PLANT mAGic Kit - Interest Approach Ideas

Corn and Soybean Search

Ask students to search products with corn and soybeans in them as an ingredient in the store or at home in the cabinets. Have the student make a list of those food and nonfood items. Create a class list.

Beanie Baby

Grow a soybean in a plastic bag
Materials Needed:

- ➔ Jewelry size resealable bag (found in craft stores)
- ➔ Crystal Soil (order from Flinn Scientific at 800-452-1261, catalog numbers FB0381-FB0384 for various colors)
- ➔ Hole Punch
- ➔ Water
- ➔ Measuring spoons
- ➔ Soybeans
- ➔ Yarn

1. Punch a hole in the top of your bag.
2. Place a scant 1/4 teaspoon of Crystal Soil into the bag.
3. Add one tablespoon of water.
4. Gently push in two soybeans.
5. Seal your bag firmly.
6. Insert the yarn to make a necklace.
7. Wear your Beanie Baby around your neck and under your shirt to keep it in a warm, dark place.
8. Check your Beanie Baby several times a day for germination and record the growth.

Thanks to: Steve Connelly, Maryland Ag in the Classroom

Growing Corn and Soybeans

Place corn and soybean seeds in a cube of floral foam. Place the cube of floral foam with seeds inserted in a Ziploc bag, add water and watch them grow.

Dissect Peanuts

Have a snack of peanuts in the shell. Have the students carefully remove the outer shell and dissect the two peanut seeds inside.

Can they locate the seed coat? (The brown, papery covering.)
The cotyledons? (The nutmeat they eat.)
The embryo? (The tiny plant tucked inside.)

Shelburne Farms, Project Seasons

Little Sprout written by Debra Parrella; copyright 1995 ISBN # – 0-9642163-0-2;

1. Dress up a student as a well-prepared hiker wearing a backpack and rain jacket. Introduce the student to the class as "Sprout." Explain that Sprout and seeds have a lot in common.

2. Ask the students what a well-prepared hiker wears to protect him/herself from the wind, rain, and cold. (A coat.) Explain that seeds also have coats for protection. Attach the seed coat label to the coat the volunteer is wearing. Explain that when the conditions change, Sprout can take his/her coat off and enjoy the warm, sunny weather. Similarly, when conditions are right for growth, the seed absorbs water, the seed coat cracks open, and the seed begins to sprout roots and leaves, or germinate. Have the volunteer remove his/her coat and hang it so that the seed coat label is clearly visible.

3. Ask the students what else a well-prepared-hiker brings. (A backpack with supplies.) Let sprout discover the snack in the main compartment of the backpack. (This can be shared at the end of the activity – it can even have some peanuts or other edible seeds inside to dissect!) Explain that seeds also have a supply of stored food. Our hiker's food is stored in a backpack. A seed stores its food in cotyledons. Attach the cotyledon label to the backpack. Cotyledons provide the plant with the initial energy to germinate and grow. Once the plant has established itself, the cotyledons fall off.

4. Sprout expends a lot of energy hiking and eventually gets thirsty. What else is important to bring along on a hiking trip? (A water bottle.) Have Sprout remove the water bottle from the backpack. Plants also need water and minerals to grow. How do the plants get this water and minerals? (Roots.) Attach the root label to the straw of the water bottle.

5. Ask the students what other item is useful to have on a hiking trip, especially on bright and sunny days. (A hat.) Have Sprout remove a hat from the backpack and place it on his/her head. Compare the hat to the first green leaves a seedling puts out to absorb sunlight. Attach the leaves label to the hat. The leaves use sunlight to make food for the plant. This process of making food from sunlight is unique to plants and is called photosynthesis. Soon the cotyledons will fall off and the plant is now able to get energy from the sun. Have the volunteer remove the backpack and place it next to the seed coat.

6. Explain that the leaves and roots grew from a tiny plant inside the seed called the embryo. Place an embryo label around the volunteer's neck showing the connection between these two parts. Review the various parts of the seed and their functions using the props.