



CORAL REEF ECOLOGY

Concepts

Coral morphology and anatomy

HCPS III Benchmarks

SC 4.6.1

Duration

1 hour

Source Material

PRISM

MARE

Vocabulary

Colony

Endosymbionts

Tentacles

Making an Edible Coral Polyp

Summary

Students will apply what they have learned about coral-polyp morphology and anatomy to build an edible and “anatomically correct” coral polyp with representative food items.

Objectives

- Students will identify the anatomy of a coral polyp.

Materials

White baking chocolate, candiquik mix, or other hard candy coating (½ ounce for each child)

One marshmallow per student (Heathy substitute: section of banana or strawberry)

Toothpicks

Red licorice (regular or whip, but Twizzlers work the best): six two-inch strips for each child. If regular licorice is used, cut the pieces into small, thin strips.

Blue, red or green sprinkles

Heat source (microwave or hot plate) for melting candy coating only

Pan for candy coating

Paper plates

Optional: Paper baking (muffin) cups to represent calyx

Making Connections

Students will build upon their prior knowledge of coral morphology. They will use edible materials to represent the parts of a coral polyp. By using familiar food items, students will have an easier time recalling the parts or structures of a coral polyp.

Teacher Prep for Activity

Buy and prepare food materials for the class. Teacher may want to prepare a model colony ahead of time to show your students before they make their own.

Background

No additional background is necessary.

Procedure

1. Group the students into pairs.
2. Give each pair of students a paper plate (*and/or a paper baking cup*). The plate represents the limestone base to which the coral is attached.



3. Give each student a marshmallow on a toothpick and six strips of licorice. The marshmallow represents the polyp body and the licorice represents the tentacles.
4. Give each pair of students one ounce of melted candy coating from the heat source in a shallow container (the candy represents the limestone skeleton).
5. Have the students work together. Roll the sides of the marshmallow in the melted candy coating and stand the marshmallows on a paper plate. If the marshmallows are placed close enough together, they will attach to each other and resemble a coral colony.
6. Have the students insert six licorice strips around the top of the marshmallow. Children may want to use their toothpicks to help them poke the holes. [Be careful to remove *all* toothpicks!]
7. Slightly dampen the marshmallow with water (this can be done simply with a clean spray bottle) and sprinkle it with the sprinkles. The sprinkles represent the endosymbionts. Use only one color per polyp.
8. Discuss the edible polyp model. Explain what the marshmallows, candy, licorice, sprinkles, and the plates (or baking cup) represent.
9. Now have the students pretend that they are parrotfish or crown-of-thorns sea stars (starfish) and eat their polyps. YUM!

Assessments

Completed edible coral polyp model

Resources

Coral Forest Teacher's Guide. Coral Forest, 400 Montgomery St. Suite 1040, San Francisco, CA 94104. Email: coral@igc.apc.org

Corals and Coral Reefs 4-8 Teacher's Guide. 1993. Sea World, Inc.

Art & Literature Connections

Students may want to write and illustrate a story about their polyp.

Math Connection

Students can count the number of tentacles on their polyp and multiply by the number of students in the class to find the total number of tentacles in the classroom coral colony.