POLAR TREC
Learning Resources

Details

Completion Time: Less than one period
Permission: Download, Share, and Remix

Sea Algae Bookmark

Overview
Students will create a bookmark to help them remember that diatoms (ice algae) are the main producers in the Bering Sea ecosystem.

Objective
To create a tangible reminder of how the Bering Sea ecosystem's main producers (diatoms and ice algae) use sunlight and transfer that into food energy for use by most other creatures that live there.

Preparation
Have students pick the materials (see Materials section) from a central location and bring them back to their work area.

Description
Most of the food that is available to creatures starts with the diatoms. They take sunlight and change it into food. Making the bead (food pellet). Ask students what the ice algae need to make food? Write their comments on the board or overhead. Tell them that ice algae need sunlight, carbon dioxide and water to make food and oxygen. They also need nutrients (guano or waste). Write:

$$CO_2 + H_2O \xrightarrow{\text{sunlight}} C_6H_{12}O_6 + O_2$$

Carbon dioxide + water → sugar + oxygen

Tell them to draw or write that information on the tiny strip of paper.

Attach one end of the strip to the toothpick and roll it to resemble a bead. Put a tiny dab of glue at the end. Turn it upside down on their desk or work area to dry while they make the rest of the bookmark.

Making the diatom bookmark (see attached diagram).

Materials

per student:

- two 1½ inch felt, heavy paper or cloth circles (rusty or greenish in color)
- 8 inch strip of thin ribbon (golden or greenish)
- Tacky glue
- ½ inch by 4 inch strip of paper
- round wooden toothpick or similar small stick
- pen or pencil

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Place the discs back to back the way you would like them to look. Put glue sparingly on the inside of the disc. Put the strip of ribbon in the center with the majority of the ribbon hanging outside the discs. Press the discs together. Ask the students what they think the cloth discs represent? (Diatoms, Ice Algae, the sun?) Ask them what they think the ribbon represents? (the changing of sunlight into food or photosynthesis). When the bead is dry, thread the thin ribbon through the center and tie in a knot. This should hang at the end of the bookmark.

Resources
N/A

Credits
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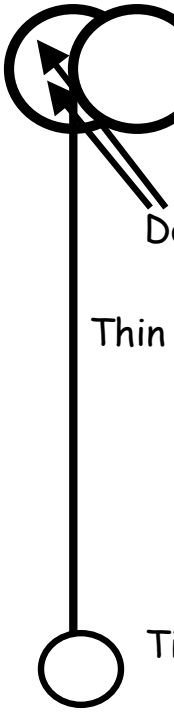
Bookmark



Two discs of fabric, or heavy paper

Dab glue in here to join ribbon to discs and discs together

Thin ribbon glued to the inside of the discs

Tie food bead to the end of the ribbon