- Pencil
- Coloured pencils, markers or crayons

1. Do a pencil sketch of mangroves. You can use the image on the right for inspiration. Feel free to add any animals you want.

2. Recreate your pencil sketch in four different artistic styles using the grid on the next page. Look at the local art examples on pages 1, 2, 8 and 9 for inspiration. You may want to use a realistic style like Shakir Husein, and Moira Abbott, an impressionistic style like Teresa Grimes or an expressionistic style like Chris Mann. To learn more about these styles, visit the links below:

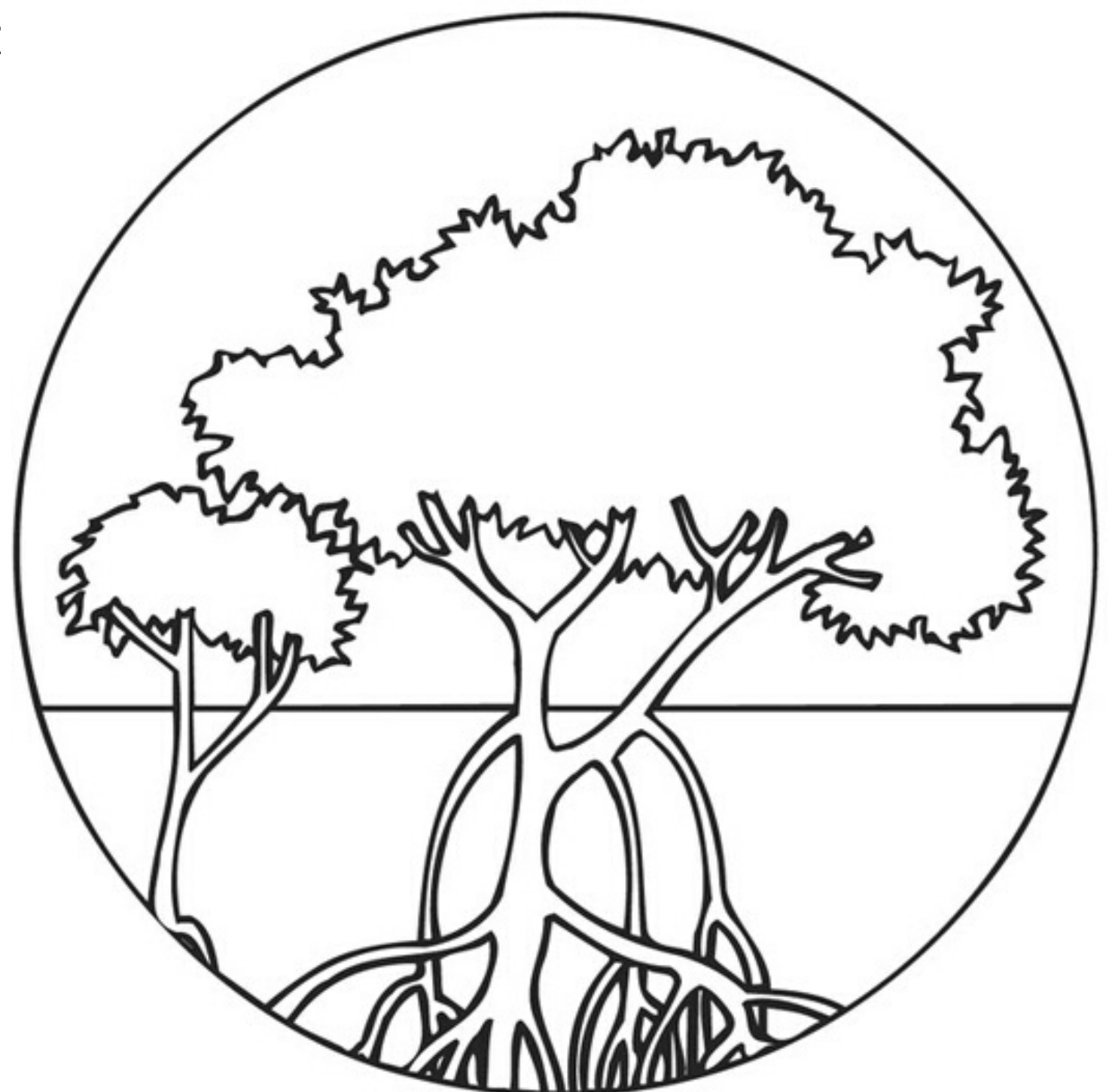


Image source: <https://www.edupics.com/coloring-page-mangroves-i9469.html>

Realism: <https://www.britannica.com/art/realism-art>

Impressionism: <https://www.tate.org.uk/art/art-terms/i/impressionism>

Expressionism: <https://www.tate.org.uk/art/art-terms/e/expressionism>

*If you would like to create your artworks on a piece of watercolour or other art paper, you can copy the grid onto that page.

