

CORAL REEFS

Welcome to the coral laboratory

We are now entering this laboratory filled with corals. What is coral?

Look around you and **determine** what coral is by circling the correct answer.

ANIMAL

MINERAL

PLANT

Draw two corals, each with a different shape



Over time, coral colonies build and form reefs. **Number 12**

The three habitats studied are interconnected!

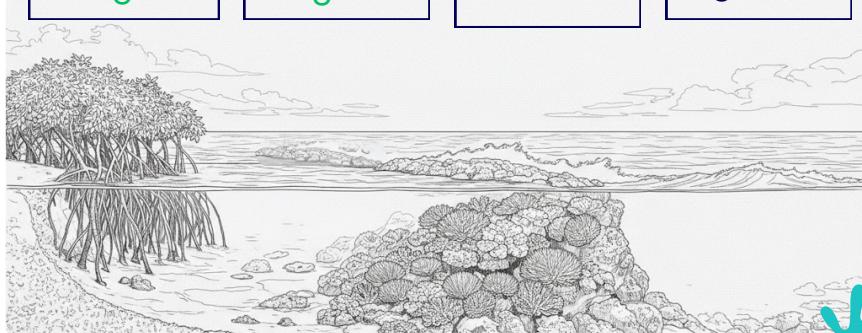
Complete the following diagram:

Mangrove

Lagoon

Coral reef

High seas



Tropical getaway - Mankind and Shores



MANGROVE

Let's discover the inhabitants of the mangroves!

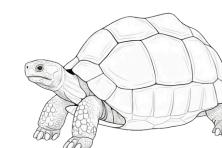
Find and **write** the missing word in this sentence:

A mangrove is a forest of mangrove trees that grow with their **roots** **in the water**. Some animals have unique characteristics. It's up to you to investigate !

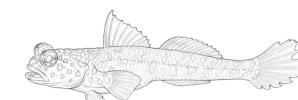
Look around you and **match** the corresponding animal with its characteristic.



Archerfish



Aldabra giant tortoise



Mudskipper



Horseshoe crab

BLUE BLOOD



150 YEARS



Number 9

Mangrove biodiversity

Mangroves represent 1% of the surface area of tropical forests but host rich biodiversity: fish, crustaceans, and birds find food and shelter there.



Describe an animal with a shell that lives in this environment.

- Aldabra giant tortoise: domed shell, massive legs, long extendable neck...
- Pig-nosed turtle: smooth shell, pig-like snout, claws on its flippers...
- Horseshoe crab: multiple legs, horseshoe-shaped body, pointed tail.

What is the purpose of this shell?

The shell acts as a protective shield and/or an external skeleton that supports the body. It also helps regulate temperature and provides camouflage.

Number 9

After the mangroves, we arrive at the tropical lagoon filled with colorful fish.

Observe the reef and **find** the name of the species described in this following riddle.

When I am young, my body is covered with black and white vertical stripes. As I grow older, these stripes disappear and are replaced by small brown spots.

My tail is very large, and I often rest on the sand.

Who am I?

Zebra shark

Number 10

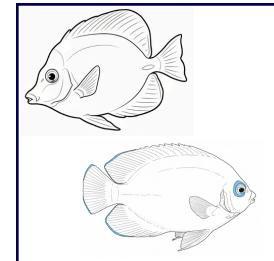
LAGOON

Dive into the lagoon waters and observe a fireworks display of colors and shapes.

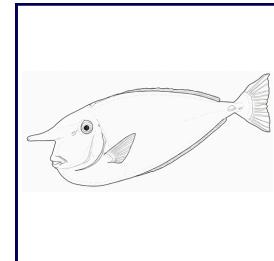
Have you seen that small, bright yellow fish? What about the one with a short of spike between its eyes? And the other one with a whip-like filament on its back...?



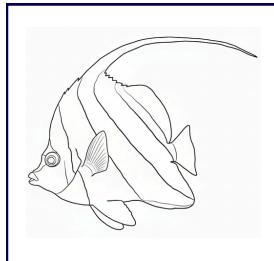
Find them, draw them, and make up names for them.



Yellow
surgeonfish (1)
or Lemon
angelfish (2)

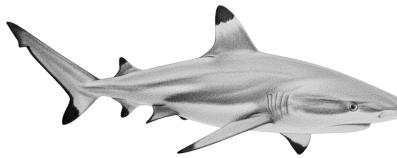


Unicornfish



Threadfin
butterflyfish

Circle the shark species found in this area.



Blacktip reef
shark



Zebra shark

Number 11

MANGROVE



The mangrove is a unique ecosystem characterized by mangrove trees that grow with their roots in the water near coastlines. Although it covers only a small area of tropical forests, it is vital for biodiversity.

Some animals have specific traits:

- **The archerfish** can knock down prey by shooting a jet of water up to 2 meters high.
- **The Aldabra giant tortoise** is the largest species of land tortoise. It can live up to 150 years.
- **The mudskipper** is able to live both in and out of the water!
- **The horseshoe crab** is an arthropod that dates back more than 450 million years and has blue blood that is highly valued in medicine.

LAGOON

A tropical lagoon is **a calm body of water located between the coast and a coral reef barrier** that blocks the waves. This area works like a protective basin where the water is warmer and shallower, allowing sunlight to reach the bottom.

It is a very rich ecosystem, often called a 'nursery,' because many fish come there to lay their eggs so the young can grow in shelter from predators. A wide variety of tropical fish can be found there, such as surgeonfish, threadfin butterflyfish, and even sharks (**more than 8,000 species**).

Reef sharks (such as the zebra shark or the blacktip reef shark) play a role as top predators that are essential to the balance of the lagoon. By regulating populations of mid-level carnivorous fish, they prevent the disappearance of herbivorous fish, which in turn protect coral by grazing on invasive algae.

N.B.: The third one was the leopard shark, which lives in California's kelp forests (Exhibit No. 6).

CORAL REEF

Coral is an animal made up of tiny individuals called **polyps**, which most often live in **symbiosis** with microscopic algae called **zooxanthellae**. These algae provide most of their food and give them their colors.

Some species build coral reefs over thousands of years by constructing a **limestone skeleton**. Reefs act as a natural barrier against waves, creating lagoons while also providing habitat and food for nearly 30% of the world's marine life.

INTERCONNECTED ECOSYSTEMS

The life cycle of many species, such as surgeonfish, takes place in coral reefs, lagoons, and mangroves.

Corals reduce the force of the waves, helping to protect the lagoon and support the development of **mangroves**. In turn, mangroves trap particles coming from the land in their roots, preventing the silting up and suffocation of coral reefs.