



# Growing STEMS

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# Connections: STEM Day

- Increase students' agricultural literacy and connect agriculture across the curriculum
- Increase pre-service teachers' awareness of agricultural literacy and STEM and how to incorporate it into the classroom
- Expose pre-service teachers to the importance of collaboration within the community
- Implement lessons selected from the National Agricultural Literacy Curriculum Matrix
- Meet standards from multiple content areas

# Literacy and STEM: Rooted in the Standards

- Literacy:
  - Learn About Your World
  - Receptive and Expressive Language
  - Communication
  - Academic Vocabulary
- STEM:
  - Learn About Your World
  - Understand How Things Grow and Work
  - Impact Your Environment

# Collaboration: Growing Partnerships

- Common Beliefs
- Commitment to Learning
- Open to Collaboration
- Experts in the Field



CLYDE RIGGS ELEMENTARY

PROVIDING ACADEMICS WITH SUCCESS



**BELMONT**  
UNIVERSITY



**Portland High School**



# Partners

- Clyde Riggs Elementary School
- Belmont University
- Portland High School
- John Deere
- TN Foundation for Ag in the Classroom
- Portland High School FFA
- Sumner County Farm Bureau
- Portland Pizza Hut
- NAITC
- TSC: Dig It!

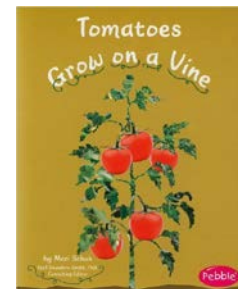
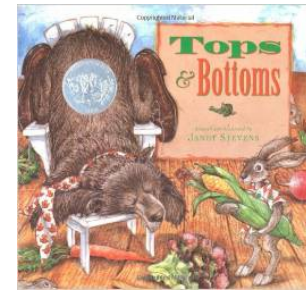


# Partner Resources

- National Ag in the Classroom Teacher Center:  
<http://www.agclassroom.org/teacher/index.htm>
- State Departments of Education:  
<http://www2.ed.gov/about/contacts/state/index.html>
- Ag Pinterest Page:  
[www.pinterest.com/jennifer\\_bates](http://www.pinterest.com/jennifer_bates)

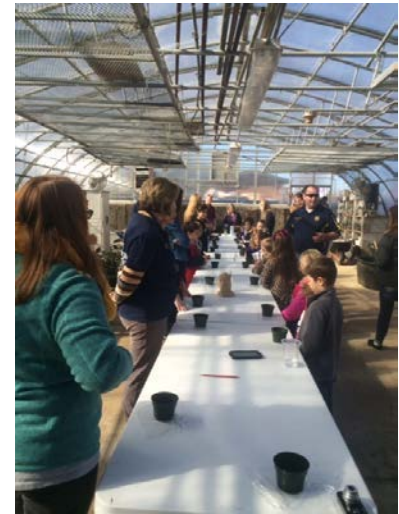
# Nutrients: Fall

- *Tops and Bottoms*
- *Tomatoes Grow on a Vine*
- Greenhouse Planting
- Garden in a Glove
- Food for Thought: Lunch(Pizza)
- STEM Stations
- John Deere Safety
- Soil Cups

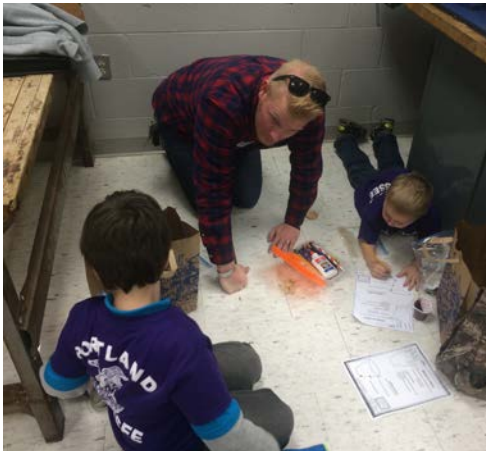


# STEM Stations: Fall

- Aquaculture
- Greenhouse Tour/Planting
- Animal Husbandry:
  - Sheep
- Tractor Safety

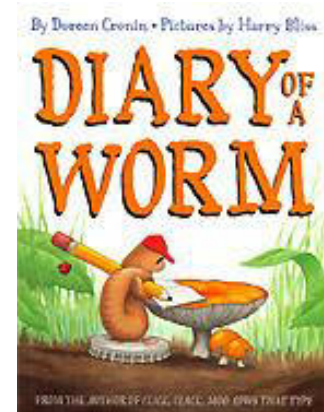


# Seasons of Change: Fall



# Nutrients: Spring

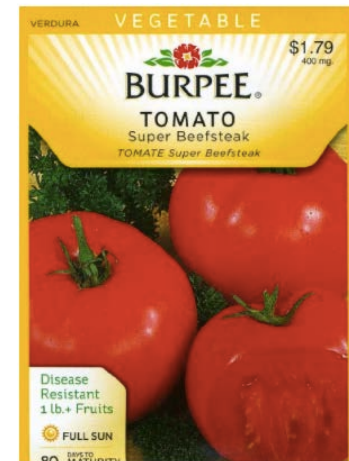
- Seed Packets
- Sequence of [Tomato Seed](#)
- Greenhouse Work
- Food for Thought: Lunch
- *Diary of a Worm*
- *Worms are Wonderful* video
- Small Animal Care





# STEM Stations: Spring

- Greenhouse Tour
- Animal Husbandry:
  - small animal care
- Cowboy Dan
- PHS Food Pantry
- Seed Packets



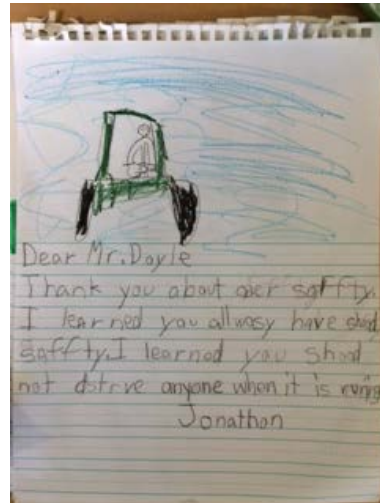
# Seasons of Change: Spring





# Sprouting Ideas

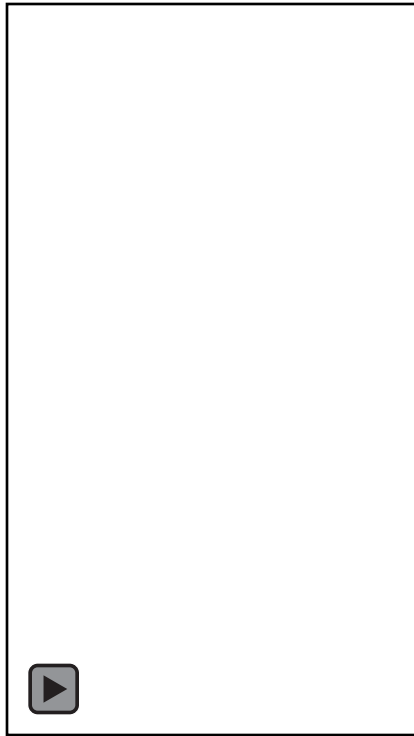
- Elementary Students
- Pre-service Teachers
- High School Students



# Harvesting the Benefits

- More Individualized Instruction
- Additional Resources
- Real-World Experience
- Multiple Perspectives
- Expertise Shared
- College Connections

# Interviews: Sarah Sockwell & Ruth Browner



# Video Clips



- Germination:  
[https://www.youtube.com/watch?v=E\\_rbDzNOZI](https://www.youtube.com/watch?v=E_rbDzNOZI)
- Radish:  
<https://www.youtube.com/watch?v=d26AhcKeEbE>
- Seed Germination:  
<http://thekidshouldseethis.com/post/seed-germination-to-growth-time-lapses-by-neil-bromhall>
- Worms are Wonderful:  
[https://www.youtube.com/watch?v=l-zc\\_1vjLnI](https://www.youtube.com/watch?v=l-zc_1vjLnI)
- *Diary of a Worm* Read Aloud:  
<https://www.youtube.com/watch?v=xLe45CnP8eQ>

# Websites



- Parts of Seed: <http://easyscienceforkids.com/all-about-germination/>
- From Seed to Fruit: <http://www.pbslearningmedia.org/resource/evsc-ps.sci.life.seed/from-seed-to-fruit/>
- Britannica Plant Grows from Seed: <http://kids.britannica.com/elementary/art-89944/A-bean-is-the-seed-of-a-bean-plant>
- BrainPop: <https://www.brainpop.com/science/diversityoflife/seedplants/>
- My American Farm: <http://www.myamericanfarm.org/classroom/games>

# Apps



- Seeds to Plants:  
<http://www.teacherswithapps.com/seeds-to-plants-app-enables-early-years-kids-find-out-how-to-grow-plants/>
- Gro Garden:  
<http://www.bestappsforkids.com/2014/gro-garden/>
- Plants for iPad: <http://www.kidsdiscover.com/apps-for-kids/plants-app-for-ipad/>
- Plants HD by Sprout Labs:  
<https://itunes.apple.com/app/plants-hd/id490444766?mt=8>
- Happy Little Farmer:  
<http://topbestappsforkids.com/best-kids-apps-happy-little-farmer/>

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