**Activity: The Great Pumpkin**

*Activity Level: Basic*

Source: Adapted from Illinois Agriculture in the Classroom

**Purpose**
Understand and model the pumpkin life cycle and relate it to other agricultural plants.

**Example Topics It Supplements**
Parts of plants; changes in living things

**Activity Snapshot**

1. **Organize and Prepare Supplies**
2. **Read Background Information**
3. **Interest Approach**
4. **Conduct Activity**
   Students will illustrate the life cycle of the pumpkin using a model.
5. **Ask follow up questions and make the connection to agriculture.**
   - How do all plants start?
   - What is the order of the plant life cycle?
   - What agricultural plants that we talked about also have the similar cycle?
   - What can we share with others about what we learned today?

**State Standards It Supports**

SS 0.3.3—Students will identify natural processes in their physical world.
SC 2.3.1.c—Identify external parts of plants.
SC 2.3.2.b—Describe how living things change as they grow.
Science 2.3.4.a—Recognize seasonal changes in plants.

**Materials**

- Suggested reading: Pumpkin Circle by George Levenson.
- Orange paper plates—2 per student
- Construction paper in brown (seed), light green (small pumpkin, leaf), yellow (flower), orange (pumpkin)
- Brown or green yarn 8” long
- Tape
- Scissors
- Stapler
- Hole punch
- Pumpkin chain template

**What’s the Connection to Agriculture?**

The pumpkin cycle shows how seeds are the start of fruits and food products. Just like apples, plants that farmers grow go through the same cycle. Corn, wheat, and soybeans are just a few things that Nebraska farmers grow and similarly, they start as seeds! These commodities get turned in to several products that we eat, wear, and use daily!
PROcedures:

1. Organize and Prepare Supplies
   See “Materials” on cover page.

2. Background Information
   A life cycle is the series of stages that an organism passes through during its lifetime. Specifically, this lesson discusses the life cycle of a plant starting as a seed, growing into a tree, producing a flower, pollination of the flower, development of a fruit, and the fruit containing a seed, thus starting the cycle over again. Students will see the life cycle for plants being modeled through illustration of an apple. Plants that farmers grow also have a similar life cycle. Plants that farmers grow in Nebraska are corn, soybeans, wheat, dry edible beans, sugar beets, to name a few. These plants are essential for use for food, fiber, and fuel!

3. Interest Approach
   Have students brainstorm all the places they get food and clothes. Record on writing surface.
   Expected responses: grocery store, convenience store, mall, online, etc.
   Discuss how these items that we eat or wear all start as something else, like plants. Farmers grow the plants, harvest the fields, and then the grain gets turned in to other products. The plants go through a similar lifecycle that we will model today with apples. 

Alternate extension of the interest approach: Read Pumpkin Circle by George Levenson to students.

4. Conduct Activity
   a) Cut out each item of the Pumpkin Chain template out of construction paper: seed, sprout, flower, little green pumpkin, ripe orange pumpkin. Punch a hole on each side of the items you made with construction paper. The brown seed only gets one hole punch.
   b) Glue two orange paper plates together around 2/3 of the edge. Leave the other 1/3 open. Allow time for it to dry. You can also skip the glue and staple the plates together depending on age of student.
   c) Tape or staple a piece of yarn to the inside of the paper plates and extend the yarn out of the opening.
   d) Add a stem to the orange paper plates to make them look like a pumpkin.
   e) Tie the ripe orange pumpkin to the yarn coming out of the large pumpkin. Tie little green pumpkin to the ripe orange pumpkin. Tie the flower to the little green pumpkin. Tie sprout to the flower. Tie the sprout to the seed. These should all form a chain.
   f) Tuck the shapes into the pumpkin. Starting with the seed, slowly pull shapes out of the apple and tell the story of how the pumpkins grow.
   g) Discuss how agricultural crops are plants that have a similar life cycle. Plants are grown by farmers and those crops provide food, clothes, and fuel for us to use.

5. Ask Follow-Up Questions and Make the Connection to Agriculture.
   • How do all plants start?
     Seed
• What is the order of the plant life cycle?
   Seed grows to tree, tree grows a flower blossom, the flower gets pollinated represented here
   with a bee, the blooms starts growing into a small fruit represented here with a small green
   apple, and matures into a full-size apple containing seeds. The seeds from inside the fruit can
   be planted and the whole cycle starts again.

• What agricultural plants that we talked about also have the similar cycle?
   Corn, wheat, soybeans, dry edible beans are agricultural products grown in Nebraska.

• What can we share with others about what we learned today?
   The life cycle of a plant starts as a seed, grows into a tree, produces a flower, gets pollinated,
   develops a fruit, and the fruit contains a seed, which starts the cycle over again. Plants that
   farmers grow also have a similar life cycle. Plants that farmers grow in Nebraska are corn,
   soybeans, wheat, dry edible beans, sugar beets, to name a few. These plants are essential for
   use for food, fiber, and fuel!