

## Soil to Plate Paper Chain Activity

What: Paper Chain Activity

Level: High School Level (see last paragraph for elementary modifications)

Time: 30 minutes with educators

This activity is appropriate to use after introducing N, P, and K and creates a visual to explain the concept of “from soil to table.”

Materials:

1. Three paper plates per participant (optional: substitute one brown paper plate per participant for the soil component)
2. One sheet of construction paper
3. Stapler
4. Scissors
5. Markers
6. Hole Punch
7. String or Ribbon



Directions:

1. First fold a paper plate in half and staple along the edges; it will resemble a pita pocket. Then cut along the folded edge; this is where they can place the nutrients, then plant into the soil.
2. Participants will color this section and label “soil.”
3. Next, cut three squares (around 3 x 3”) and label each with N, P, and K. \*\*
4. Punch one hole in the soil component, and then two on each N, P, and K component. See visual.
5. Next, on a new paper plate, participants should draw a vegetable plant, like corn, in the middle of the plate. Then, cut off the ridges of the plate so that it will fit inside the “pita pocket” later.

6. On the final paper plate, draw a delicious plate of food that includes the vegetable from the previous vegetable plant. Punch one hole in the plate of food and two holes in the vegetable plant.
7. Tie each component to each other in this order:
  - a. Soil – N – P – K – Vegetable (Corn) Plant – Plate of Food
8. To explain the connection between our food and soil, educators can teach starting from the soil and go ‘up’ the chain to the plate of food. Other educators may like starting with the plate of food and working back to the soil.

\*\* There are many opportunities for modifications so that the chain can fit the appropriate age level. For instance, early childhood and Kindergarten teachers can completely eliminate the N, P, K components and concentrate on the concept that “soil helps plants grow so that we can have fruits and vegetables on the table.”

Another modification can be to make the squares look like parts of the periodic table of elements, with weights. A periodic table poster should be supplied; for example, Nitrogen would be labeled: “N: 14.007; 7.”

Another modification includes making “N” in the shape of a cloud (87 percent of the air we breathe is made up of nitrogen), “P” in the shape of a fish (Phosphate was formed from ancient sea life), and “K” in the shape of table salt (Potassium is salt left over from evaporated oceans). This is a great opportunity to tie in the Nutrients for Life postcards.





