

# MORE THAN A SEED

## 1<sup>st</sup> Grade Ag in the Classroom Lesson Plan



**Goal for presentation:** Help children make a connection between crops grown in area farm fields and products found in the grocery store and at home.

**Length of presentation:** 40 to 45 minutes.

### Materials needed:

1. Products made using corn and soybeans – six to eight each (*See suggestions below*)  
**Presenter provides**
2. Set of 8 corn/soybean photos – *1 set per presenter.*
3. Ear of corn – *1 per presenter.*
4. Paper towels (optional, to place on desks before distributing seeds – **presenter provides**)
5. Seed corn/soybeans
6. One bag of vermiculite
7. Plastic cups - *1 per student*
8. Coffee filters - *1 per student*
9. Pail for water to moisten vermiculite – **presenter provides**
10. Blank labels for cups. (Teacher or students can write names on each.)
11. One large spoon. (Used to stir and distribute vermiculite.) – **presenter provides**
12. Plastic jar with lid. (Used to dissolve corn-based packing peanuts.) – **presenter provides**
13. 1 bag each corn-based packing material and polystyrene packing material.
14. Teacher gift bag – *1 per teacher.*
15. Certificates of Participation – *1 per student* (signed by you in advance)

### SUGGESTED PRODUCTS

#### Items Made With Corn

- breakfast cereal (corn meal and/or corn sweetener)
- soft drink (high fructose corn syrup)
- peanut butter (corn syrup)
- fruit juice (high fructose corn syrup)
- dog or cat food (corn meal)
- marshmallows (corn syrup)
- Sweet Tarts candy<sup>®</sup> (dextrose)
- hand sanitizer (ethyl alcohol, also known as ethanol)

#### Items Made with Soybeans

- newspaper printed with soy ink
- mayonnaise (soybean oil)
- chocolate candy bar (soy lecithin, may also contain corn syrup)
- salad dressing (soybean oil)
- vegetable oil (soybean oil)
- soynuts (sold in grocery store produce area)
- Tropical fish food (soy meal, oil & protein)

## Procedure:

1. **Introduce yourself.** Thank teacher & classroom for inviting you. Tell class what you do, or ask them to guess. By show of hands:

- *How many of you live on a farm? Have a relative that lives on a farm?*
- *How many of you have ever been on a farm?*
- *How many of you have ever seen a corn field?*

### **Discuss crop production.** Continue dialogue:

- *What do you need for a seed to germinate, or to sprout and grow?* (soil, water, warmth, sunlight)
- *Do you think farmers in our area have the things they need to grow seeds?* (Yes, we live in an ideal climate and have good soil for growing crops.)
- *What if you lived in a desert/on a mountain?* (crops wouldn't grow very well)
- *What happens when plants mature?* (they are ready to be harvested)
- *What happens after harvest?* (crops are stored, sold, shipped, made into food or other items)

### **Introduce the terms "farming" and "agriculture."**

- "Farming" means to grow plants (crops) or raise animals (livestock) for food. "Farmers" are the people who grow crops or raise livestock.
- "Agriculture" includes the farmers **and** everyone else that is involved in making farm products into things we can eat or use. (Give examples.)

2. **Show selection of corn items, then soybean items.**

- *What do you think these items might have in common?*
- *Did you know that all of these items contain products made from corn? ....soybeans?*

### **Challenge students to look for more corn or soybean-containing items at home! Point out that packaged food items always include a list of ingredients.**

3. **Discuss** the importance of fields around them to their everyday lives. Talk about how crops are grown by showing and explaining the set of corn and soybean production posters.

4. **Demonstrate/help students plant seeds.** (*Invite teacher to help with this process. Avoid down time as materials are passed out by continuing to ask questions and lead discussion.*)

- Distribute plastic cups and coffee filters.
- Have students put names on cups. (Or, ask teachers to do this during your introduction.)
- Show class how to line cup with coffee filter.
- Fill each student's lined cup 3/4 with damp vermiculite.
- Distribute 2 corn kernels and 2 soybeans to each student. Make sure children wait for your instructions before planting their seeds! (Placing a small dry paper towel on each

child's desk beforehand may help to keep seeds from rolling away.)

- Demonstrate how to place seeds between plastic cup and coffee filter.
- Encourage students to watch for root development during the next few days and discuss whether they think seed position will affect growth.
- Prepare 2-3 extra cups if the teacher would like them for further experiments, such as comparing how the seeds sprout without light or water.



5. **Discuss** how agriculture feeds us *and* helps our environment by providing earth-friendly products. For example: starch-based packing peanuts made from corn are an earth-friendly choice over polystyrene (Styrofoam) packing material. **Show** dissolving of corn-based packing material in a clear container (if you plan to let a student shake the container, use plastic) about 3/4 full of water.
6. **Conclusion**
- Answer any questions.
  - Hand out signed certificates (students may fill in their own names).
  - Remind teachers and class of upcoming **placemat design contest**. **The deadline for entries is March 12, 2010**. The first grade contest theme is **"If I Were A Farmer."**
  - Thank class and teacher!
7. Before leaving, give teacher the thank you gift bag. Point out the Food for Thought placemat contest rules/entry forms, evaluation form, and other items in the bag. **Encourage teacher to explore the presentation follow-up resources posted on our website, [www.dekalbfarmbureau.org](http://www.dekalbfarmbureau.org). Remind teacher to complete and submit the evaluation form.**

### **Tips to Remember**

#### **Before you visit the classroom:**

- Place vermiculite in bucket and dampen before presentation. This will save time and make things in the classroom run more smoothly. *Vermiculite should be damp – not dripping wet.*
- Place name labels vertically on cups in advance.

#### **In the classroom:**

- **Remain flexible. Don't be thrown off by space/room variables.**
- Have the teacher help pick volunteers to pass out items. If you ask, they'll **ALL** volunteer.
- Encourage class to place cups in warm and sunny location if possible.
- Explain that students should continue observing seed growth in the days that follow. Mention seed growth observation sheet left with teacher to be copied for students.
- Students or teachers often ask about the vermiculite. Explain that it is a lightweight, water-absorbent material derived from a mineral called mica. We use it for the presentations because it is lighter, easier to transport, and a little less messy than soil!