

## Grades PreK – K: The Buddy System

Many animals must work together for survival. These relationships are important for protection, food, and the health of the animal. When two animals have a relationship like this, we call it symbiotic. There are different types of symbiosis. When both animals benefit from the relationship, it is called a mutualistic relationship. When one animal benefits from the relationship, and the other one is neither harmed nor benefits, it is called a commensalistic relationship. A parasitic relationship is one where one member benefits, while the other is harmed by the relationship.

### Zone A – Shipwrecked and Ocean Realm

**Migration March** – Every year, spiny lobsters migrate from shallow waters to deeper ones. In order to find their way, they must work together. Using their long antennae, the lobsters will touch the lobster in front of them, forming a long line.

- Can you think of other animals that migrate by “following the leader?”

**Ocean Realm** – In the Ocean Realm exhibit, you will see many examples of smaller fish swimming with larger fish. Cobia can be seen swimming on top of the larger stingrays. The smaller fish swim with the larger fish for protection, to gain extra scraps of food every time the bigger fish eats or to save energy by coasting along in the wake produced by the bigger fish.

- Are there other examples of relationships that you see in this exhibit?



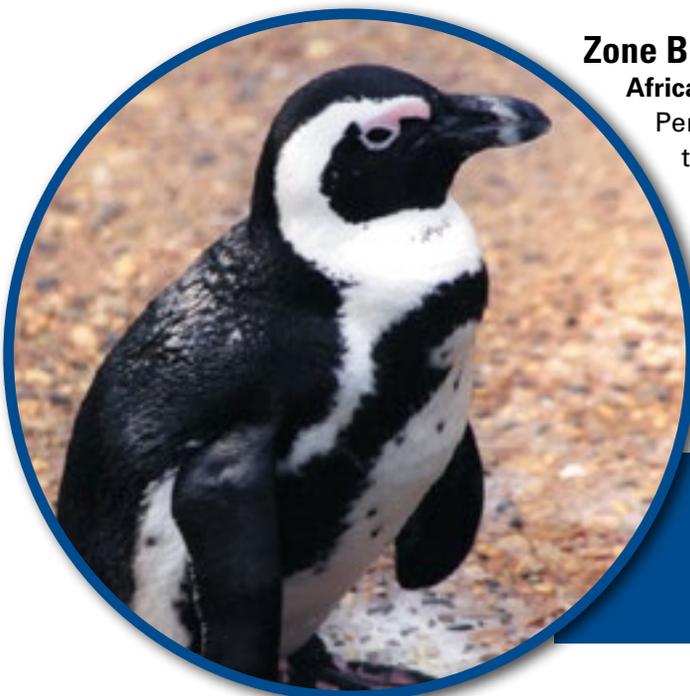
### Zone B – Penguin Island

#### African Penguins – African

Penguins exhibit many behaviors

that benefit each other. Penguins will often preen each other, using their beaks to clean their feathers. Not only does this help keep them clean by reaching spots it may be hard for the penguin to reach itself, it also is a way for penguins to communicate.

- Why do you think it is difficult for a baby penguin to recognize its mother by looking at her?



For the full “Buddy System” Exhibit Companion, visit Educator Inlet at [AdventureAquarium.com](http://AdventureAquarium.com)

### Zone C – KidZone

**Clownfish and Anemones** – Clownfish are slow swimmers, and depend upon the anemone for protection from predators. The anemone, in return, gets cleaned of parasites, increased water circulation (by the clownfish swimming in and out of it), and food – sometimes other fish are lured into the anemone by the clownfish’s presence, other times the clownfish will actually bring food to the anemone and feed it.

- What would happen to a clownfish if it was unable to find an anemone in which to live?

**Gill’s Grotto – Horseshoe Crabs and the Red Knot** – Female horseshoe crabs can lay over 80,000 eggs per season that are tiny, green, and very nutritious. Many of them become food for migrating shore birds, especially the Red Knot. This small bird flies from Brazil to Canada every year, and only stops to eat when it reaches the coast of New Jersey and Delaware, where it doubles its weight by feasting on horseshoe crab eggs.

- What do you think would happen to the Red Knot if horseshoe crabs were to disappear?

**Gill’s Grotto – Cleaner Shrimp** – Living in the reef, sometimes animals pick up bits of debris or parasites on their skin, or bits of food get stuck in their teeth. If this happens, fish can go to a “cleaning station”, where cleaner shrimp will pick off the debris and clean their teeth. The fish get these annoying parasites removed from their skin, and the shrimp have their food brought to them.

- Did the cleaner shrimp crawl over your hands?
- What do you think they were doing?



### Zone D – West African River Experience/ Hippo Haven

**Hippos and Cichlids** – In the hippo’s lower viewing area, there are many brightly colored fish, called African cichlids. These fish help keep the water clean by eating the hippo’s waste, and keep the hippo’s skin clean by eating parasites from it. They will also swim inside of the hippo’s mouth to clean her teeth. Because hippos are herbivores (eat only plants) the fish do not have to worry about getting eaten. In return, they get food and nutrients.

- Why do you think there are so many cichlids in the exhibit?

