





Crinoids, also called feather stars or sea lilies due to their feathery, flowery appearance, are animals related to starfish, sea urchins, and sea cucumbers.



Pseudanthias fish

These fish live in large social groups with a dominant male and several females. However, all *Pseudanthias* fish are born female, and in the absence of a male, the largest, most dominant female will become male.



Acropora coral

Acropora is an incredibly diverse genus of coral, with over 150 species worldwide.







Sea anemones are related to corals, in a group of animals that have special stinging cells for capturing food.



Pink skunk anemonefish

Anemonefish live in a group with their partner anemone, which protects them from predators. Anemonefish are all born male, but the largest, most dominant male will become female, and head of the anemone household.



Soft coral

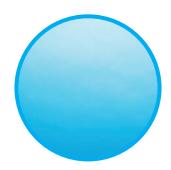
Soft and hard corals, like anemones, have special stinging cells to catch food.





Soft coral

This soft coral has large polyps and tentacles that reach out into the water to catch and eat passing plankton.



Sunlight

Clear water lets the sun's light shine to deeper depths, providing energy for corals to grow. What do you think makes some water more clear than other water?



High fish density

A healthy reef like this one supports a large, diverse population of fish. These fish play many different roles in the ecosystem.







This charismatic fish species is common on the reef, but has no close relatives. It is the only member of the taxonomic family Zanclidae.



**Porites coral** 

Massive *Porites* corals can grow for thousands of years, reaching the size of a two story building.



**Branching coral** 

Branching corals provide a safe haven for small fish like this one to hide from predators. Other animals take advantage of this protective habitat as well, such as crabs, starfish, and nudibranchs.





### Pocillopora coral

The genus *Pocillopora* is one of the most common branching corals in the Indo-Pacific region. It is sometimes called cauliflower coral because of its appearance.



## SCUBA diving equipment

This diver is using a rebreather, which allows them to dive longer and deeper. The extra tank contains oxygen to replenish the air so it can be breathed again.



High coral cover

This area has incredibly high coral cover - nearly 100% of the sea floor is covered in healthy coral.





**Healthy coral** 

Healthy coral is colorful! Why do you think that is?



**Bleached coral** 

When a coral loses its color, it is called "bleached" because of its stark white appearance. What do you think causes this?



**Dead coral** 

After a coral dies, algae begins to grow over its skeleton, creating a mat of grey-green-brown turf.





#### **Bleached reef**

This reef is pictured in its healthy state on another Immerse Card. Over 50% of the reef is now bleached.



#### Fluorescing coral

After bleaching, corals sometimes fluoresce bright colors, such as the pink and blue seen here.
These colors may be pretty but in this case it means the coral is in trouble.



#### Hope for reefs

Scientists such as this diver, from the California Academy of Sciences, still have hope that we can save coral reefs through research, education, technology, and government policy.





To bleach or not to bleach?

At this reef, only one type of coral has bleached, while the others remain healthy. Why do you think that is?



One fish, two fish...

How many fish do you see? A reef area this size should be teeming with fish, but here we see very few. Can you spot a species in the photo that likes to eat fish?



**Sheltered shadows** 

Some coral reef animals are seldom seen because they hide underneath corals. Can you imagine what might be hidden in the shadows?





#### Coral rubble

This reef has been destroyed, leaving broken pieces of dead coral behind. What do you think caused such destruction?



# Underwater photography

A camera can be brought underwater if you put it in a special case called a "housing" to protect it from the water. What would you take a picture of underwater?



## The lone survivor

Amidst the rubble is one tiny *Porites* coral, ready to rebuild the reef from scratch. Unfortunately this will take thousands of years, which we may not have, if oceans continue to warm.





**Table Coral** 

Table corals are spectacular when alive, but sadly this one has died. Its skeleton remains, acting as shelter for reef fish and other animals.



Squirrelfish

This squirrelfish knows it is a tasty treat for humans, and is hoping you don't see it. Do you like to eat fish?



**Moorish Idol** 

This Moorish Idol is still alive on this dying reef, but would have a much easier time finding food on a healthy reef.