

Going the Extra Degree Produces STEAM

Tennessee Foundation for Agriculture in the Classroom

Jennifer Bates

STEAM



This session will highlight samples of exemplary work that connects STEAM to all parts of the curriculum, using the backdrop of a school garden. **Community collaboration** will be highlighted and discussed. Each of the activities presented will provoke **thinking and problem solving**. **Several inquiry-based lessons** will be shared and linked to an educational standard. This session will raise one's enthusiasm and show how a **school garden** will enhance the STEAM focus at any school. The many partnerships and resources that will be discussed will be applicable to any size school or district.

STEAM-Community



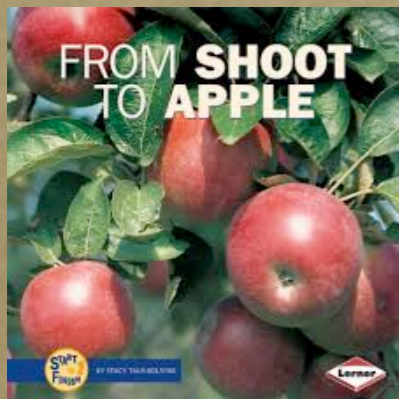
*Develops a bond
between
the community
and
the school*

STEAM-Community



Community Helpers

STEAM-Community



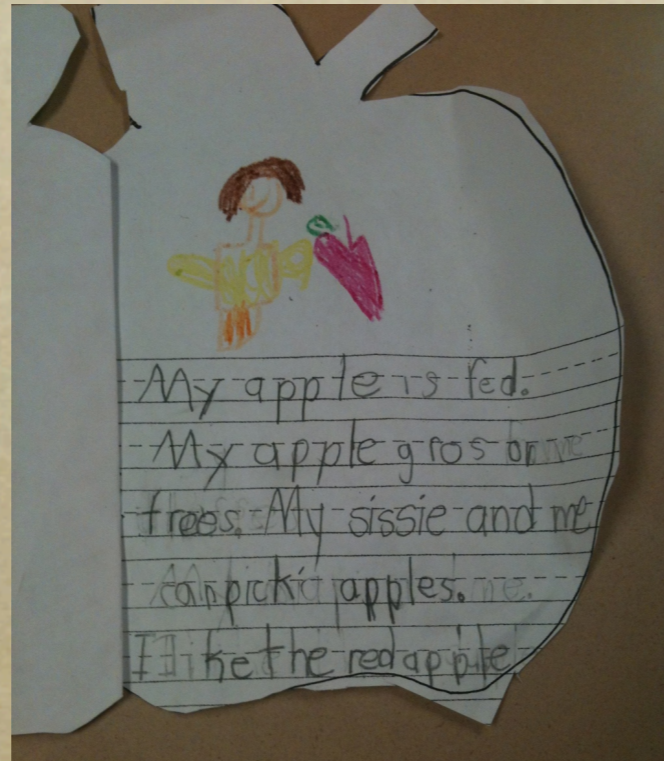
Johnny Appleseed

STEAM-Community

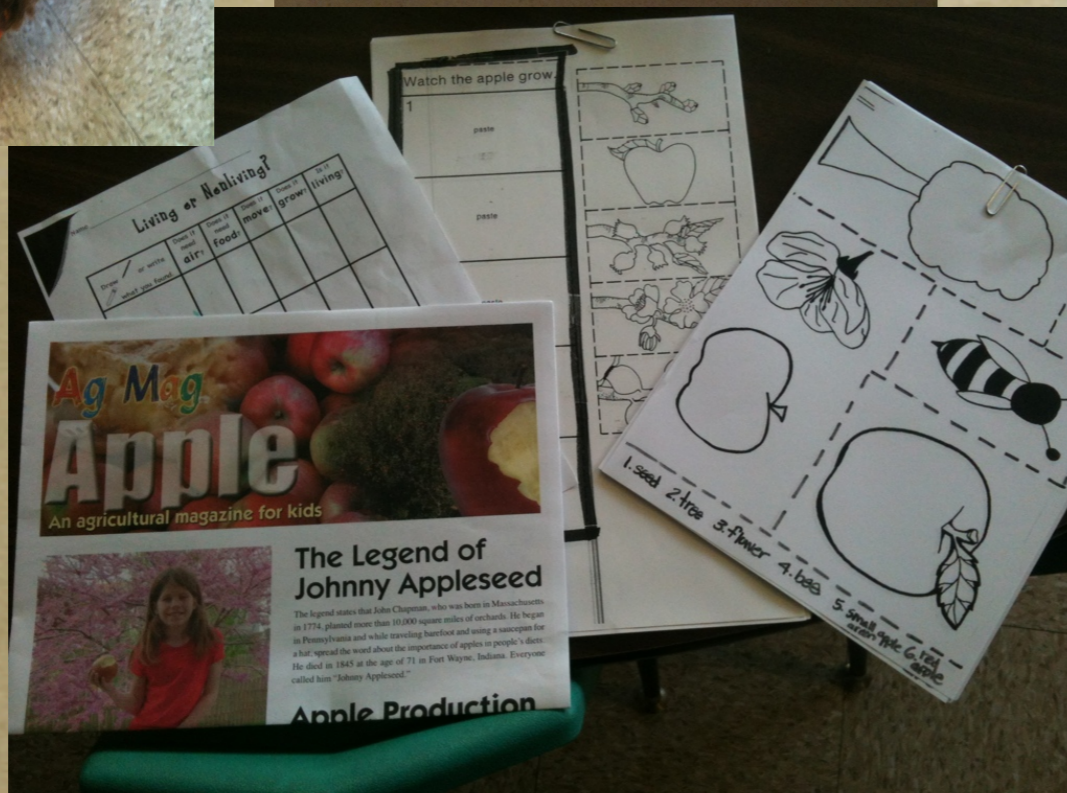


High School Readers

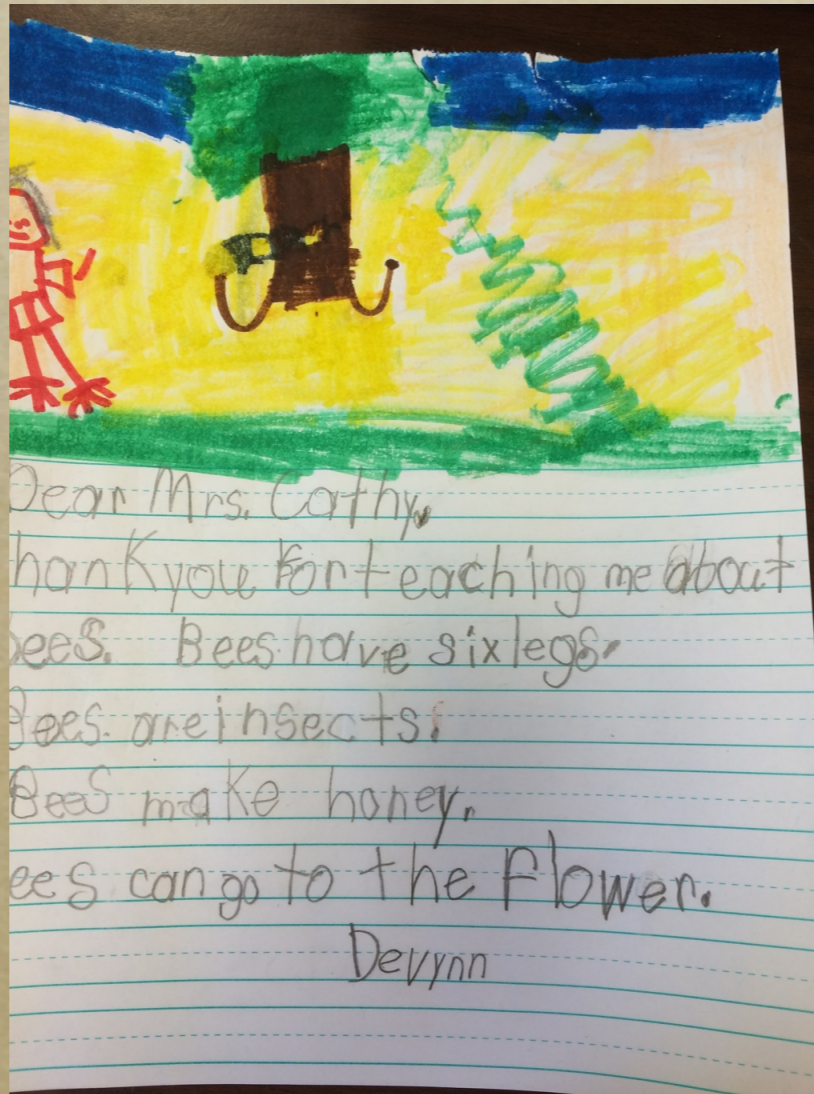
STEAM-Community



Apples



STEAM-Community



Bees
A local Bee Keeper,
Guest Speaker

STEAM-Community



*Chris Allen,
Meteorologist*



*Kelly Cox,
Meteorologist*

STEAM- Thinking/Problem Solving



*Encourages the student
to try new things and
change his/her schema*

STEAM- Thinking/Problem Solving



*Cooking
Classes*



STEAM- Thinking/Problem Solving

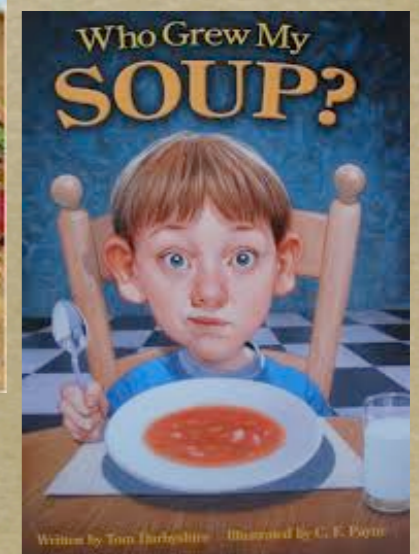
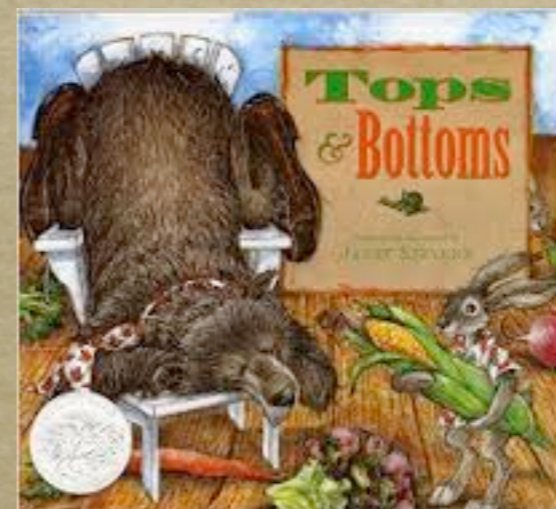


Pancakes/Muffins

STEAM- Thinking/Problem Solving



Vegetable Soup



STEAM- Thinking/Problem Solving



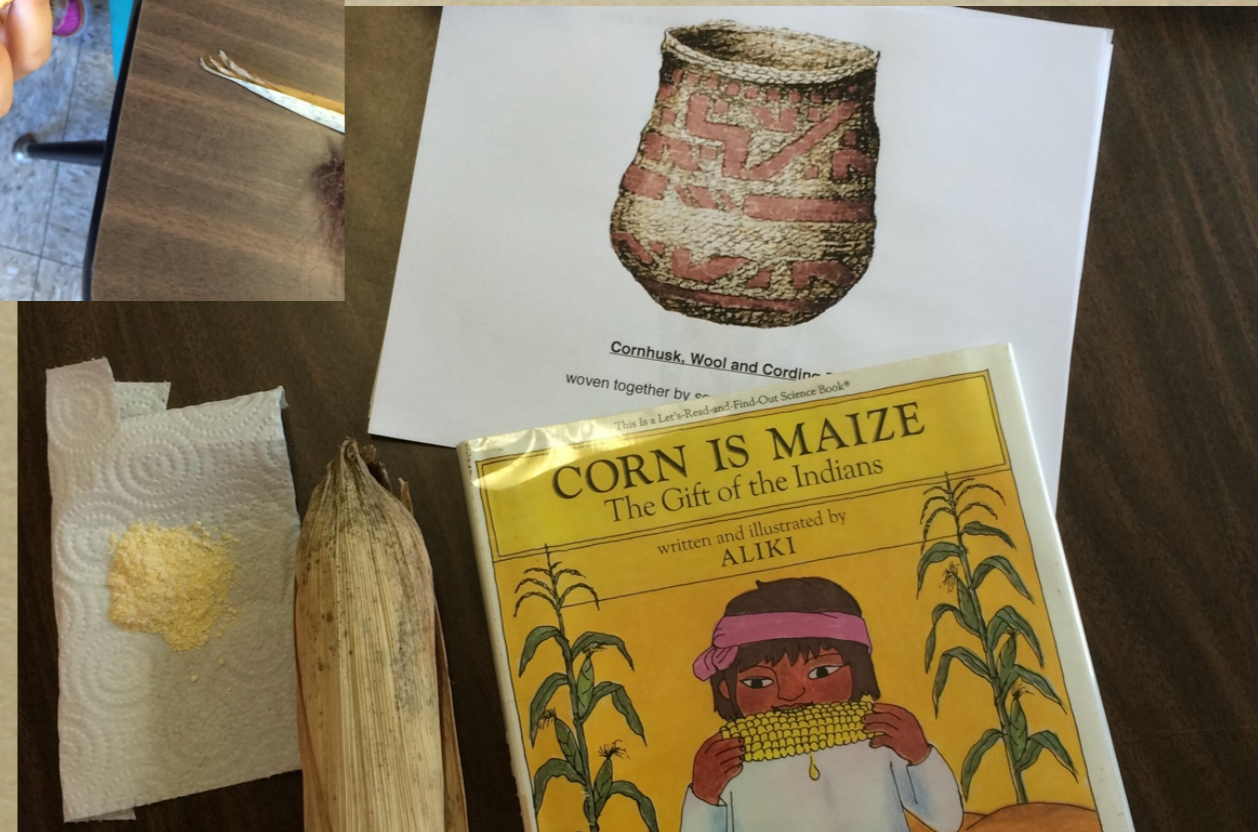
*Raw
Vegetables*



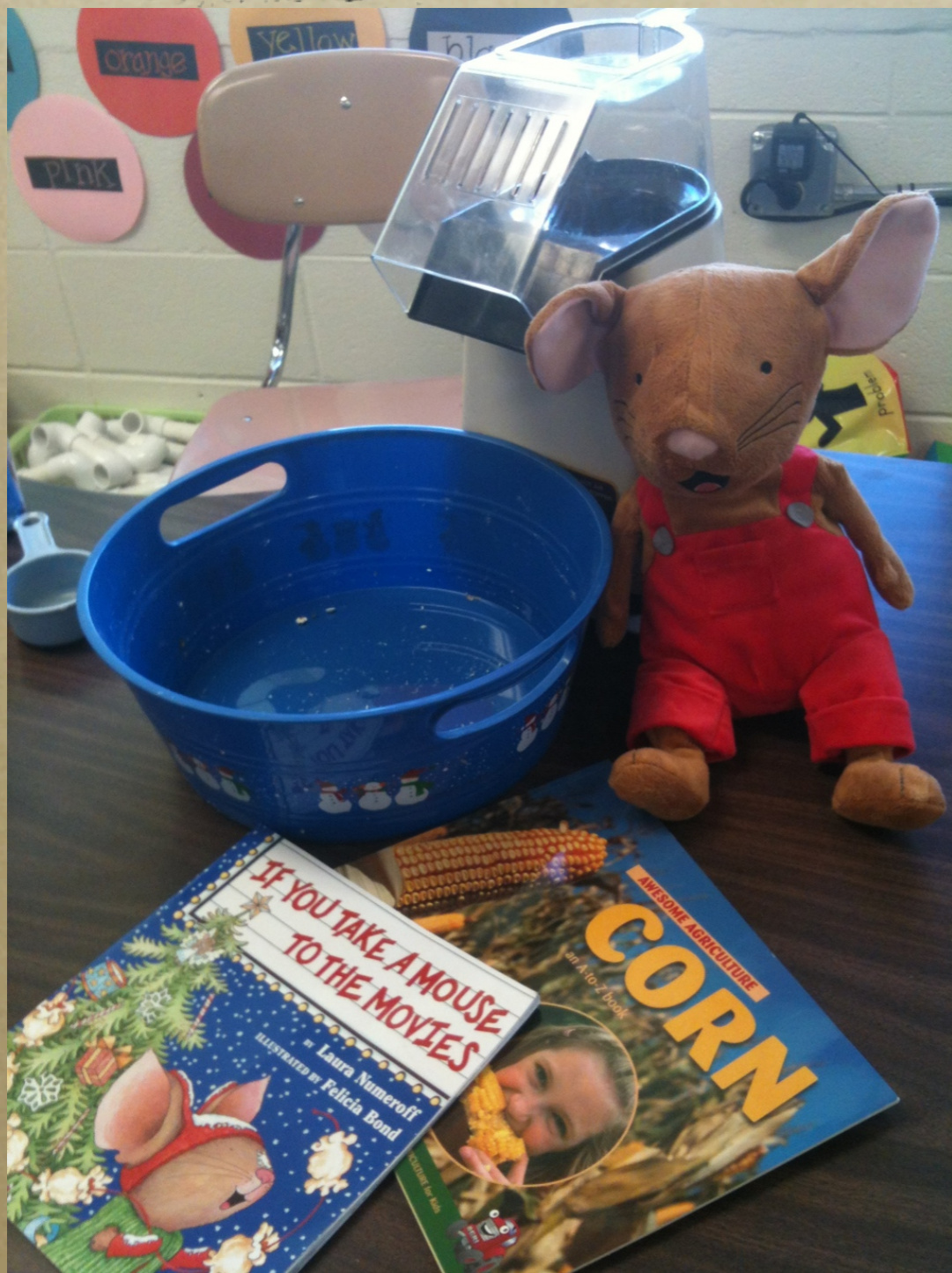
STEAM- Thinking/Problem Solving



*Cooking
with
Corn*



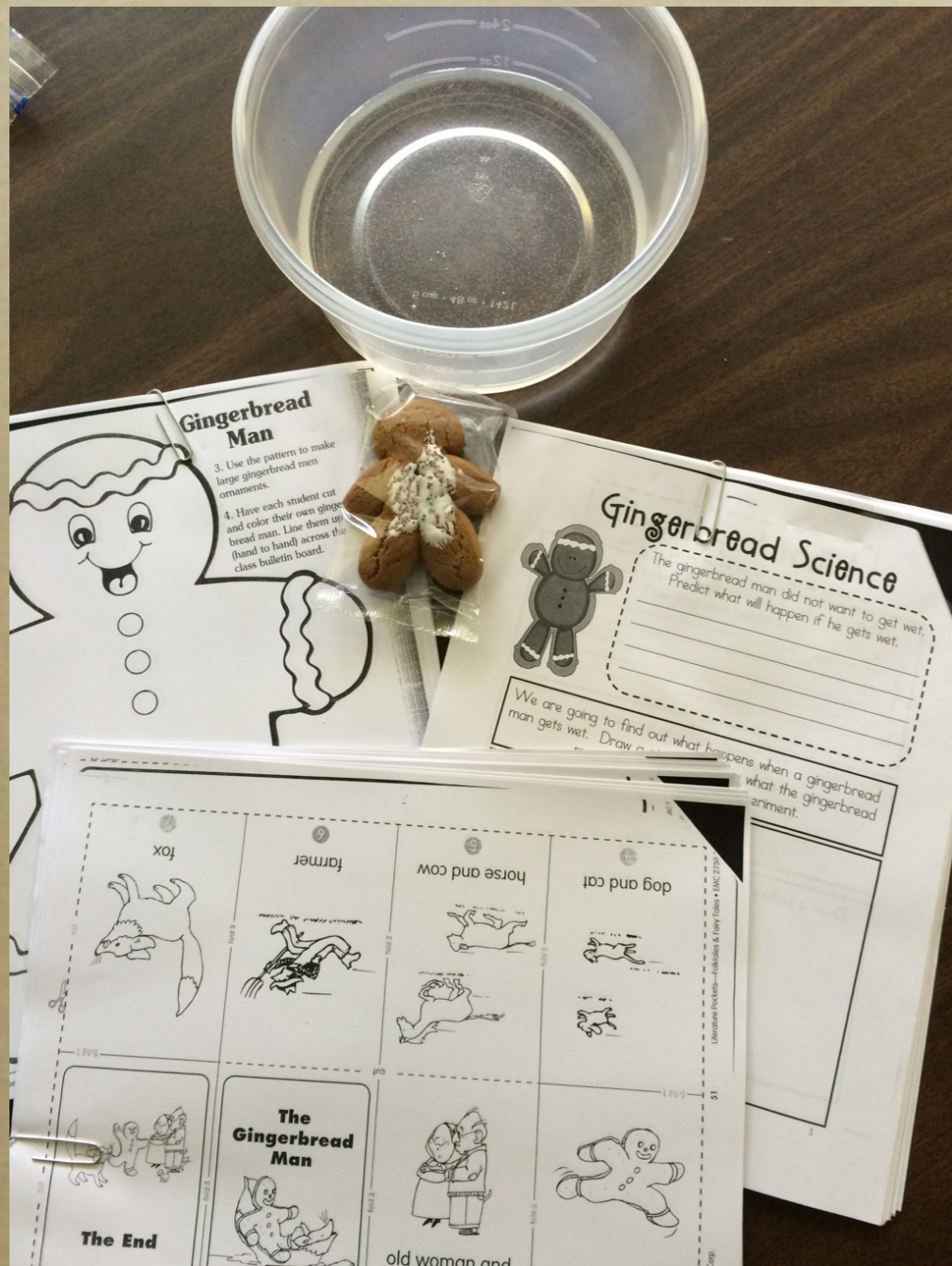
STEAM- Thinking/Problem Solving



Popcorn



STEAM- Thinking/Problem Solving



Gingerbread Experiment



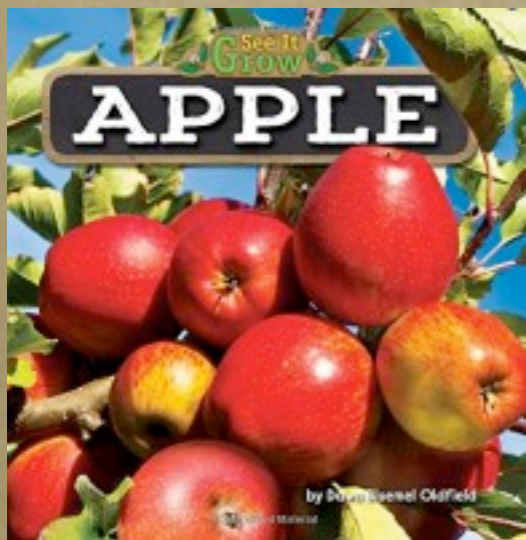
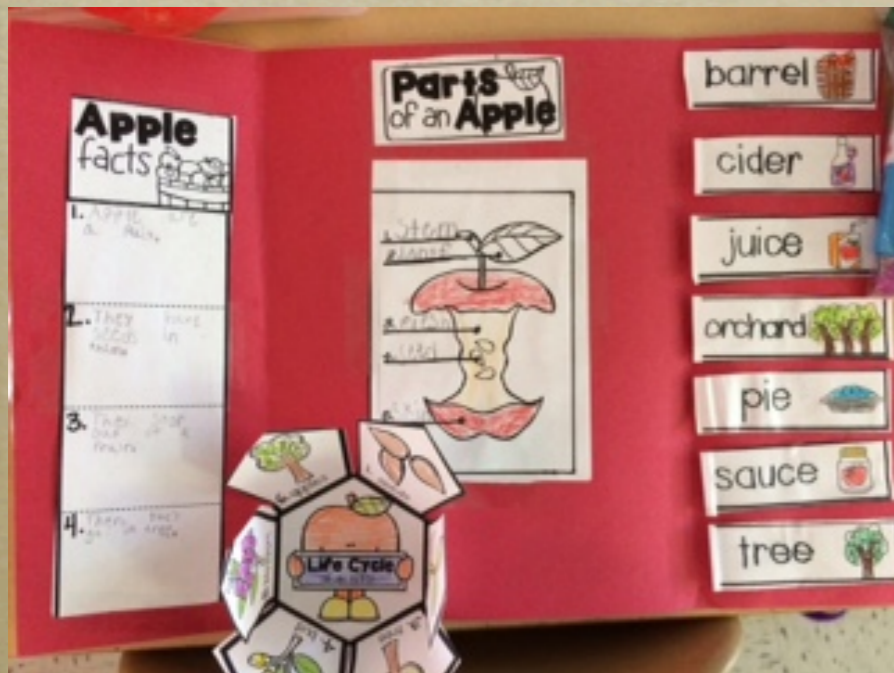
STEAM- Thinking/Problem Solving



*100 Circle
Farms*

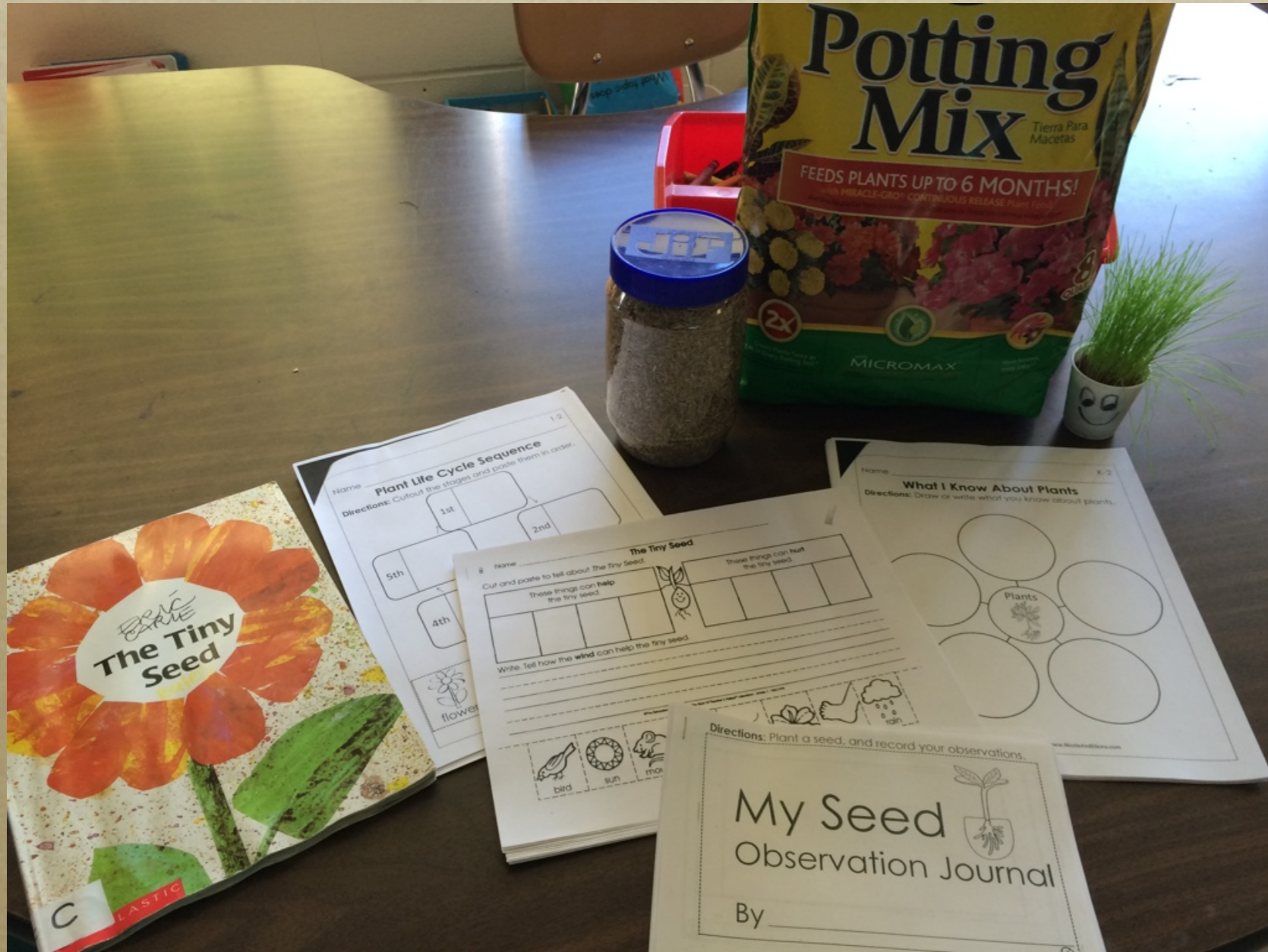
*Potatoes
into
fries*

STEAM- Thinking/Problem Solving



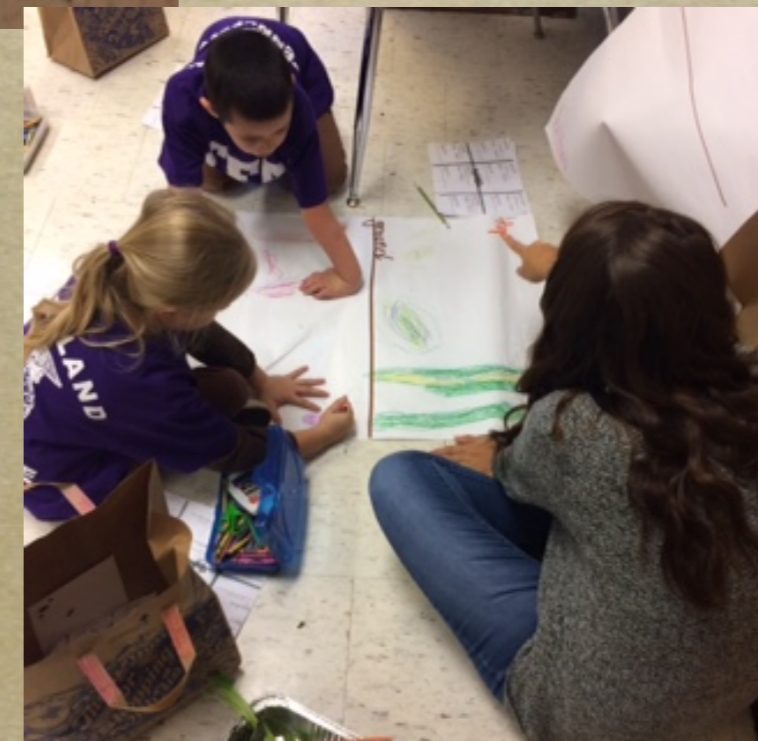
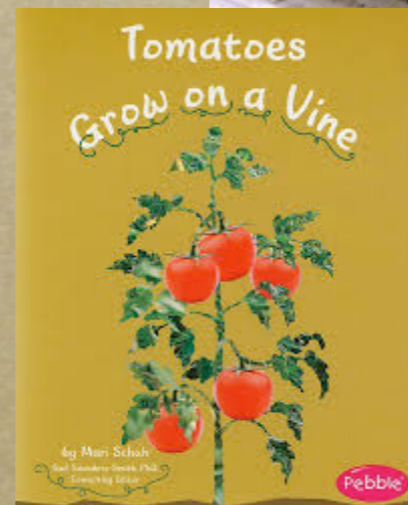
Apple Experiments

STEAM- Inquiry Based Learning



*Develops
questioning and
investigating*

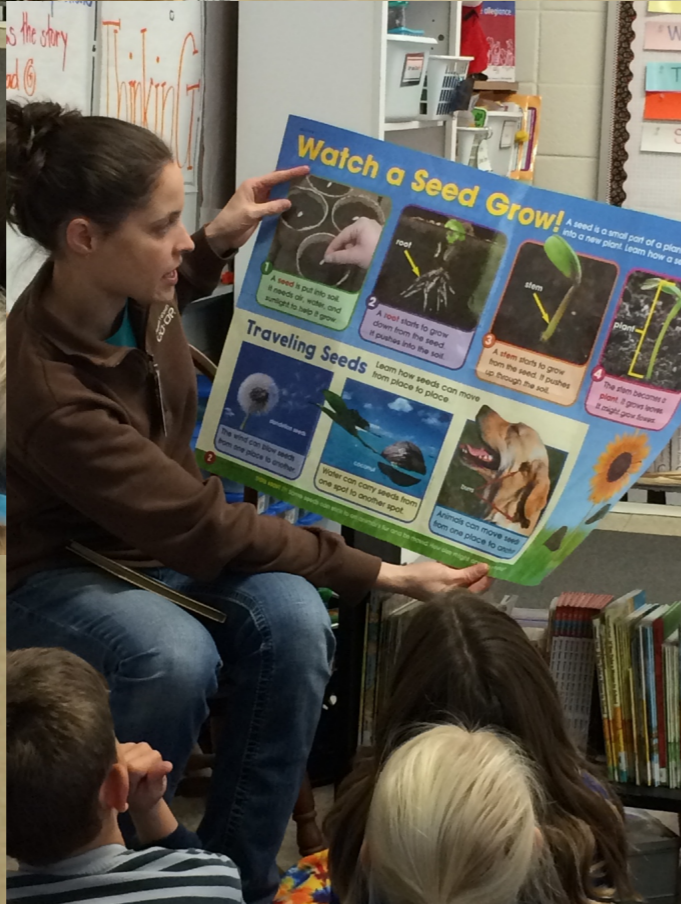
STEAM- Inquiry Based Learning



*STEM Day
Belmont University
Portland High School
Clyde Riggs Elementary*

STEAM- Inquiry Based Learning

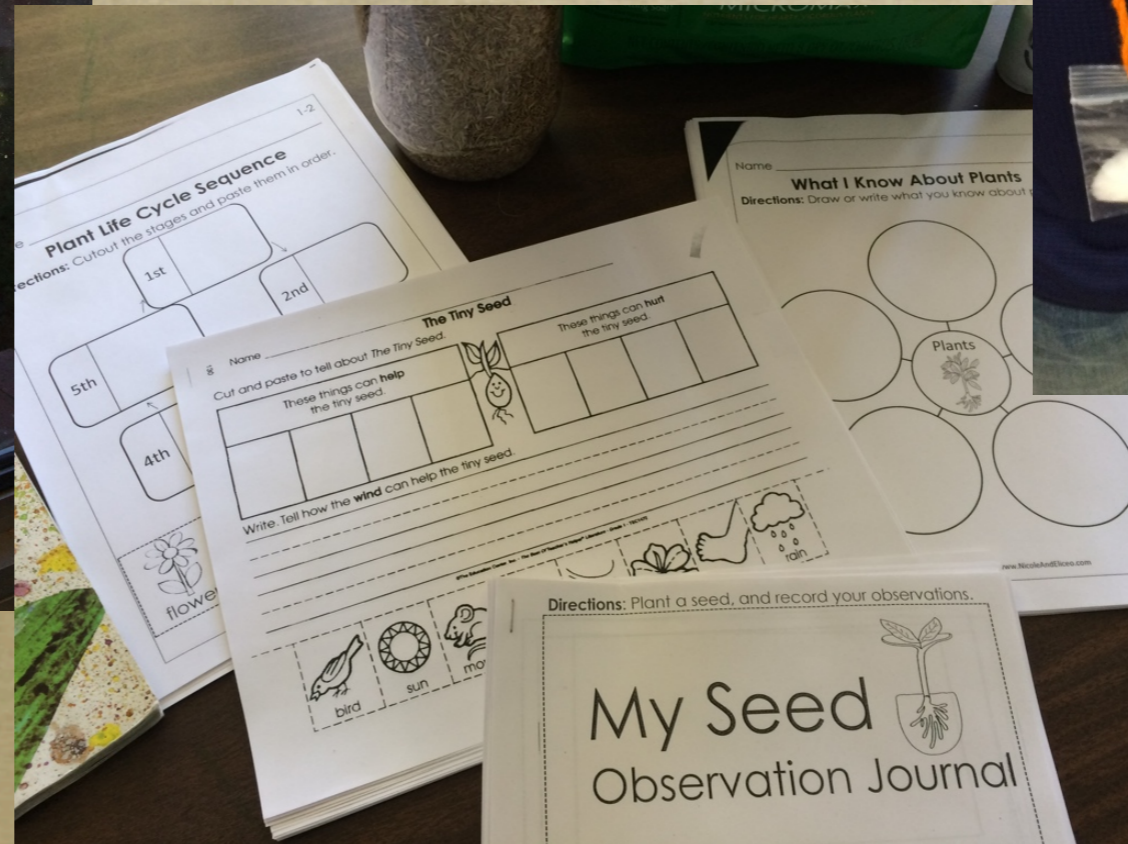
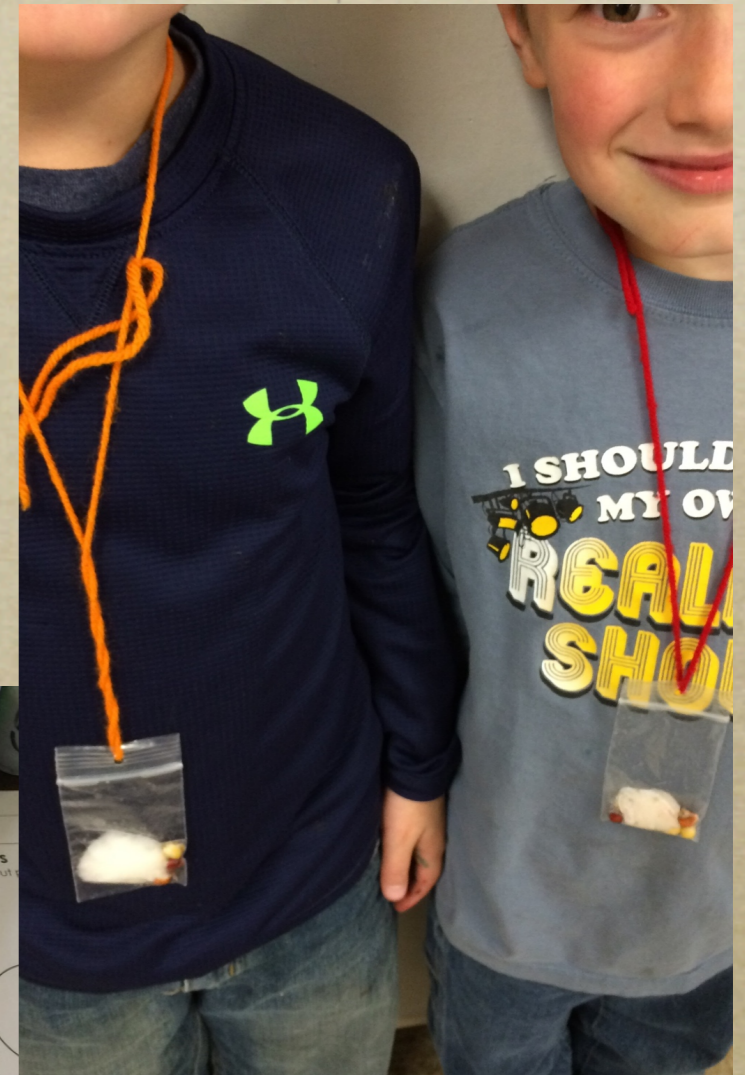
Guest Speaker, Sumner County Co-Op



STEAM- Inquiry Based Learning



Seed Experiments



STEAM- Inquiry Based Learning



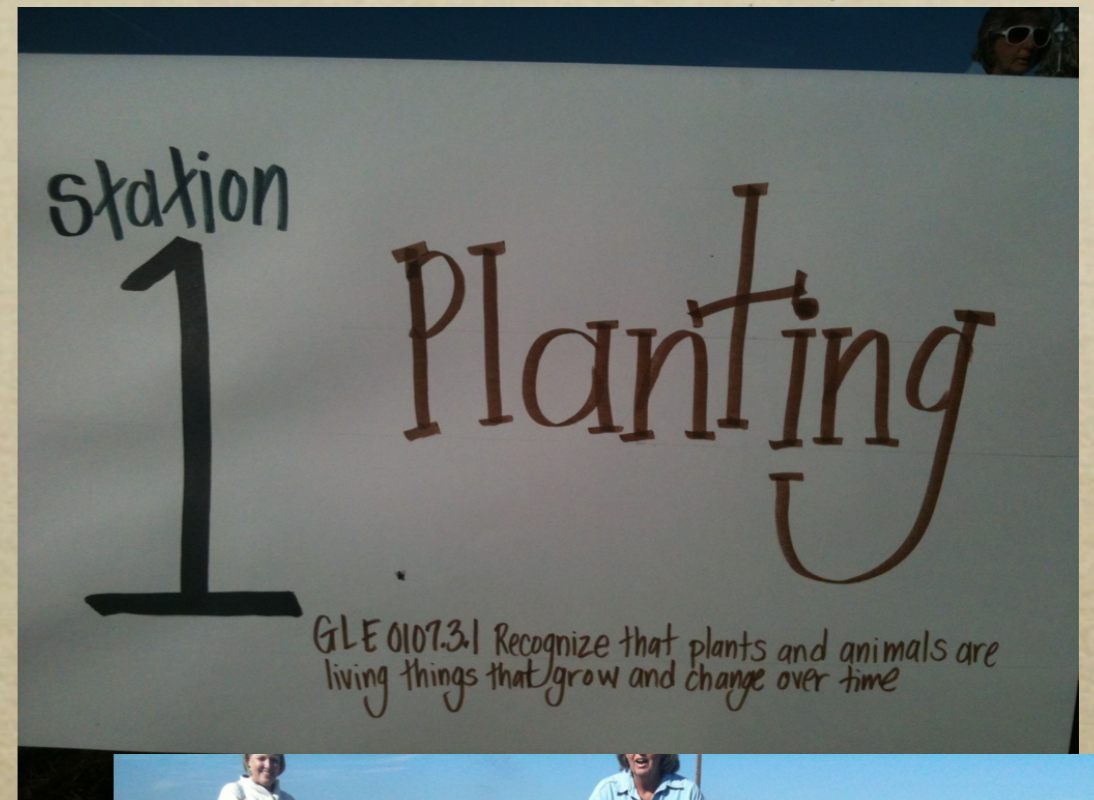
Pumpkins



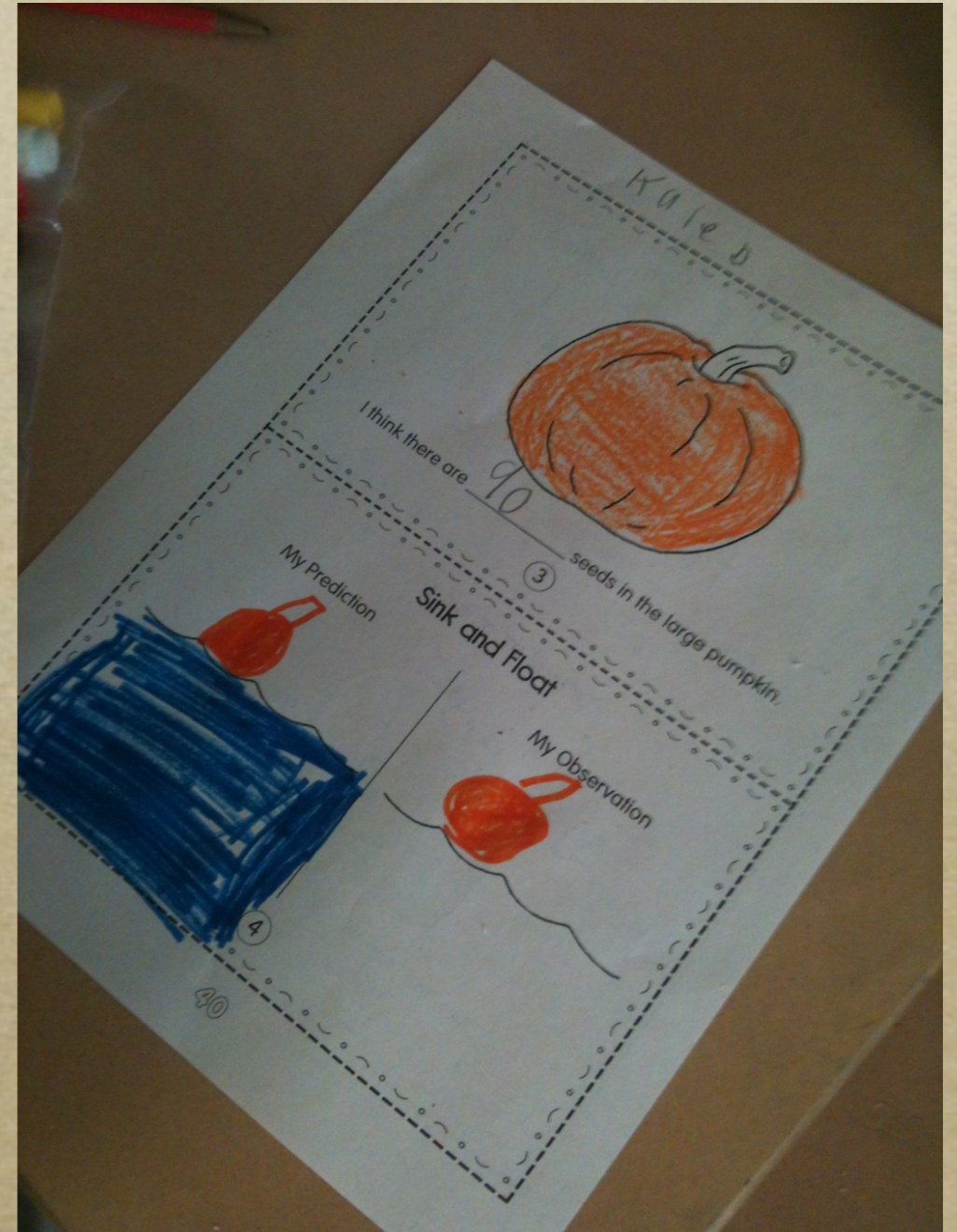
STEAM- Inquiry Based Learning



*Field
Experiments*



STEAM- Inquiry Based Learning



Investigating

STEAM- Inquiry Based Learning



Nursery

STEAM- Inquiry Based Learning



Ag Simulator

Cotton

Hay/Forage

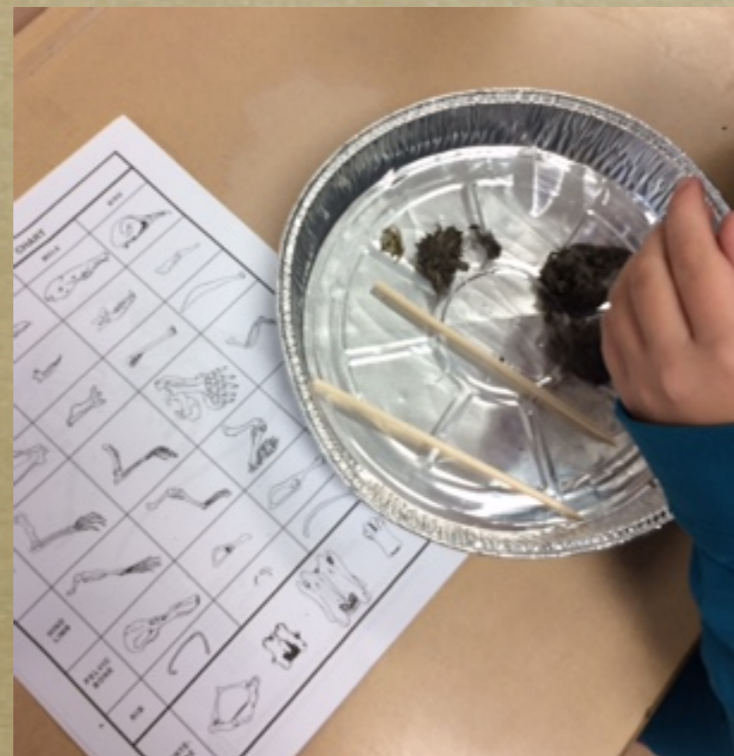
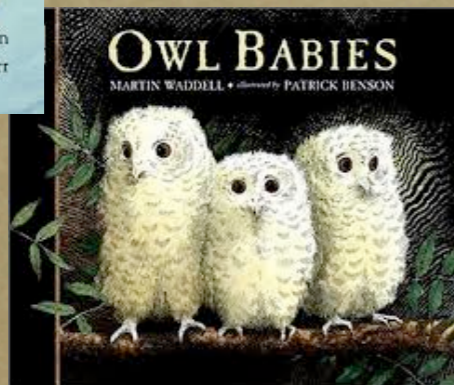
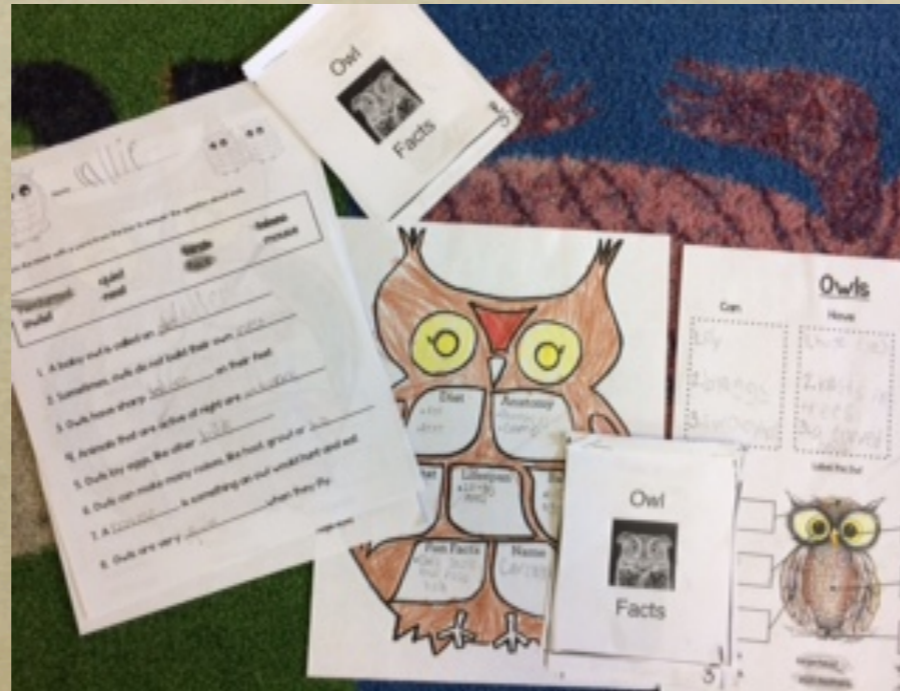
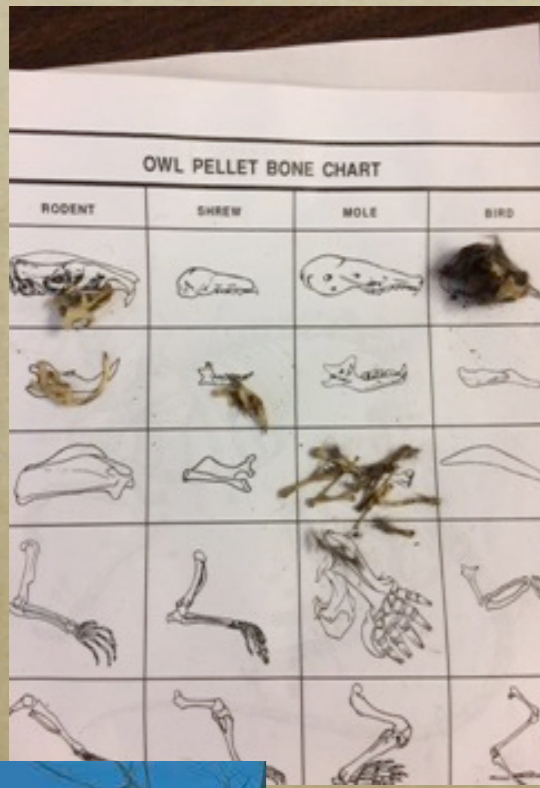
Corn

Wheat/Grains

Timber

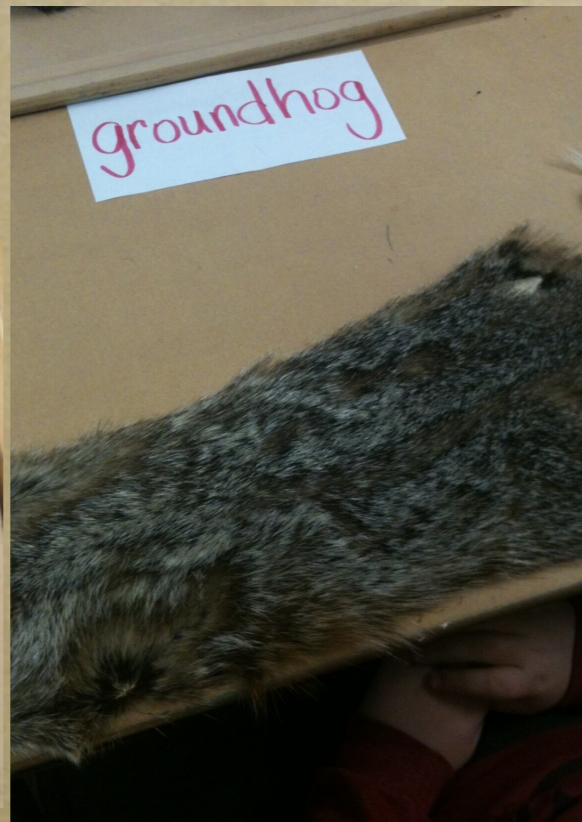
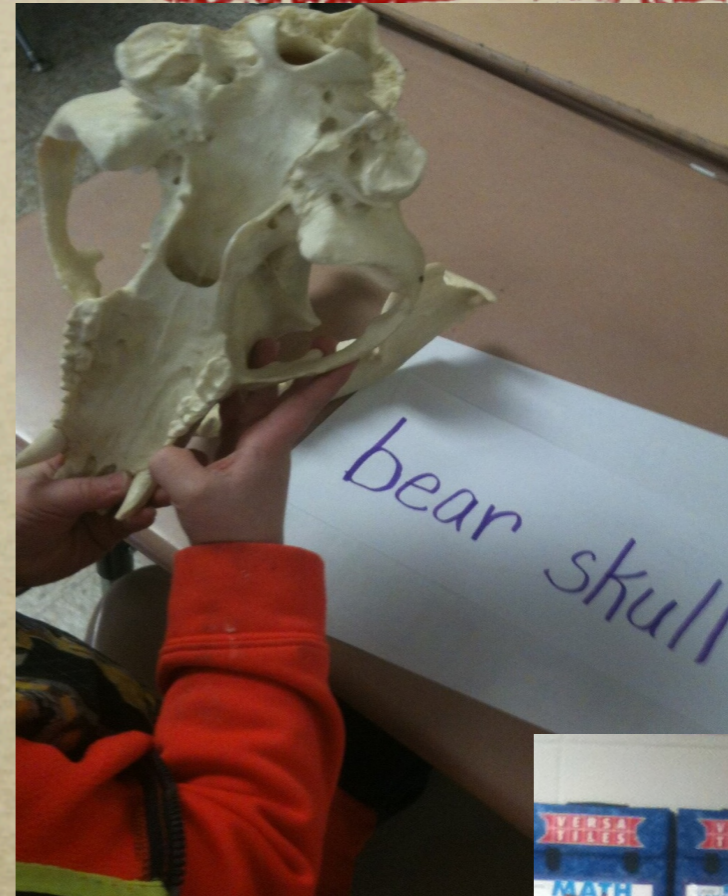
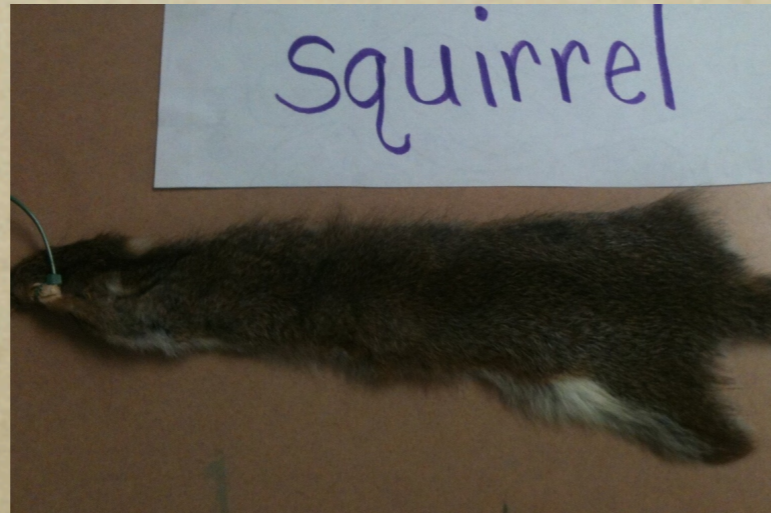


STEAM- Inquiry Based Learning



*Owl
Pellets*

STEAM- Inquiry Based Learning



*UT Extension
Agent*



STEAM-School Garden



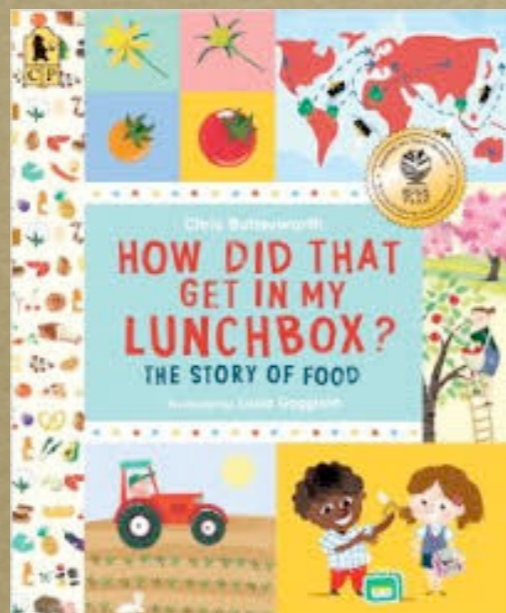
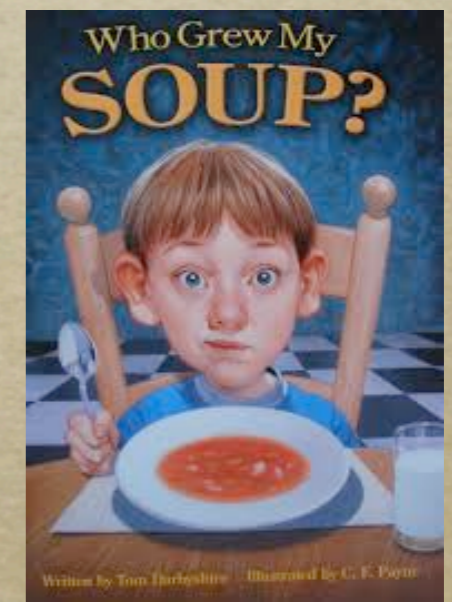
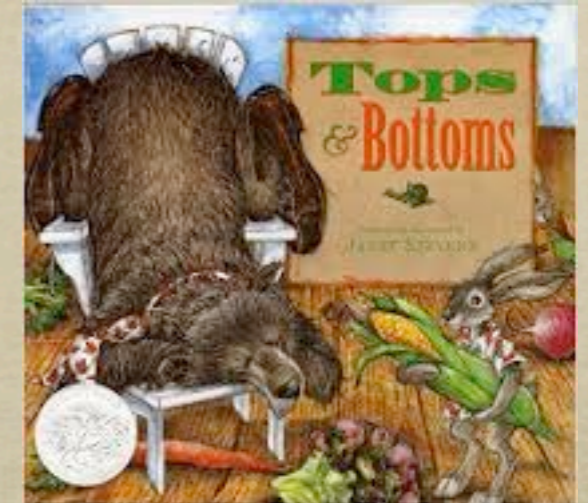
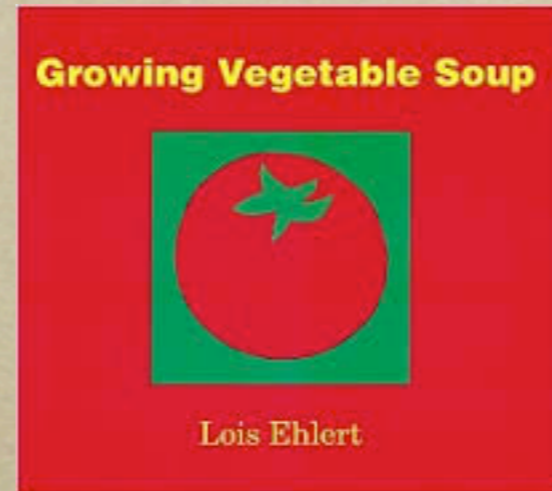
*Develops
the connection
between
'seed and supper'*

STEAM-School Garden



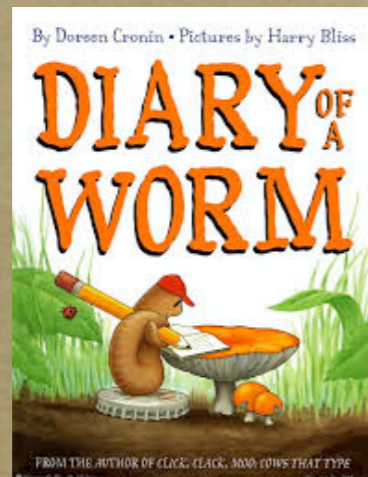
Garden Club

STEAM-School Garden



Ag
Literacy

STEAM-School Garden



*Classroom
Garden*

STEAM-School Garden

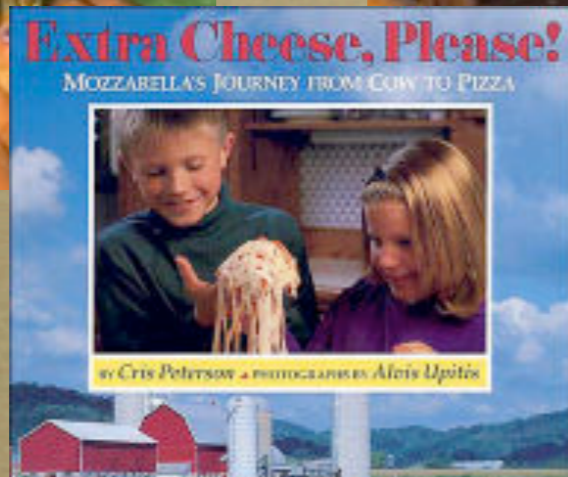
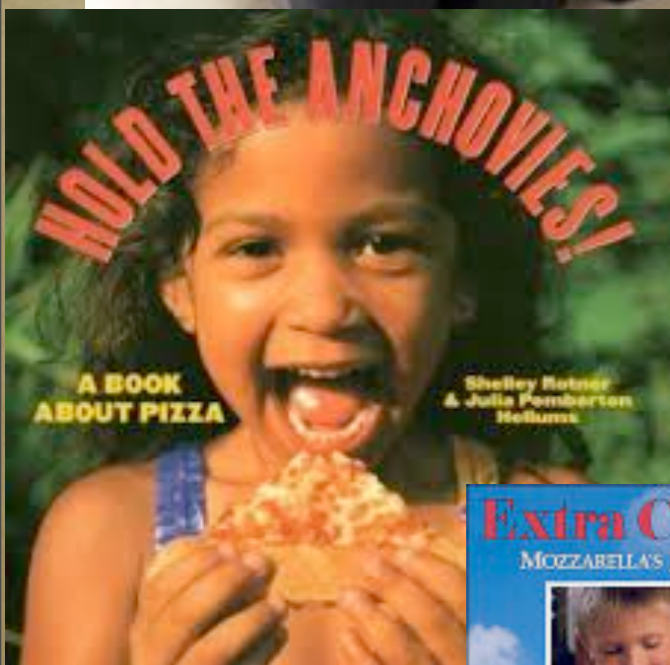


Pizza GARDEN
Tomato - Gulf State
Pepper - Sweet Banana
Basil
Dregan
KMG
"



Local Nursery

STEAM-School Garden

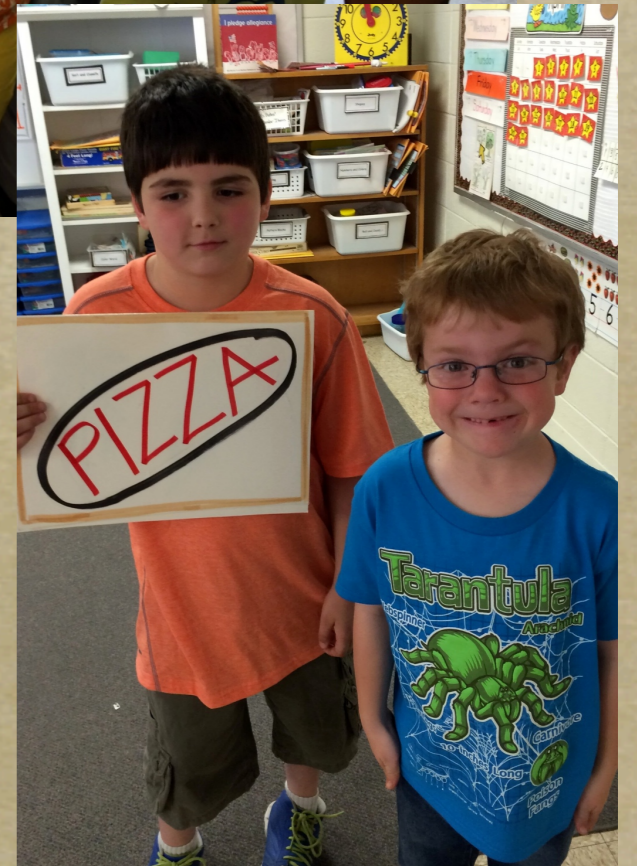


*Pizza Garden-
High School
Greenhouse*

STEAM-School Garden



*Pizza
Play*



STEAM-School Garden



*Tennessee
Garden*

STEAM-School Garden



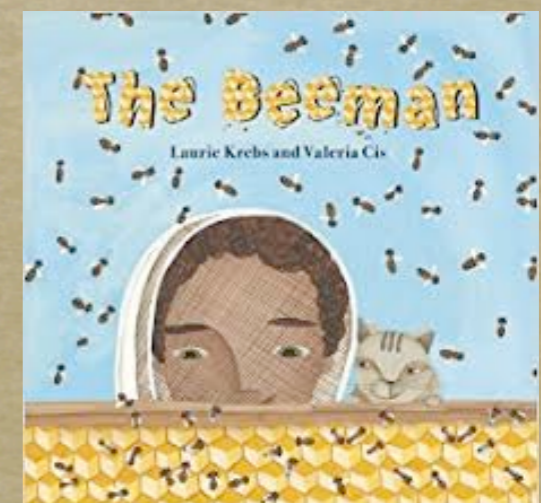
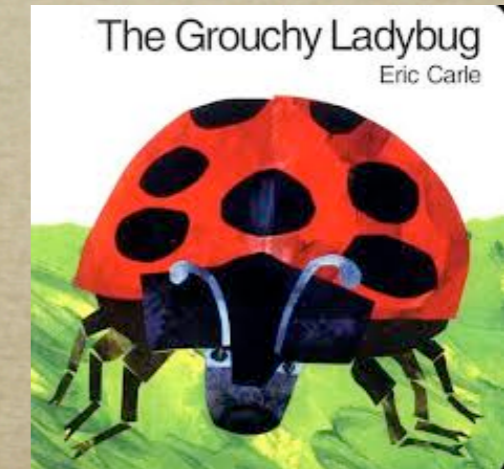
First Graders and High School Art Students

STEAM-School Garden



*Tennessee Symbols
and
Native Plants*

STEAM-School Garden



STEAM





STEAM


Name _____


POLLINATION EXPERIMENT

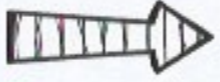
Draw a picture in the first box and write a sentence in the second box to match.


My bag of Cheetos represents: 


My hand represents: 

When I touched a friend's flower: 





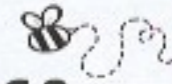




MENSE 2013

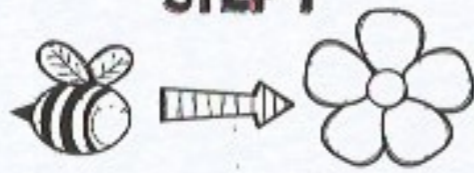
STEAM

Name _____



QUESTION: HOW DO BEES POLLINATE FLOWERS?

STEP 1



The bee flies to a flower.

STEP 2



The bee lands on a flower

STEP 3



The bee flies to another flower.

Draw It:



WHAT HAPPENS AFTER STEP 2?

Draw It:



WHAT HAPPENS AFTER STEP 3?

Write about your observations and conclusion.
