Plant Adaptation Activity

Objectives: 1) Name 3 plants that can be found on Antelope Island

2) Identify a plant adaptation

3) Name three thing plants need to grow.

Introduction

Antelope Island plants have to adapt to a desert environment as well as a salt saturated environment. For most plants, too much salt would kill it. There are plants known as Halophytes that have special adaptations for managing their salt content. You can find some halophytes here on the island, mostly on the beach and near the water. One of the best examples of halophytes on the island is pickleweed.

Pickleweed – Its adaptation is that it holds the toxic salt water in little cell pockets. With the salt water taken care of it can use the water it needs and store the salt it doesn't. These cell pockets make the plant spongy and squishy. Pickleweed is edible. Try some!

Other salt -tolerant plants we have are saltgrass, shadscale, and greasewood.

Other Antelope Island plants include: Sagebrush, Rabbitbrush, Cheatgrass, Desert Parsley,

Inventory Items

Plant Identification Cards
Poker Chips
Microscopes
Box of slides

Activity

1. Pull out Plant Identification Cards and discuss what plants need to survive (water, sunlight, carbon dioxide, soil) Talk about Salt-tolerant plants.
2. If you are at the Beach, have the kids search for pickleweed. Have them pick off a little bit and taste it. What does it taste like? Put the pickleweed under the microscope and identify the small salt pockets called “vacuoles”.

3. Pull out the "Every Plant for Itself" Game.

- Every child is a plant. Their feet are the roots and they cannot move.
- Space children evenly, arms width apart.
- Scatter (as evenly as you can) the resource tokens
  - Red -Sunlight (20)
  - Blue -Water (29)
  - Green- Nutrients (39)
  - In order to survive, a plant must collect one of each token.

Round 1

- Have class, without moving their feet gather as many resource tokens as they can. Tally the tokens and see if everyone could have survived. Collect tokens for round two.

Round 2

- Now to mix it up a bit, group kids together 2-4 in each group. Now they have to compete for the same amount of resources. Tally the tokens, did every plant survive? Collect tokens for the third and final round.

Round 3

- Have each group draw a black token from a bag. These are problem tokens and will affect their resources.
  Black – Problem tokens (10)
  - D – Drought = less water tokens
    B – Bug or Insect Infestation = less sunlight
    S – Salty Soil = less nutrients
- Tally the tokens, how many survived this time? Discuss how the problem tokens affected the groups. Brainstorm how their plant might adapt to the problem.