

“AG” cited About Pumpkins

SOIL AND
PUMPKIN LIFE CYCLE

Presenters

Lynne Gibson

- I am originally from southwestern Wisconsin, and a granddaughter of farmers.
- I have been teaching elementary school students for 13 years, teaching Montessori/Catholic School-multi-age 6-9 year olds, and public school 2nd, 4th and 5th grades.

Stephanie Young

- I am originally from Michigan.
- I have been teaching early elementary for 10 years now. I have taught Kindergarten, 1st and 2nd grade.
- “Together may we give our children the roots to grow and the wings to fly”



Why pumpkins?



AGRICULTURE-



- Second Grade – Theme 2:
 - Explain how farmers/ranchers work with the life cycle of plants and animals (planting/breeding) to harvest a crop

Keyword Chart Index

Hyperlink Glossary Heading Illustration & Photograph Text Box Guide Words Diagram

Caption Label Map

Icon Title Page Table of Contents



Aa Aa Bb Bb Cc Cc Dd Dd Ee Ee Ff Ff Gg Gg Hh Hh Ii Ii Jj Jj Kk Kk Ll Ll Mm Mm Nn Nn Oo Oo Pp Pp Qq Qq Rr Rr Ss Ss

I AM A TREASURE HUNTER

I can make a ten
to add and subtract
within 20. Basic Facts
 $15-4=11$
 $-4=1$

Rocky 7 Farm Parts

Whiteboard area with a blank space for writing.

Team Perb
Tractors-1111
Barns-71111
Horses-11
Pigs-11
Dogs-
Mans-
Liberty School
District Farm:
Jaelyn- Brianna-
Chalissa-
Wednesd
Mus



SOIL

The Most Important Part of the Garden

What's soil got to do with it?



OBJECTIVE:

- Today we will learn about:
 - The different types of soil in which pumpkins grow
 - <http://www.pumpkinfanatic.com/growing-pumpkin/soil/>

AGRICULTURE

- Second Grade- Theme 1:
 - Describe the importance of soil and water in raising crops and livestock
- Second Grade – Theme 2:
 - Identify the importance of natural resources (sun, soil, water, minerals) in farming.
 - Elements of Soil (NPK)

Soil is ready, aerated, tilled till smooth, then seeds are planted and watered. "AG" cited



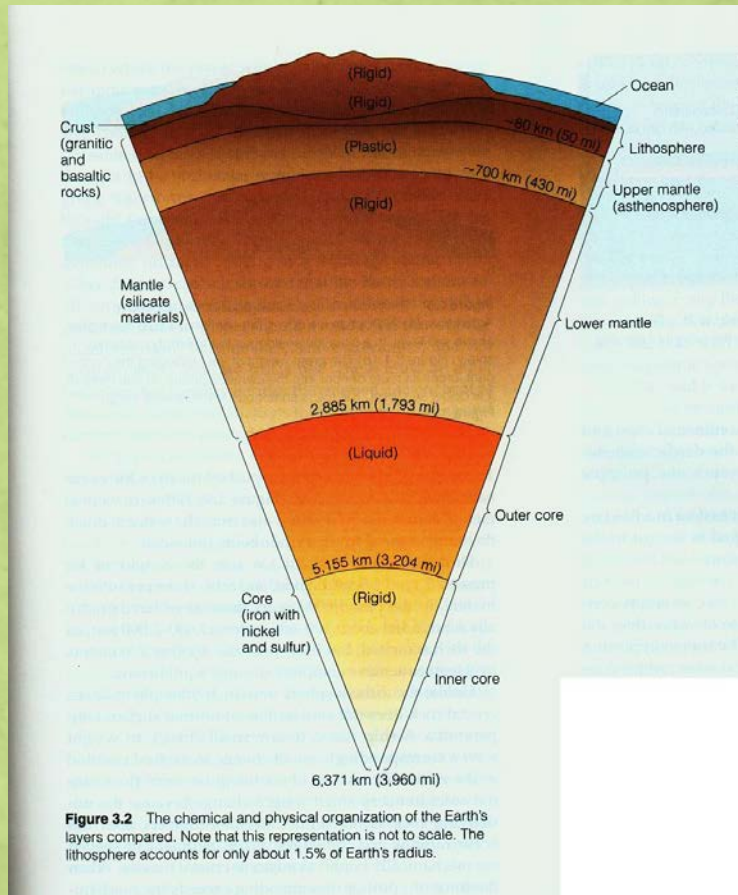
SCIENCE

- Arizona Science Standard: Strand 6: Earth Science (3rd Grade)
 - Identifying the layers of the Earth
 - Describe ways humans use the Earth's materials (growing food).

Soil Vocabulary

- Humus
- Topsoil
- Subsoil
- Bedrock

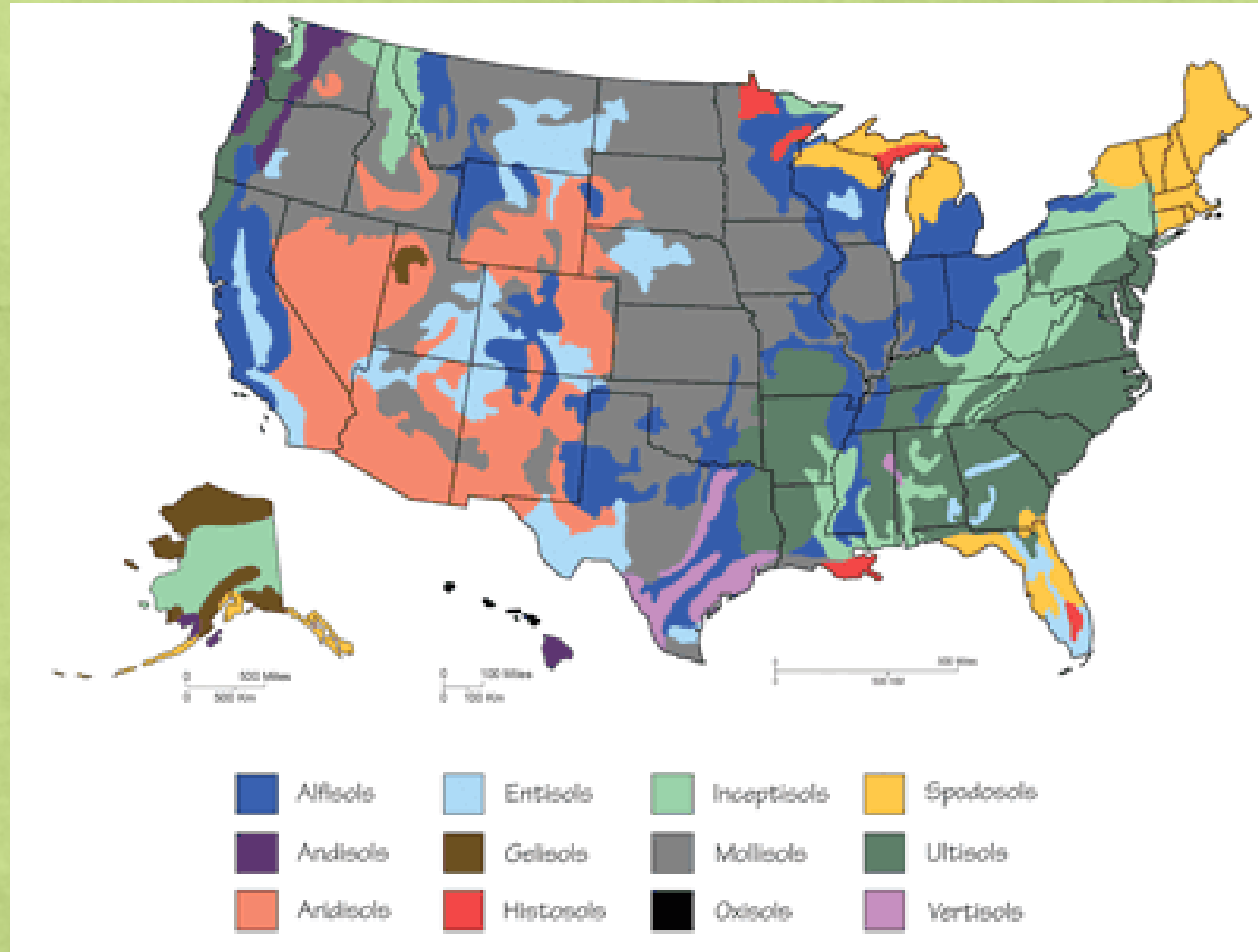
What our earth's layers look like...and how we use the soil to grow food...



Four Main Characteristics of Soil to Grow Pumpkins

- Sandy Soil
- Clay Soil
- Loam
- PH Level (important to the success of growing mature pumpkins)

Soils across America



Preparing the Soil

- Till the soil
- To start test the PH level of the soil. The PH level should be between 6.5 and 6.8 or slightly acidic

Correct PH is key

- **Soil pH**
- Good quality soil also requires the correct acid and alkaline balance, which is indicated by the soil pH. A simple soil test from a garden center or a more extensive test supplied by a county extension office, which usually carries a small fee, can determine the pH and give you time to adjust it before planting. Pumpkins require a pH between 6 and 6.5 for healthiest growth. Established vegetable beds likely fall within this range, but new beds may require amending. Agricultural lime amendments raise pH, while ammonium sulfate lowers it. A soil test provides a recommendation of which to use and in what amounts to add it.

Testing the PH level of the soil

- A way to test at home-Materials:
 - Distilled water
 - White vinegar
 - Baking soda
 - Bowl and spoon

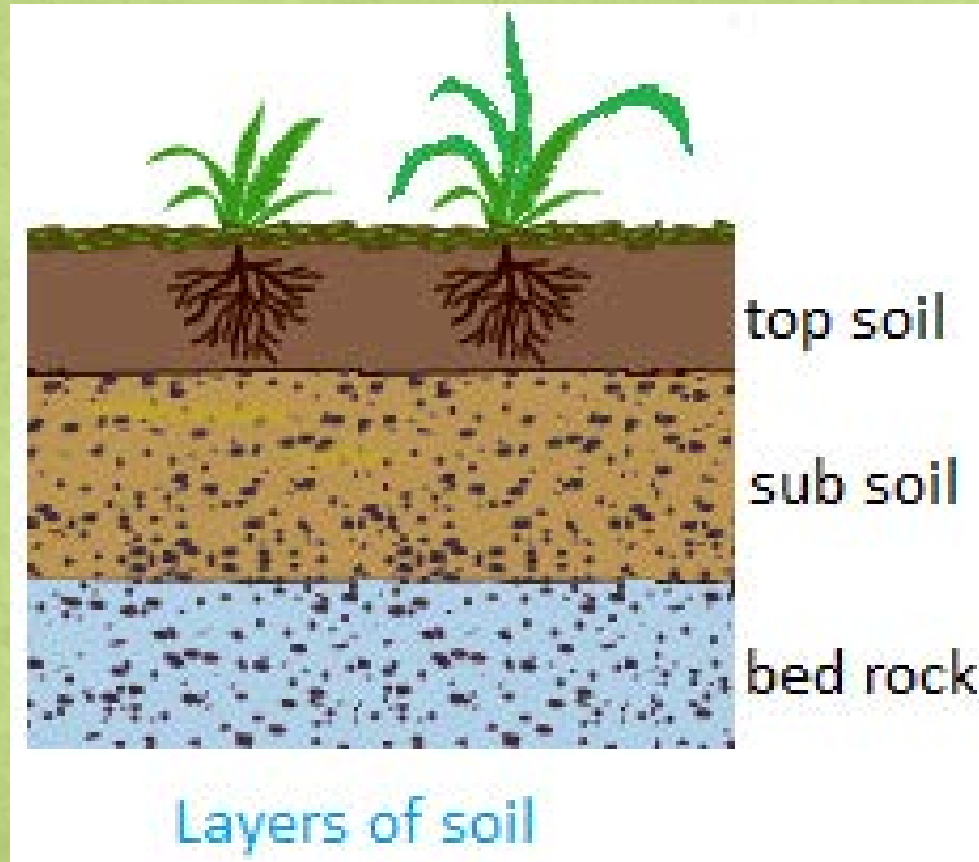
Testing the PH level of the soil

- The Test:
 - Scoop some soil in a bowl from your garden
 - Mix in a bit of distilled water to the soil (enough to make loose mud)
 - Pour a little bit of vinegar in the bowl
 - Fizzes up- the soil is alkaline
 - No fizz- soil is acidic
- Double Check:
 - Grab another scoop of soil from your garden
 - Wet with water and mix again
 - Sprinkle baking soda in and mix
 - Fizzes- soil is acidic

Soil Samples (PH level testing)

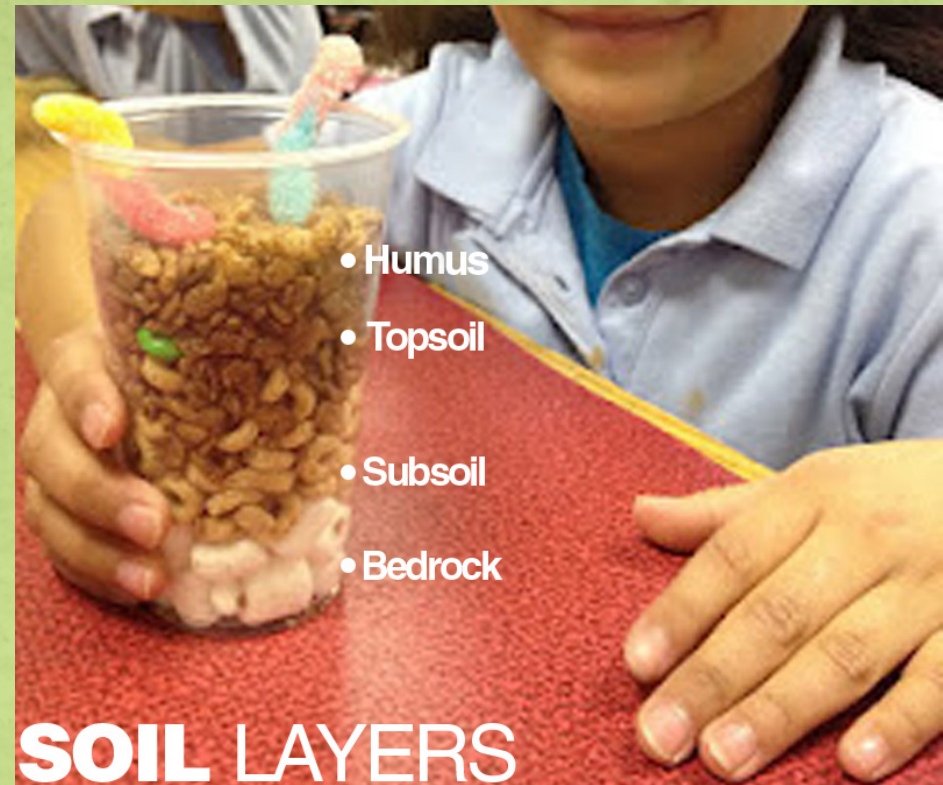
- Each table has a baggie
 - Examine the soil
 - Discuss:
 - What do you notice?
 - What do you think is in this soil (topsoil, humus, sand, clay, etc)???
 - What color is the soil?
- PH level test
 - Pour baggie into bowl
 - Add what and mix
 - Add vinegar
 - What do you notice?

Layers of soil



Activity Materials- Soil

- Cheerios
- Marshmallows
- Cocoa Krispies
- Crushed Oreos
- Plastic cups



Activity- SOIL

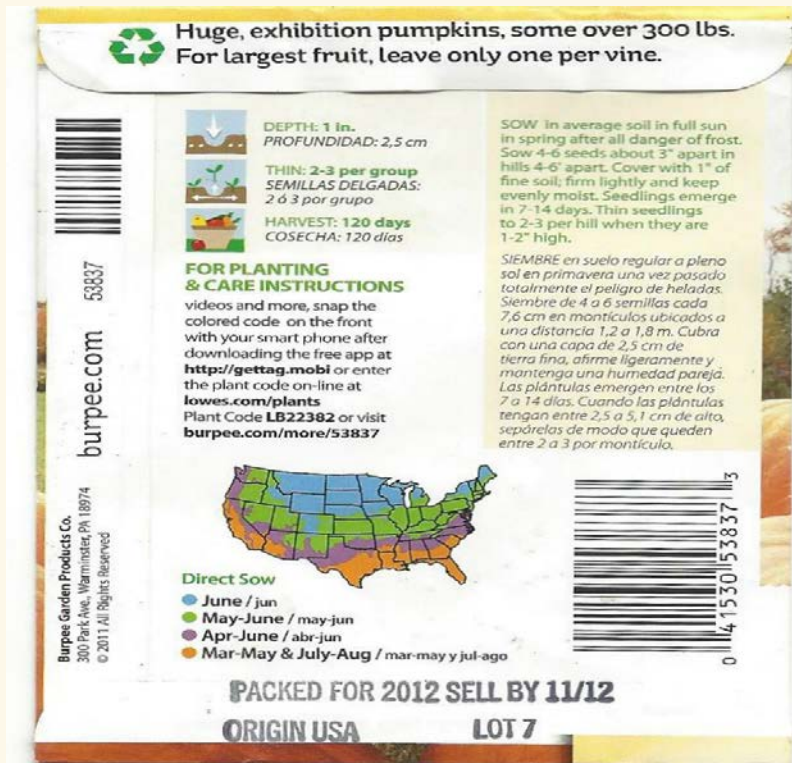
- Layer the cup with the edible materials
 - Bottom layer (4th)- Marshmallows- Bedrock
 - Next layer (3rd)- Cheerios- Subsoil
 - Next layer (2nd)- Cocoa Krispies-Topsoil
 - Top layer (1st)- Crushed Oreo- Turned Topsoil

Planting the Pumpkin

Garden needs to be in full sun

Plant the seed 1-2 inches deep

Depending on where you live you may have to form a mound



PUMPKIN LIFE CYCLE

Discovering the sequence of events in meaningful ways.

OBJECTIVE:

- Today we will learn about:
 - Important vocabulary used with pumpkins
 - The life cycle of a Pumpkin
 - Care for pumpkin plants
 - Four scientific processes
 - Harvesting the fruit

SCIENCE-Students will be able to recognize the plant life cycle

- Arizona Science Standard: Strand 4: Life Science (2nd Grade)
 - Life Science expands students' biological understanding of life by focusing on the characteristics of living things, the diversity of life, and how organisms and populations change over time in terms of biological adaptation and genetics. This understanding includes the relationship of structures to their functions and life cycles, interrelationships of matter and energy in living organisms, and the interactions of living organisms with their environment.
- Concept 2: Life Cycles: Understand the life cycles of plants and animals (2nd Grade)

LITERATURE-The student will be able to correctly sequence a story or everyday events

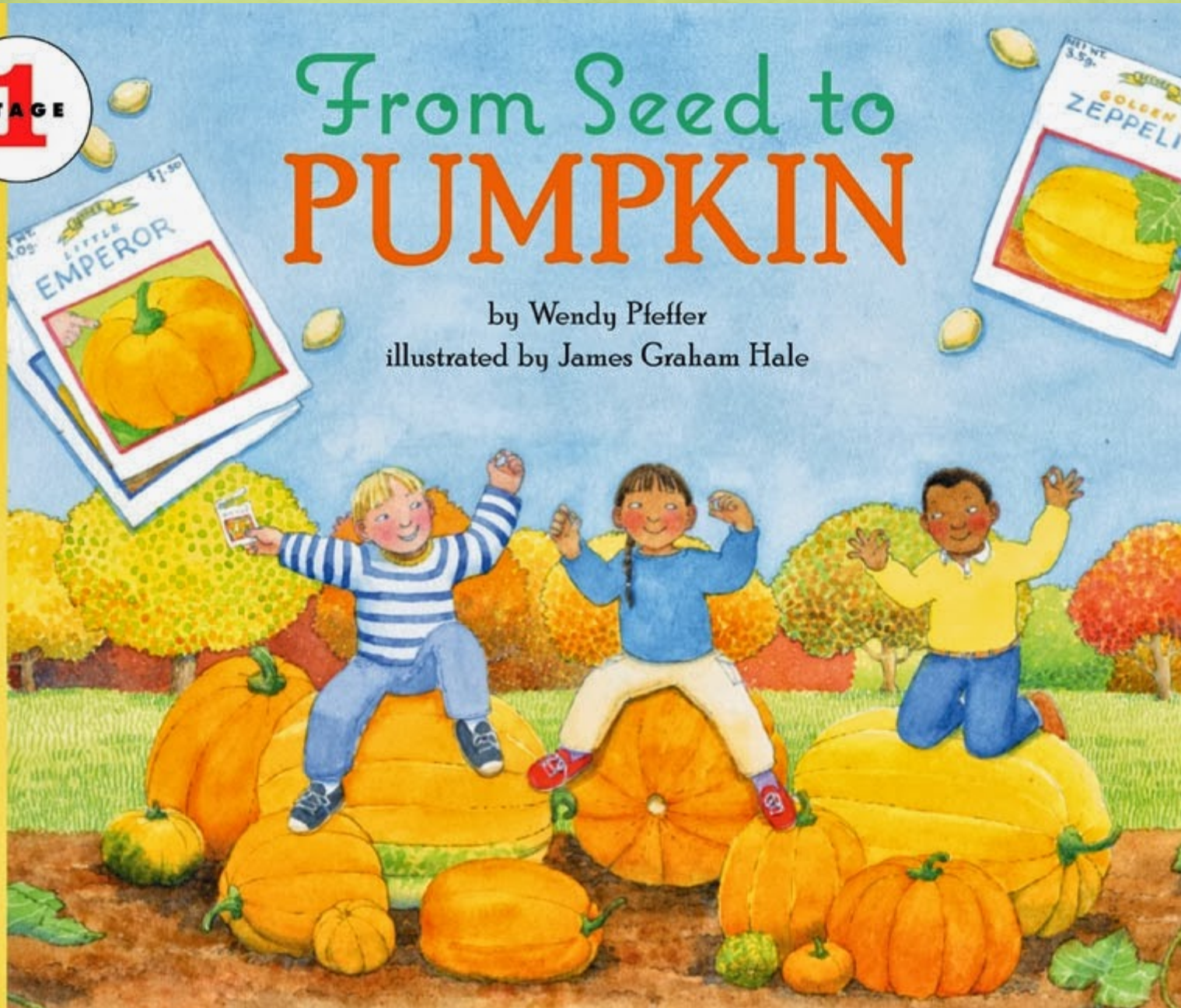
- Arizona College and Career Readiness Standard (Second Grade)
 - 2.RI.3-
 - the connection between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text.

1
STAGE

LET'S-READ-AND-FIND-OUT SCIENCE®

From Seed to PUMPKIN

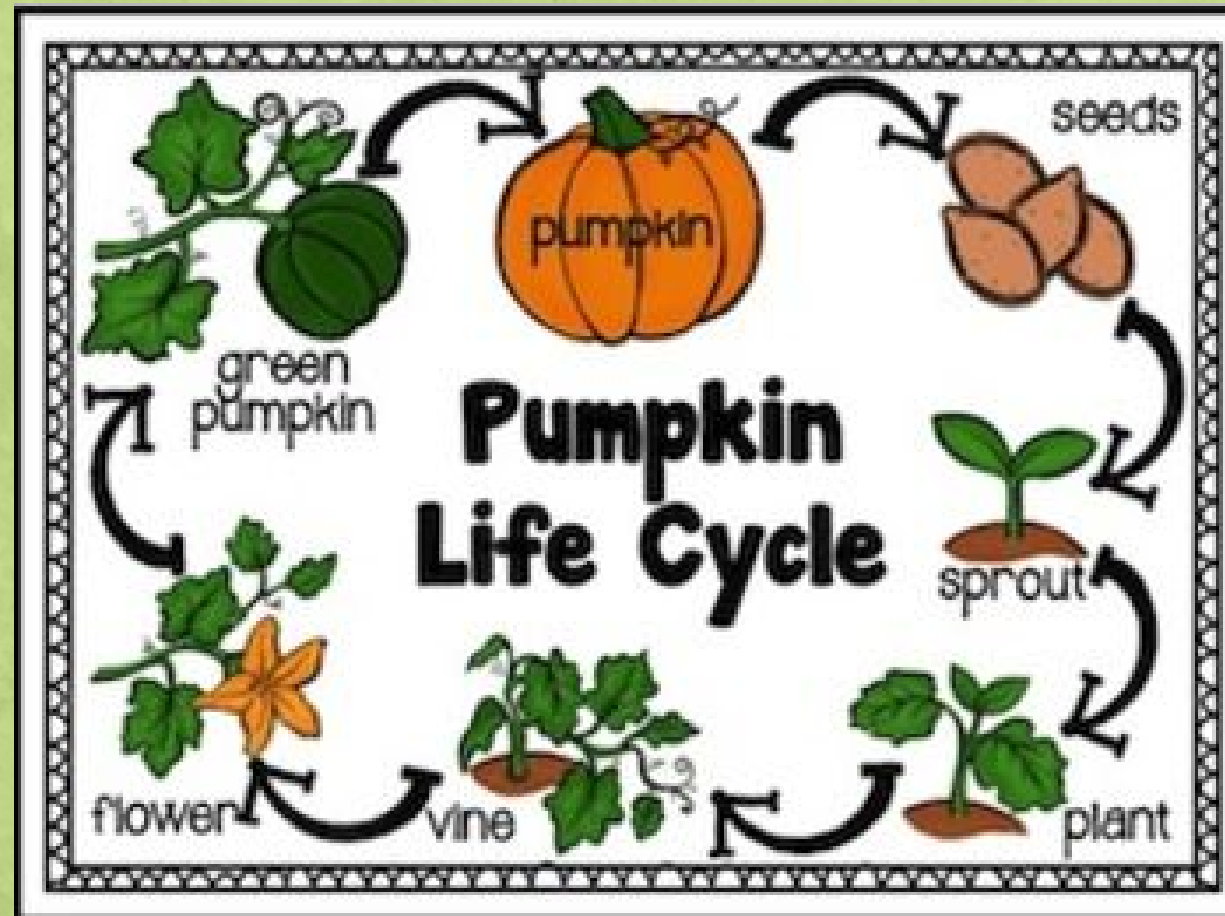
by Wendy Pfeffer
illustrated by James Graham Hale



Pumpkin Vocabulary

- Seed
- Root
- Sprout
- Vine
- Blossom
- Flower
- Pumpkin

Life Cycle of a Pumpkin



Activity 1- Materials:

- Crayons
- Life cycle pictures
- Paper Plate



Activity 1

- Students create the model of the pumpkin life cycle
- Students will cut and glue the pumpkin life cycle pictures in order on the paper plate
- Students will number the pictures in order of the life cycle

Activity 2

- Students create a model of the pumpkin cycle.
- Staple two paper plates together, leaving the top section unstapled.
- Attach a piece of yarn to the pumpkin. Attach pictures to the yarn that represent each of the steps leading up to the pumpkin
- . The “vine” can be stuffed inside the pumpkin and gradually pulled out as students recite the steps of the pumpkin life cycle.

Activity 2- Materials

- 2 Paper plates per student
- Life cycle pictures
- Green yarn



Objective

- Caring for the Soil and the Pumpkin
 - How to take care of the pumpkin
 - How to water the pumpkins
 - How to prevent damage from insects and other predator

Taking Care of the Pumpkin

- How to water the pumpkin
- Fertilizing the pumpkin/soil
- Pollination
- Prune the Vines
- Weeding
- Keep Records (Journaling)

How much water should the pumpkin get?

- Pumpkins are about 80-90% water
- Only water when needed
- Water in the Morning

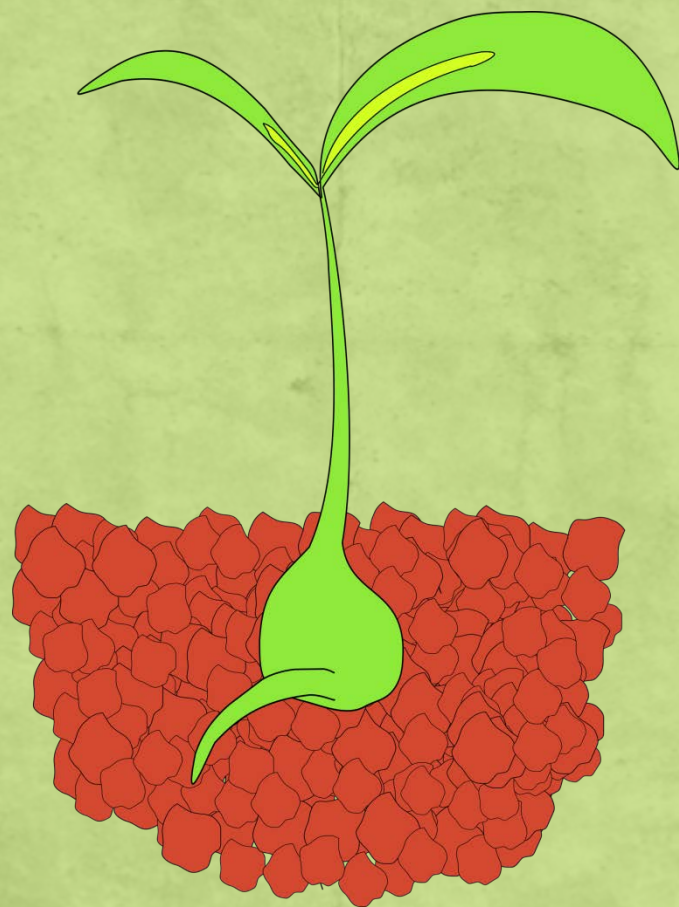
Protecting the Pumpkins/Good bugs, bad bugs

- Four Main Pests:
 - Cucumber beetle
 - Four Line bugs
 - Squash beetle
 - Aphids
- <http://www.mnn.com/your-home/organic-farming-gardening/stories/good-bug-bad-bug-how-can-you-tell-the-difference>

Four Scientific Processes

- Germination
- Pollination
- Fertilization
- Seed Dispersal

Germination







Fertilization of a pumpkin flower

Seed dispersal



Harvesting the Pumpkins

- Predominately orange in color-The fruits change from green to yellow to sunset orange
- Before the first hard frost.
- Vines die back and leaves shrivel at the end of the growing season.
- Shell has started to harden
- Use Shears to cut the stems, leave the stems as long as you possibly can (six inch stem)



What Can You Do
With A Pumpkin?????

PUMPKINS!!!!



Lifecycle begins again...

We planted pumpkin seeds in May in hopes of having a pumpkin harvest this fall before the first frost.



Conclusion....

- “May the SEEDS
- that you plant today,
- be the Flowers that
 - *bloom*
- tomorrow”