

# Mangranimal

(Adapted from the Mangranimal Activity - [www.globio.org](http://www.globio.org) and from *Project Wild's* "Adaptation Artistry" )

**Video:** Everglades Mountains and Valleys- Chap 7 "Mangrove"

**Subject:** Science, Art, Language Arts

**Duration:** 1-2 hours or class periods

**Group Size:** Any

**Setting:** Classroom (outdoors optional)

**Grade:** 4-5

**Standards:**

**Common Core:** LACC.5.RI.1.3., MACC.K12.MP.2, MACC.K12.MP.3, LACC.W.4.2, LACC.W.5.2.

**NGSSS:** SC.5.L.15.1., SC.5.L.17.1., VA.4.C.2.2., VA.4.C.2.3., VA.4.C.3.3., VA.4.H.3.1., VA.4.S.1.2., VA.5.F.3.2., VA.5.0.1.1., VA.5.0.3.1., LA.4.1.6.1., LA.5.1.6.1., LA.4.3.5.3., LA.5.3.5.3., LA.4.4.2.2., LA.5.4.2.2., LA.4.6.2.3., LA.5.6.2.3.

**Vocabulary:** Mangrove, adaptation, avian, marine, terrestrial, wildlife

**Objective(s)**

**Guiding Question:** What types of adaptations has the wildlife in the mangrove forest developed?

**Critical Content:** Learn how wildlife in the mangrove forests have developed certain adaptations to survive, and understand the advantages and importance those adaptations.

## Materials

- Paper
- Pencil or Pen
- Crayons

## **Student Objectives:** Students will...

- Identify and describe the advantages and importance of adaptations in mangrove wildlife.
- Identify avian (bird), marine (water), and terrestrial (land) species in the mangrove habitat.
- Design and create an imaginary animal or bird, along with a written report or story about the animal or bird, and its adaptations.

**Method** Students design and create a drawing of an imaginary bird or animal that lives in the mangrove forest, highlighting the adaptations that help it survive in that environment. Students will then write a report or story that includes descriptions and purposes for those adaptations, as well as the animal's name, food source, habitat, and lifestyle.

**Background** The mangrove forest is an intra-tidal habitat located in brackish water (where fresh water meets with salt water). The species of mangroves in Florida include the Red Mangrove, the Black Mangrove, the White Mangrove, and the Buttonwood. Mangroves serve several important functions in the Everglades environment, such as protecting coastlines from erosion, filtering out pollutants from the fresh water flow, providing an important nursery for juvenile marine and avian wildlife, and due to its leaf "litter", acting as a primary source in the food chain.

The mangrove forest is home to many species of wildlife that have developed adaptations for survival in this coastal habitat. For example, birds have a variety of adaptations, such as beak shape for ease in catching and eating prey, feet for swimming, wading or clutching prey, and coloration for mating or camouflage.

Animals of the mangrove forest include the following: bobcat, bottlenose dolphin, crab, eagle, egret, grasshopper, hawk, heron, ibis, jellyfish, kite (swallowtail), lizard, mosquito, mullet, night heron, nurse shark, osprey, pelican, raccoon, roseate spoonbill, tree frog, turtle, vulture, crocodile, manatee, snook, wood stork, and yellow rat snake. Each has developed unique adaptations suited for survival in this rich environment.

## **Suggested Procedures**

- Show students "Mangrove" Chapter 7 of the "Everglades Mountains and Valleys" Video.
- Ask students to name some of the wildlife they think lives in the mangroves. Remind them of the animals and birds that are listed above under "Background" above. Photos and/or drawings of several of these animals can be found on [www.nps.gov/ever/forteachers/k-3\\_guide](http://www.nps.gov/ever/forteachers/k-3_guide) (colored or

black and white alphabet picture cards) or under [www.nps.gov/ever/forteachers/4-6](http://www.nps.gov/ever/forteachers/4-6) activity guide (supplemental materials pages 197-208).

- Review the definition of avian (bird) species, terrestrial (land) and marine (water) species of wildlife.
- Ask students to discuss and write down various adaptations found in mangrove wildlife and what their advantages would be for survival. For example, the curved beak of a hawk can tear solid tissue, like meat, and the pointed beak of a woodpecker can break and probe the bark of trees for insects. The long toes of a crane can assist it in walking around in mud, and the clawed feet of a hawk can help it to grasp food. An adaptation worksheet page is provided under [www.nps.gov/ever/forteachers/4-6](http://www.nps.gov/ever/forteachers/4-6) activity guide (supplemental materials page 190)
- Have the students design their own original animal or bird – one well adapted to the mangrove habitat. Have them name the animal, as well as label specialized body parts. Tell how these adaptations are helpful for survival. Each student should decide
  - Where the animal will live
  - What it will eat
  - Its type of mobility
  - Type of shelter or nest

Based on these choices, the students will decide the adaptations that are necessary for this animal and write them down before proceeding further. Each student will then create a drawing of his or her own **original animal** or “**Mangranimal**”.

- In conjunction with the drawing, each student should write a short report or story that includes the name of the animal, its food sources, its habitat, rearing of young, and lifestyle. Students should also include their lists of adaptations, and advantages provided by the adaptations.
- Completed projects may be submitted to the teacher, displayed, or presented to the class.

## Evaluation

- Mangrove wildlife: Name two adaptations for the following avian body parts, listing their advantages: beaks, feet, legs, wings, color.
- Fictional Animal or Bird “Mangranimal”: Draw a diagram of the animal or bird and include the “mangranimal”’s name, and at least three adaptations, along with a description and purpose for each.
- Write a report or story (can be in any format that the teacher prefers), including the “mangranimal”’s name, habitat, adaptations, shelter, lifestyle, and rearing of young.

## **Extension**

- Visit a mangrove habitat in Everglades National Park. Ask students make a list or journal of the wildlife they see, along with some of their adaptations for survival.
- Have students choose one adaptation and bring in an object from home that represents it as a metaphor. For example: a nut cracker can represent a short, strong beak that can be used to break seeds and nuts. A magnifying glass can represent excellent vision.
- Practice classification using the “created” animals, grouping them by adaptations or any other properties you choose.
- Students can create slide presentations focusing on one or more animals of the Everglades and their unique adaptations.

## **Additional Resource**

[www.globio.org/glossopedia/mangroves](http://www.globio.org/glossopedia/mangroves) - web site that features video, image galleries, lessons, and information about the mangrove habitat.