

**How do we plant seeds indoors to transplant to our garden when weather permits?**

## **MY OWN FOOD CHAIN PROGRAM (K-2)**

### **Sowing Seeds** **(ILS 21A)**

#### **Overview**

This curriculum explores the relationship between people and the food they eat. It aims to give children in grades K-2 a basic understanding of the flow of energy through the food chain, and the place of people in the food chain. If teachers complete the entire curriculum, their classes will explore food chains in nature, focusing on its individual links and looking at the flow of energy as a whole. Students will then look at the place of people in the food chain, and discover how people have appropriated nature's systems in agricultural practices – making the food chain our own. Classes will compare traditional and sustainable agricultural practices.

Sustainable Agriculture, for the purpose of this curriculum, shall be defined as "a system of food production, supported by consumers, where farming operations, practices and technologies work in harmony with the natural systems that sustain life on earth."

#### **Suggested Grade Level**

This curriculum is designed for kindergarten through second grade levels. The topics covered can be built upon in complexity throughout that age range.

#### **Approximate Time**

60 minutes. Read seed packet to assure that seeds are being planted at the proper time of year (probably in April).

#### **Objectives**

1. The students will plant seeds indoors to get them started (they will be transplanted to the garden in a later lesson).

#### **Activity Abstract**

In this lesson, students will plant the seeds they ordered. They will start to grow them in the classroom or greenhouse until the danger of frost ends.

#### **Background Information**

The best information on how, when and where to plant seeds is on the seed packet! Be sure to purchase them in plenty of time to read and prepare.

Here are some tips for care, from the Care Counselor, <http://www.windowbox.com/cgi-bin/experts/DisplayArticle.asp?TopicID=5&ArticleID=89>.

“We're probably all aware of the dangers of underwatering plants. You come back from vacation to find your plants clearly distressed. The leaves are wilted and perhaps starting to turn brown around the edges. A little water will bring them back to life if they're old enough, but younger plants may not bounce back. Bad plant parent!

“Underwatering can be a problem, but in most cases when your plant is distressed it will be due to overwatering! Yes, roots need water, but they need oxygen as well to function properly. Consider this: when was the last time you saw a tree growing in the middle of a river? Plants that are consistently overwatered are in danger of developing root or stem rot, which can affect the overall health of the plant over time.

“Compounding the problem is this: A plant suffering from overwatering may appear to actually need water. The leaves will wilt and turn yellow, sometimes dropping off. Someone seeing this might believe that the plant needs water and add to the problem. But once again, feeling the soil is the best way to avoid this. When in doubt: Soil + dry = water. Soil + wet = don't water.”

### **Materials**

- Greenhouse space or grow lights set up in the classroom
- Trays for plants
- Small plastic pots for all the seeds.
- Watering can
- Soil
- Newspapers to protect floor and tables from soil
- Trowels
- Extra adults.

### **Set-up**

Have space in greenhouse ready or grow-light system set up and ready to go in classroom. Pre-read seed packets... some seeds types don't transplant well, and must be seeded directly into the soil.

### **Procedure (Session 1)**

1. **Tap prior knowledge.** Remind students that we chose our garden layout earlier. Remind them of the chore list we created. Write list on board. Pull out the seeds you ordered.
2. **Hands-on experience.** Explain instructions for planting each type of seed. Use terms that the students can truly visualize, such as “as deep as your fingernail” instead of “¼ inch deep.” Explain a system for getting soil, etc., that will minimize messiness and spillage.
3. Have students plant seeds. (If students are capable, they can figure out how many seeds each person should plant. Split into groups based on seed type; adults should check that they're doing it properly.)
4. Label pots so you know what's what.
5. Water planted pots.
6. Move them under the grow light or to their proper place in greenhouse. If using a grow light place the light 6 inches above the soil surface. Continue adjusting the light so that it remains no more than 6 inches from the top of your plants.



7. **Conclusion/Wrap-up.** The class needs to make sure seeds get watered and cared for in future. Create a system for getting this done. If possible, make plant care a rotating class job; adults should monitor to prevent over- or under-watering (see background). Plants should not require watering more than every other day and probably not more often than every three to four days.

### **References**

The care counselor. <http://www.windowbox.com/cgi-bin/experts/DisplayArticle.asp?TopicID=5&ArticleID=89>