



HERMIT CRAB GAME

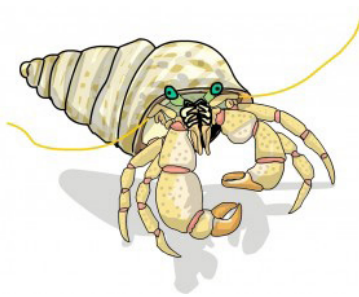
This lesson plan developed by:



Marine
Biological
Association

Overview:

Through a game similar to “musical chairs”, students will learn about hermit crabs and the challenges they face when they need to find a new shell to live in, including habitat carrying capacity, adaptation, and predation.



Materials:

- Open area (soft sand, grass or inside)
- At least 4 students

Duration:

10-30 minutes

Physical Activity:

High

Background:

A hermit crab is a type of crab that lives inside a shell for protection. Most species have long, spirally curved abdomens, which are soft and vulnerable if exposed. Hermit crabs protect their

Hermit Crab Game (cont.)

vulnerable abdomen from predators by finding and living in an empty shell that their whole body can retract into. If the shell is too small for the hermit crab, it will not grow as fast as those with a “well-fitting” shell, and is more likely to be eaten if they cannot retract completely into the shell. As hermit crabs grow, they require larger shells. Intact shells can be a limited resource, so vigorous competition often occurs among hermit crabs for shells. The availability of shells at any given location depends on the relative abundance of gastropod shells (ex. coiled shell used by snails) and hermit crabs, matched for size.

Activity:

1. Divide students in half. One group will be the crabs and the other group will be the shells. If there is an odd number, you (the educator) may have to join in as a shell.
2. Shells will stand in a row, bent forward, using their arms to make an opening.
3. Crabs will put their hands behind their backs and crawl on hands and feet in a crab position. Crabs will start behind a starting line away from the shells.
4. Explain what hermit crabs are and why it is important that they find a shell for protection when they grow.
5. When the leader says “go”, all of the crabs have to find a shell and get inside them by crawling underneath their open arms.
6. After the first round, everyone should have a shell and be happy.
7. Explain to them that you are a shell collector and you are collecting shells from the beach and take one “shell” away. All crabs must start at behind the starting line and then start again. One crab will be left without a home.
8. Ask the students to think about what would happen to this crab. Would it be eaten or have to move to another area? This crab is out and another shell is removed. Continue removing a shell every round until only one is left (very similar to musical chairs). The last person is the winner.
9. When one round is finished, the crabs can become shells and vice versa.



Discussion:

As a group, you can discuss the consequences of removing shells from the shore, as well as habitat carrying capacity, adaptation and predation.

Hermit Crab Game (cont.)

Ocean Literacy Principles:

Ocean literacy is an understanding of the ocean's influence on us, and our impact on the ocean. There are seven [Ocean Literacy Essential Principles](#) that all people of our blue planet should have an opportunity to learn and understand. This activity touches upon the following Essential Principles:

5. The ocean supports a great diversity of life and ecosystems
6. The ocean and humans are inextricably interconnected

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