



Second Grade SPRING

([Full lesson plan here](#)) & ([Full lesson plan here](#))

Center 1 Second Grade: Economics & Lettuce Harvesting

Location: Garden

(Need: Spring Harvest Bin with lettuce spinners, colanders, scales, extra bowls, 2-3 clean bins half filled with cold water, harvesting bags, white board, white board marker, No Thank You Bowl, hand sanitizer, optional salad dressing in bowls for dipping)

- Define harvest, define crop - Explain that when a farmer grows lots of a plant to harvest and sell, this is called a **crop**. They will be harvesting the spring crop of lettuce
- CO Agriculture Facts:
 - Colorado harvested 3,000 acres of onions in 2021, (3,000 acres would be like having 35 Disneylands right next to each other!) That land produced 140 million lbs of onions in one year, (which would balance a scale with 470 blue whales, the world's largest animal)!
 - Colorado is 3rd in lettuce production of the nation
 - 2022 Potato production in dollars: \$380,000,000 (this would be enough money to buy everyone in Colorado a smartphone.)
 - 2022 peach production in dollars: \$33,000,000 (enough money to buy everyone in the Denver Metro area a movie ticket.)
 - Colorado produces 30,775,000 lbs of sunflowers (also the same weight as 2,370 elephants)
 - Colorado produces 2.3 billion lbs of potatoes every year (the same weight as 92,000 school busses!) If you weighed all of Colorado's potatoes from one single day of harvest, you would need 300 of those school busses on the other side of the scale to balance it!
- Brainstorm harvest celebrations around the world - ex: harvests for Thanksgiving, Farmers Market's, Moon Festival (Chinese tradition) or Sukkot (Jewish tradition)

- Explain that today, 2nd graders will take both roles of producers and consumers. Explain that most often, the process of producing food is handled in many steps by many different specialists - harvesters, washers, dryers, and packagers. Tell students this lettuce was planted by the first graders in the early spring, and will be harvested by the second graders. Encourage a moment of gratitude for the hard work of their younger classmates.
- How is food is produced? Break down the steps for the producing side: Planting, watering, weeding, harvesting, washing, packing, transportation, selling
- Model today's steps to show exactly what you want them to do:
 - Harvesting: Tear leaf at base, look for insects, put in first washing bin, **only half of one garden bed for each class total - this is 1/4 of a garden bed per center.** Please start harvest with garden bed 3 - once two classes have gone and the bed is empty, then the next class can move to harvest garden bed 4.
 - Washing: Gently stir in first bin, using colander move to second rinse, then third (if applicable), then to spinners
 - Drying: Spin, discard excess water, spin again, transfer to packagers
 - Packaging: Fill bags to about 1 lb, using scale, tie off, move to shade
- Break into 4 groups (harvesting, washing, drying and packaging) and explain 5 minute rotations. Hand sanitize first.
- Begin rotations. **Only harvest 1/2 of 1 bed = 1/4th of a bed per center rotation**
- At end, come together to celebrate assess harvest:
 - How many pounds did we harvest?
 - Use white board for a few real world math problems.
- Time to be consumers - define consumer as one who purchases goods or services. Today, they can purchase a piece or two of cleaned lettuce with a grateful statement - ex. "I am grateful for the volunteers who helped today", or "I am grateful for the healthy soil that grew the lettuce" or "I am grateful for the first graders that planted".
- Share their observations of the lettuce.
- **Kids are welcome to bring their harvested lettuce home. Encourage them to make a salad at dinner.**
- Clean up or reset for the next harvest.

Please have each 2nd grade class gift 1-2 lettuce packages to each 1st grade class so they can taste the lettuce:

1. Seely - Gift to Mueller
2. Jack to Savage
3. Washburn/Graffam to Travis
4. Tobin to Johnstone

Center 2 Second Grade: Insects and Plants

Location: Garden

(Images of animals found in the garden, trowels placed in diggable areas, critters captured in magnifying boxes ahead of time (if able), pencils, dry erase marker, two small white boards - one blank, one with incorrect drawing)

- Remind students of the fall habitat lesson
- Begin by asking students if they can describe the components of a habitat? You can prompt them by asking what humans need to survive, and relating that to plants and animals. Focus their discussion on these four necessities: Food, Water, Air, and Space. Space includes appropriate temperature and shelter for protection. Is the garden a habitat? Yes!
- Brainstorm animals that use the garden as a habitat - use images
- Explore the garden looking for animals 10-15 min. Remind students that they may have to be extra observant detectives in the cold weather.
 - Not harvesting
 - Not capturing or touching animals
 - Only dig where the shovels have been placed, don't move them around
 - Explore creatively - listen, look up and around the garden, turn leaves, lift rocks and replace, etc.
- Come back together to share.
 - As students share which critters they found, do a guided drawing on the white board. Write name of animal, talk about its body as you draw it. Use image and/or real critter in magnifying box. Invite a student to have a turn drawing an animal they did or might see in the garden. Do this for 4-5 animals, time permitting.
 - Explain how scientists sort and categorize critters by observable characteristics

- One of the most straightforward categories in the animal kingdom is insects. Draw an insect, but explain that you are not sure that it is very anatomically accurate. Ask the students to help correct your drawing to make it look more like an insect. You can help guide them to create an image with:
 - Six legs
 - Two antennae
 - Three body parts - head, thorax, abdomen
- Sing Head Thorax Abdomen (tune of Head, Shoulds, Knees and Toes) or play simon says style game with insect body parts, if time permits
- Release the animals from the magnifying boxes.
- Finish as a whole class watching YouTube video of what makes an insect once both centers are done.

If time permits: Challenge the students to determine which of the animals you discussed were actually insects. Feel free to use the image cards to quiz students. You can sort the images of the animals into groups, insect or not insect. Here are some critters you may find that are often mistaken for insects:

Not an Insect:

- Roly Poly/Pill Bug - has 14 legs and 4 antennae - is a crustacean, related to crabs
- Spider - has 8 legs and 0 antennae, is an arachnid
- Daddy Long Legs - has 8 legs, is not a spider, is not venomous, despite what many people say (widespread myth about it being super venomous but unable to pierce human skin). It is a harvestman, an arachnid that are primarily decomposers.
- Centipede - has around 40 legs, is a cousin of the insects
- Millipede - has around 100 legs, is a cousin of the insects