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29*. PARTNER WANTED

Partners for Life

Clownfish and Sea Anemone:

Several species of fish and invertebrates spend part or all of their lives in association with sea anemones. A clownfish, in fact, will never stray far from its anemone host. The fish avoids its enemies by staying nestled among the anemone's stinging tentacles. Scientists believe clownfish have a special mucous coating that prevents anemone stinging capsules from firing.

Many scientists think that the most important thing clownfish do for their anemone hosts is to protect them by chasing away animals such as butterfly fish, which often eat anemones.

Pistol Shrimp and Goby:

In sandy areas of a coral reef, the pistol shrimp sometimes shares its burrow with a fish called a goby. The pistol shrimp spends most of its time digging and cleaning out its burrow. This shrimp finds food near the entrance of its home but can't sense when predators are near as well as the goby can. The goby hovers near the shrimp's burrow, and when a predator approaches, it flicks its tail and dives for cover inside the burrow. This signals danger and sends the shrimp down into the burrow too. Without the goby's alarm signal, the shrimp might not be able to escape danger in time.

Hermit Crab and Sea Anemone:

A few species of hermit crabs—crabs that live in the empty shells of sea snails—usually have sea anemones attached to their shells. The anemones protect the crab from enemies—especially the octopus, which eats hermit crabs but is very sensitive to anemone stings. The anemones may also help camouflage the hermit crab.

Scientists aren't sure whether hermit crabs feed their anemone partners. But the anemones do get a free ride around the reef from the hermit crabs. By riding from place to place on top of a crab, an anemone probably gets scraps of food it might not have been able to get on its own.

Cleaner Fish and Grouper:

Several species of small fish and shrimp perform a cleaning service for other fish. A cleaner fish usually stays in a small territory known as a cleaning station. When a potential "customer" enters the cleaning station, the tiny fish does a little "dance" identifying itself as a cleaner. The customer may be a large predator such as a grouper. But it recognizes the colors and movements of the cleaner fish and allows itself to be cleaned without harming the smaller fish. The cleaner fish even cleans up the wounds of reef fish, which helps them heal. In turn, the cleaner fish gets its food as it picks off pests and food particles from the larger animal's scales, mouth, and gills.

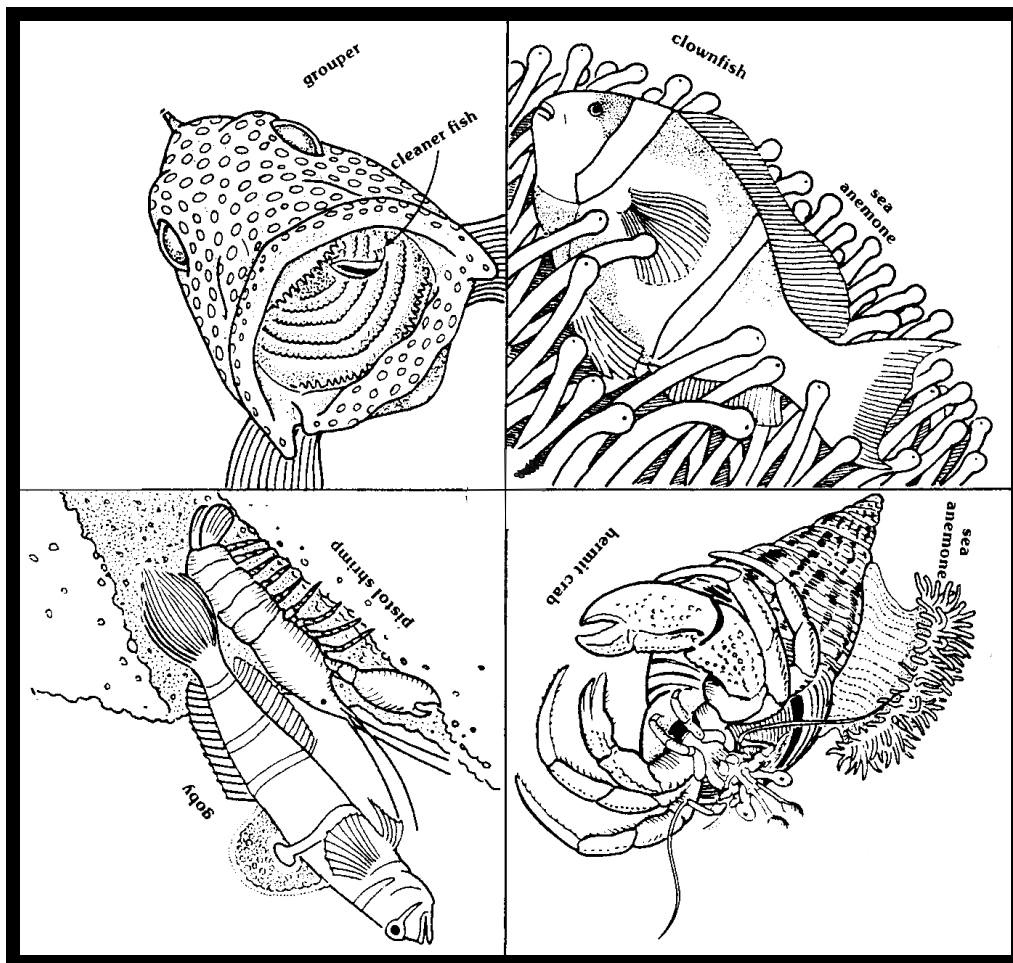
Activity

Here's a fun way to reinforce what the kids have learned about coral reef partnerships. Make copies of the "want ads" below and pass them out to the kids. Have the kids try to identify which of the reef buddies (described above) might have placed each ad and which might have responded to each ad. To do this they should match up the "box numbers" for each ad. For example, the first ad (box 1) represents an ad that an anemone might place. It goes with the ad in box 4, which represents a clownfish's ad. The kids could write "box 1 box 4" for their answer.

THE REEF WEEKLY

WANT ADS

<p>Safe and secure place for rent. I'll take in anyone that can keep unwanted company away. Write only if you can stand my "stinging" personality. Write: Coral Reef/Box 1</p>	<p>Strong digger in need of a "watchdog." Bonus: Plenty of extra space in my burrow. Write: Coral Reef/Box 5</p>
<p>Seeking extra protection and a disguise. Willing to take on hitchhikers. Write: Coral Reef/Box 2</p>	<p>Worried about safety? I can provide the added protection you need in exchange for a free ride around the reef. Write: Coral Reef/Box 6</p>
<p>Need a cleaning? Count on me! I'll keep you spotless and healthy in exchange for meals. Write: Coral Reef/Box 3</p>	<p>In search of a personal groomer. I have a "tough guy" image, but with the right partner, I'm gentle as a lamb. Write if you want to eat in peace. Write: Coral Reef/Box 7</p>
<p>Fish needs bodyguard and good home. (Not easily "stung.") Willing to help protect home from danger. Write: Coral Reef/Box 4</p>	<p>"Lookout" fish in search of a ready-made underground hideout. Lots of guard-duty experience. Write: Coral Reef/Box 8</p>



Correlation to National Standards from McREL (<http://www.mcrel.org>) :

Life Sciences

6. Understands relationships among organisms and their physical environment