

OIMB GK12 CURRICULUM

1st Grade

30-45 minutes

ROCKY INTERTIDAL FOOD WEBS

Oregon Science Content Standards:

1.2 Interaction and Change: Living and non-living things interact.

1.2L.1 Describe the basic needs of living things.

1.3 Scientific Inquiry: Science explores the natural world using evidence from observations.

1.3S.1 Identify and use tools to make careful observations and answer questions about the natural world.

Ocean Literacy Essential Principles:

5. The ocean supports a great diversity of life and ecosystems

6. The ocean and humans are inextricably interconnected.

Goal: To introduce students to the concept of food webs and chains.

Concepts:

- Food chains show who eats what or who.
- A food web is many interwoven food chains. A food web is more complicated than a food chain because most animals eat more than one type of thing.
- Energy is transferred from one organism to another through the food web.
- The base of all food webs is the sun. Plants use energy from the sun to make food.

Materials:

- laminated pictures of marine animals, seaweeds, plankton and the sun
- yarn

Lesson Plan:

1. Start by drawing four pictures on the board (sun, seaweed, sea snail, crab) and ask the class what eats what (what each gets its energy from). Have students draw arrows in between the drawings to show what eats what. (Arrows point in the direction of the predator, the direction of energy transfer.) Discuss that a food chain shows who eats what or who.
2. Now ask if crabs eat anything other than sea snails. Draw the students' ideas and put in arrows linking the crab with the other things it eats (arrows pointing toward the crab). Now ask what those animals eat. Draw in arrows and tell the class this is no longer one food chain, but many food chains. Tell them that this collection of interwoven chains is called a food web and ask them why it would be called this.
3. Hand out pictures of rocky seashore animals, seaweed, plankton and the sun (one per student) and have the students sit on the carpet. Tell them that they are going to make a food web. Have the students hold up their cards so others can see them, and look around for a couple of minutes to find things that they eat, and things that eat them.

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4. Then ask the students where the web should start (with the sun). Have the sun hold onto the end of the yarn and pass it to something that uses it to make food (seaweed or phytoplankton). Have each student say out loud what organism s/he is passing the yarn to so that everyone pays attention. Then continue passing the yarn around, **either** to a food item **or** to a potential predator, until everyone has at least one part of the yarn. Ask the students what they have made (a web). Ask if it would be easy to draw this food web. Then start with the sun and have each student tug on the yarn when they feel a tug, to show that everyone is connected.
5. Ask if any of the students eat crab or fish or shrimp or algae. Ask if humans are then part of this food web.
6. You can take this one step further and include potential impacts of pollution or of over fishing. For example, have the students imagine that most of the crabs are gone and have most of the crabs drop their yarn. Then have all of the animals that were connected to those crabs drop their yarn, and so on. Soon, a lot of the web is dropped. Emphasize that we can--and it is important that we do--protect marine life and habitats.

Assessment: Have students draw a food web.

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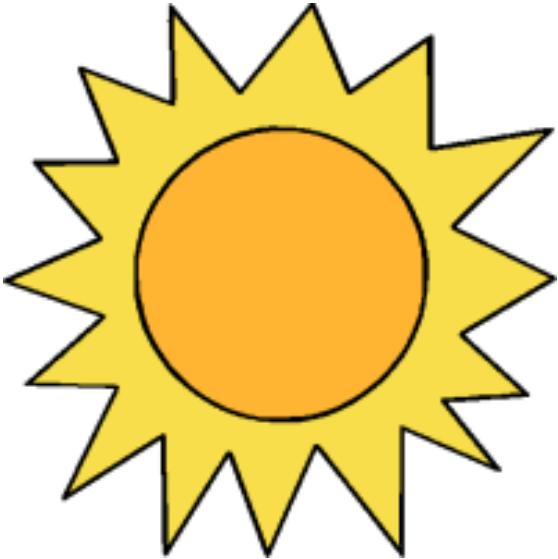
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