From Seed to Sales:

How to Create Successful, Student Powered Plant Sales and School Garden Stands

Katie Ruppel
Farm to School Educator
Island Grown Schools

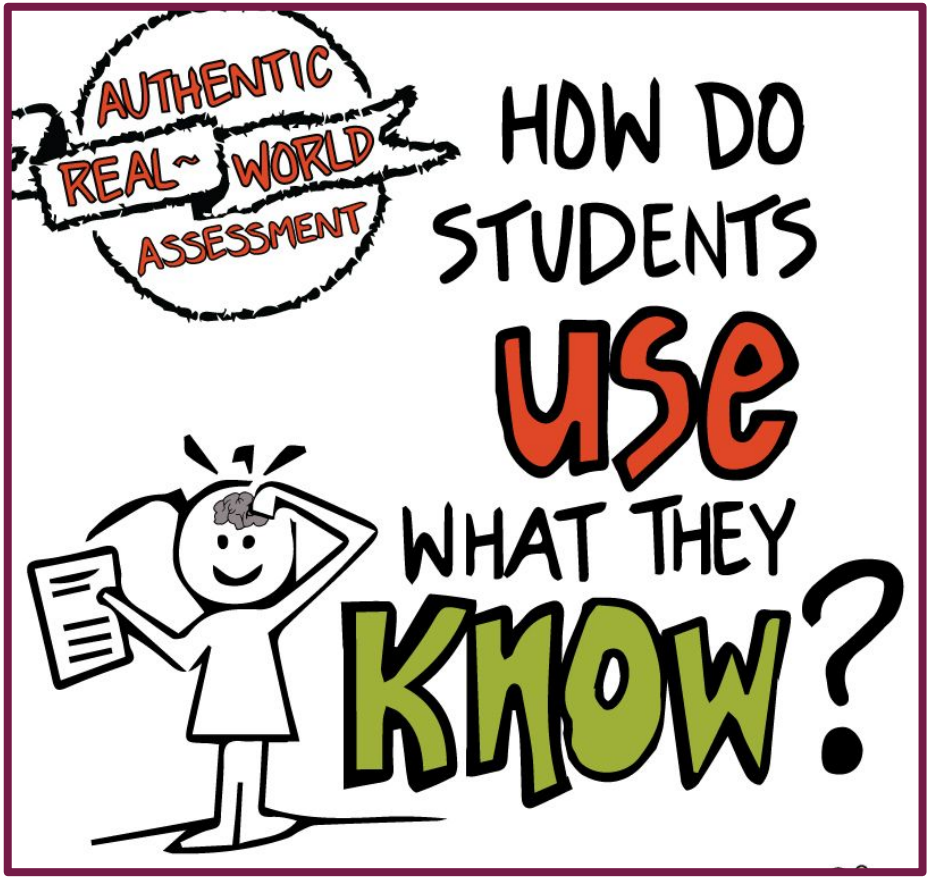
Suzie Scordino
Farm to School Educator
Island Grown Schools

Why organize student run sales?

- Engaging and involving all students in the class
- Thematic content connections
- Authentic assessment - a project with real, tangible goals
- End product they can see
- Develop and practice skills
- Raise money to purchase everyday supplies or a big purchase!

Using Authentic Assessment

- Students analyze what they've learned and apply it their own experience
- Don't have to memorize facts for a test, so they can use their creativity to show what they've learned
- Great for groups, so students can get experience collaborating on projects with their peers

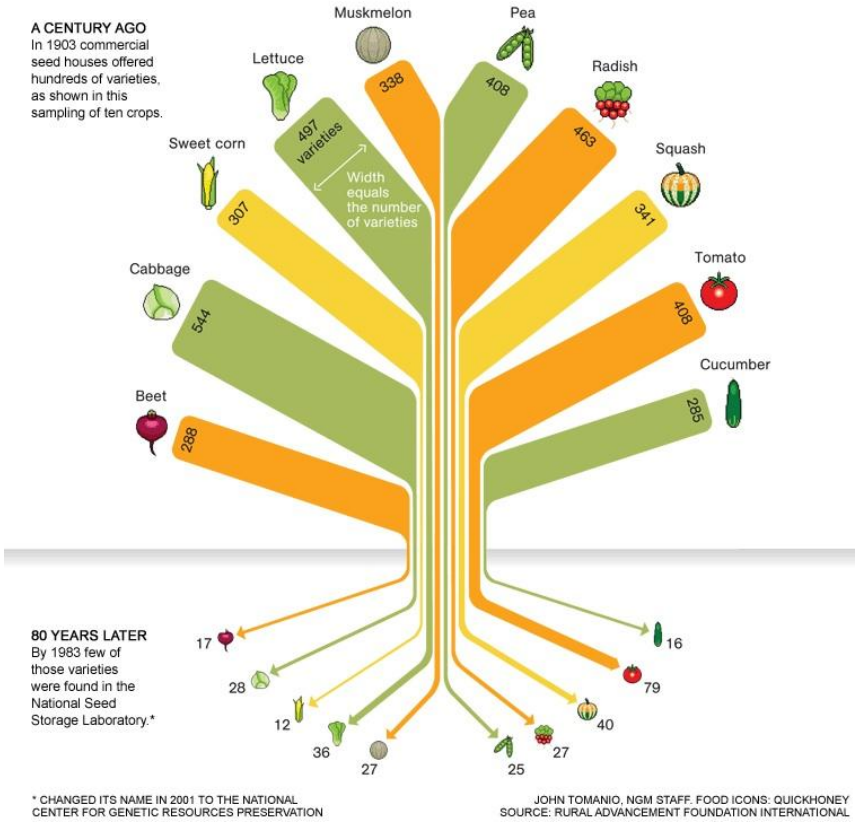


Seed Sales


Holiday
Speed Sale
when: Dec. 18th - Dec 22nd
where: front entrance to school
what time: 8:00 - 8:20 (same time as school store)
Elengib

Why save seeds?

- Save seeds - save money!
- Preserve genetic diversity
- Adapt seeds for your region
  - climate, soil and culture
- Connect to natural rhythms and cycles
- Build community
  - Share with families, gardeners, and farmers

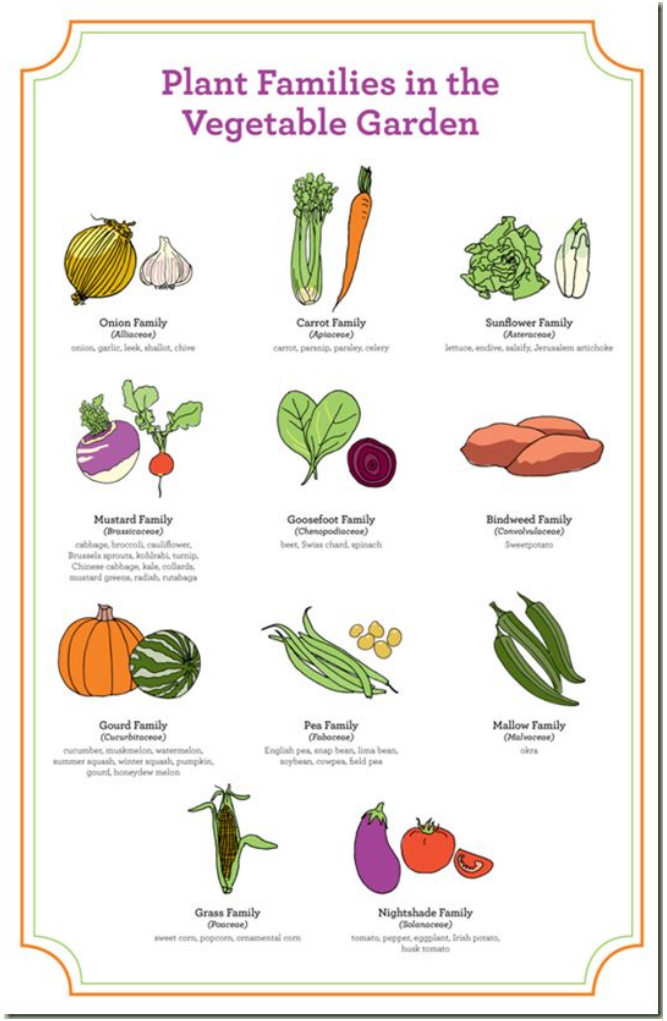


Research Seed Saving

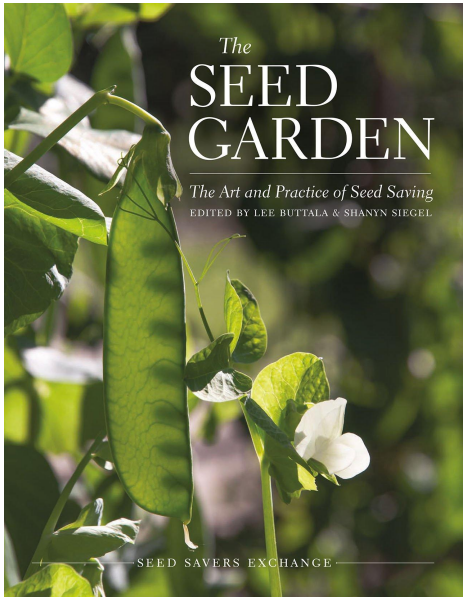
Seed saving is a complex science with several influencing factors. You will need to have a little knowledge of:

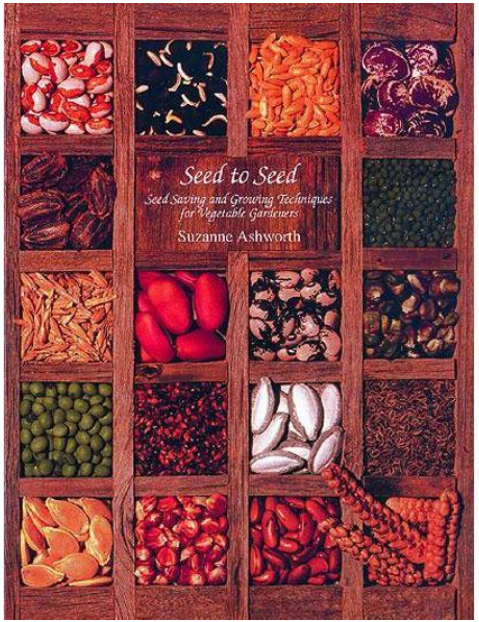
- Plant families, genuses, and species
- Isolation distances to prevent cross pollination
- Sufficient population sizes
- Type of pollination (self, insect, wind)
- Annual, biennial, perennial

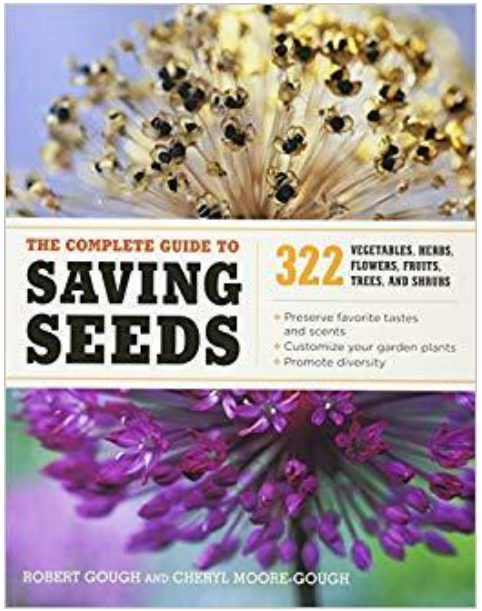
Reach out to your local extension office or a Seed Library in your community for more information. Or



Read!







Seed Savers Exchange also has a great online guide

Plan for Growing out Seed Crops

- Use open-pollinated seeds
  - Genetically “true to type”
- Start with easy crops
  - Peas
  - Beans
  - Lettuce
  - Tomatoes
- All are self pollinating
- Only need a small population of plants
- Will not cross with other varieties*

P. S. All heirlooms are open pollinated!

Plan for Growing out Seed Crops

- Ground cherries/Husk cherries
- Cilantro
- Cucamelons
  - AKA Mexican Sour Gherkins or Mouse Melons
  - Separate genus from other cucumbers
- Marigolds and Sunflowers
  - Will cross with other varieties
- Bell peppers, cucumbers, melons, and radishes
  - Can only grow 1 variety in garden
  - *Need 20+ plants for genetic diversity to avoid inbreeding*



Radish



Lettuce



Cilantro

Harvest and Process Seeds

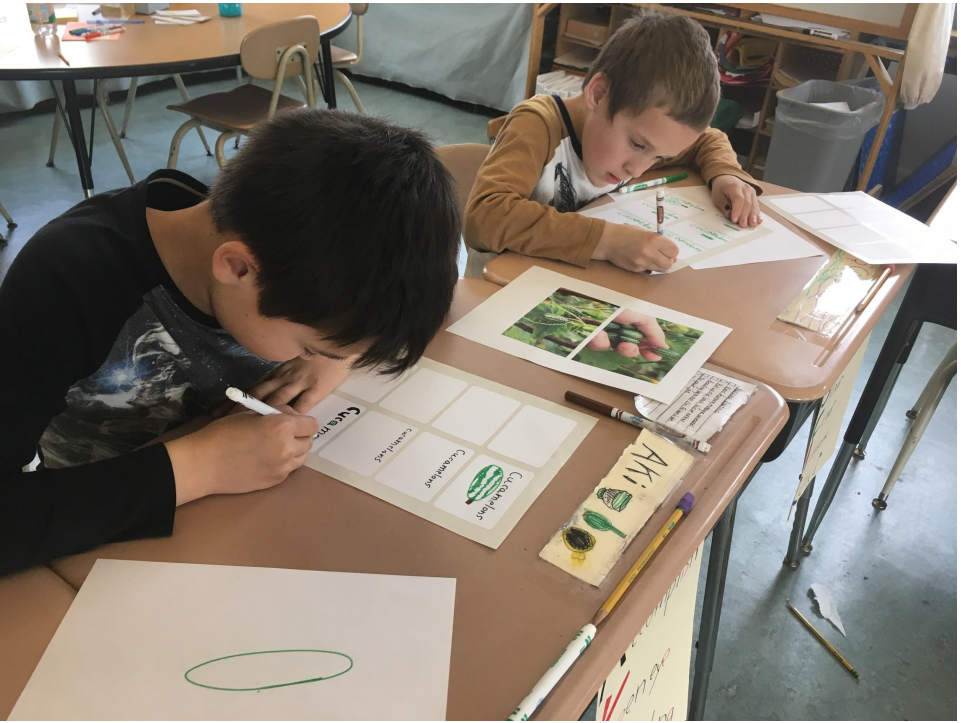
Wet Seed Processing

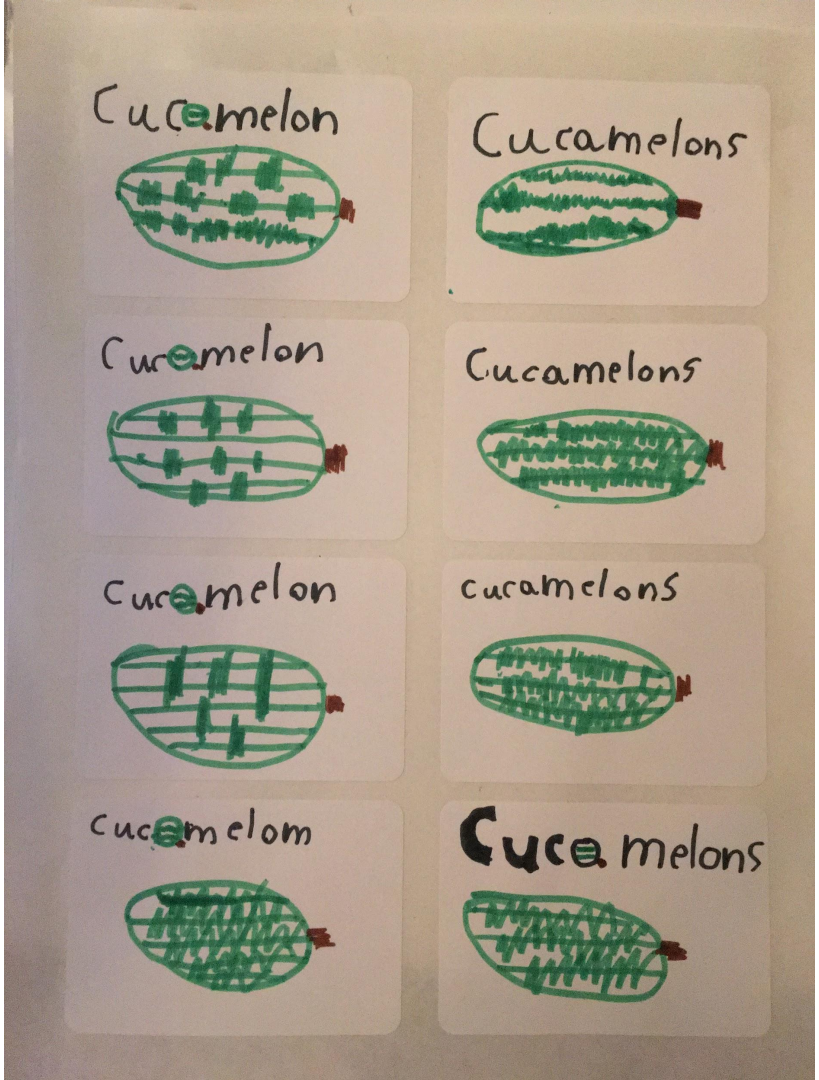
- Set their seeds in fruits
- Tomato, ground cherries, cucumbers, peppers, melon, squashes
- For nightshade family, ready to harvest seeds when fruit is ready to eat
- For cucurbit family, ready to harvest seeds when fruit is overripe
- Best to ferment seeds - mimicking nature’s cycle

Dry Seed Processing

- Set their seeds in pods or nuts
- Beans, peas, cilantro, lettuce, radish, kale, marigolds, sunflowers
- Often need to be dried for a couple weeks in a dry, well-ventilated area
- Can easily shell or thresh
    - Lettuce requires removing chaff

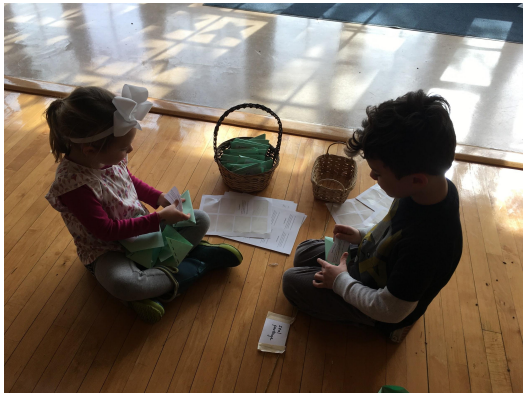
Plan for Sale





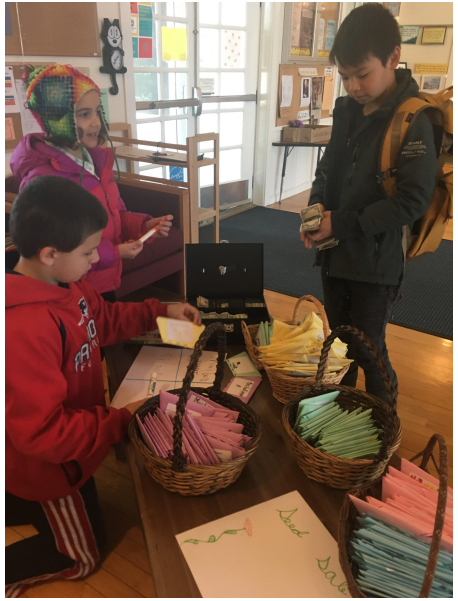
Seed Assembly Line

1. Fold envelope
2. Info sticker on back
3. Fill with seeds
4. Art sticker to seal



Seed Sale

- Use simple spreadsheet to keep track of sales
  - Type of seed/price/how many sold
- We sell before school for 30 minutes for 1 week
- Have profited between $170 and $500
- All around an easy place to start with student-run sales
  - Inexpensive start-up materials
  - Not to mention incredible learning opportunities and curriculum for seed saving for all grade levels



Seed Saving - Science Standards

- Kindergarten - Recognize that all plants and animals have a life cycle
- 1st grade - use evidence to explain that plants have roots, stems, leaves, flowers and fruits that are used to take in nutrients, water, air, produce food, and make new plants
- 2nd grade - Describe and classify different kinds of materials by observable properties of color, strength, flexibility, hardness, texture, absorbancy
- 3rd grade - provide evidence that plants and animals have traits inherited from parents and that variation of these traits exist in a group of similar organisms
- 4th grade - construct an argument that animals and plants have internal and external structures that support their survival, growth, behavior and reproduction
- 7th grade - explain how specialized plant structures increase the probability of successful reproduction of plants
- 8th - Synthesize and communicate information about artificial selection, or the ways in which humans have changed the inheritance of desired traits in organisms

Questions?


Pepper
'Sweet Banana'
Oak Bluffs Elementary School Plant Sale


Pumpkin
'Cinderella'
Oak Bluffs School Plant Sale

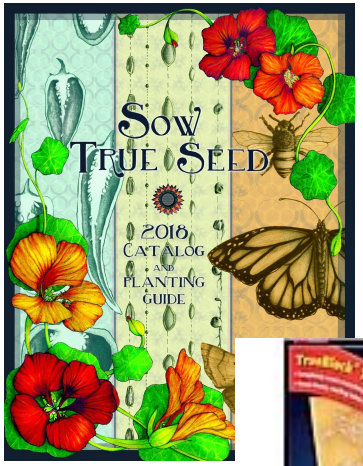
Why do a plant sale?

- Authentic final project that can involve work from many grades and practices hands-on skills in biology, math, art, marketing, organization, teamwork, and more!
- **Benefits the school through raising money** for more garden/life science projects and **welcomes the community** into school, providing a desirable student powered product
- Inspires community to revive or start an edible garden, with the enthusiasm from students with developing plant knowledge

What do you need?

Materials

- Seed catalogs
- Seeds
- Potting soil
- Trays / Plugs
- Pots
- Labels



What do you need?

Materials

- Seed catalogs (free - request from seed company)
- Seeds (purchased from Sow True Seed **$360**, lots leftover to plant in the garden, recommend Johnny's Seeds)
- Potting soil (1 - 2.8 cu ft bag is $20, need about 12 X $20 = **$240**) - I made an account with Griffins Greenhouse Supply to get bulk orders of potting soil, pots, trays)
- Trays / Plugs (100 trays for about **$100**, plugs are 100 for **$80**) (**BLEACH AND REUSE**)
- Pots (1,000 4 inch pots are about **$200**) (**BLEACH AND REUSE LEFTOVERS**)
- Labels (I bought 1,500 waterproof Avery labels: **$33**)
- The OB School sold about 700-800 plant pots for $4 (veggies) or $3 (herbs/edible flowers) a pot for the first 3 days, then everything at $2 for the last day *we also had a section of 6-pack plugs for $2, then down to $1 or free **remainder was given free to teachers, or planted in school gardens on the island
- **Expenses**: **$913**
- **Gross $2,528; net: $1,615**

$ Options:

- **Apply for a grant** or ask for a grant from a local Master Gardeners club or organization (then they can help support you in plant knowledge and/or mentor your students as well)
- Can be supported through an **after school Garden Club** that has a small budget
- **Start small** - can do just tomatoes, or just different types of basil - doesn't need to be more than about $200-$300 start up cost - then the profits can go towards expanding next year
- Can **front the cost personally** and be reimbursed by the profits, putting the excess into a school garden fund

What do y

People

- **Administration** approv
  outside the front of the
- **Community awarenes**
- **Teachers** on board (ge
- **Students during schoo**
  (ours was 2nd grade)
- **Students after school**
  from 2:30-3:30pm - sch
- **1st grade** - sowing larg
- **2nd grade** - choosing s
- **3rd grade** - sowing sma
- **5th grade** - back up ass
- **8th grade** - community
- **ELL groups** - 3rd grade
  “care for your plant” “g

What do you need?

Space

- **Space for small growing seedlings** (I have 2 - 10 by 3 feet wire tables in an old art room that has many windows! - can also set up a shelf with grow lights
- **Indoor/Outdoor space for potted up seedlings** - nearby to bring overflow and plants that are fine with cooler weather (broccoli, violas, etc.)

Indoor space

Outdoor space

Steps:

1. **Planting calendar** (1)- that we map out in January with our frost date
2. **Seed ordering** (3)- choosing varieties, getting familiar with catalog information
3. **Seeding** (ongoing) - as guided by calendar (always have stations and partners is good to; along with side activity like packaging up seeds)
4. **Seed sale packaging** (ongoing) - with date, number of seeds, picture; we also sell seeds at the plant sale for 50 cents - good work for all grades
5. **Transplanting** (ongoing) - into larger pots, good partner activity
6. **Labeling** (ongoing) - you make the labels beforehand and demonstrate - good partner activity
7. **Signage** (ongoing) - making informative vegetable signs, and plant care signs
8. **Sale**! (1) - 4 days, each class takes a day, get trained in how to use the inventory sheet with customers and work the cash register (all with partners)


6-Pack
2.00
6-pack
FREE
FREE
6-packs $2

Curriculum scaffolding this project:

1. **Life science -** plant needs, parts of a plant, plant health, experimenting, how the weather affects plant needs!
2. **Plant families** - science journal/drawings showing the similarities and differences across families - leaf shape, planting time, days to harvest etc.
3. **Seeds** - learning all about, processing seeds, dispersal, comparing different seeds
4. **Math** - taking inventory of materials with math strategies, counting seeds, working the cash register, measuring seedlings
5. **Writing** - short journaling activities including “how to’s,” reflections, persuasion, and creative writing

Name: Divya

Science Drawing: **Brassica seedling**

the bengest seedling is 2 ~~cm~~ in. the smollest is one in. in the cauli flower six pack

How to improve

- Take diligent notes and/or pictures! **Sta**
  broccoli, eggplant) **start some later** (to
- **Move the date** - from May 14th-May 17t
  planting)
- More **roadside signs**! / promotion in ne
- More **kitchen herbs** and **edible flowers**
- More defined end goal - purchase we ar

Questions?

Produce Sales

Why have a farm stand?

- Apply real world math and garden skills of weighing, counting, harvesting, classifying, pricing produce
- Practice handling money and customer service skills
- Connect to local farmers and community members
- Encourage healthy eating at home with fresh vegetables
- Make a small income for your school garden
- Students have FUN and look forward to this tradition

What do you need?

Materials:

- Harvest baskets
- Scale(s)
- Cash box
- Cooler or insulated carrier
- Easel chalkboard
- Ball jars, rubberbands, ziploc bags, paper bags, sticky labels, yarn, scissors, tubs
- *optional - market tent

People:

- Volunteers! Two is best
- Farmers to buy wholesale from
- School administration to approve farm stand
- Enthusiastic class and teacher to plan, grow, run the stand
    - We do the Farm Stand with 2nd and 3rd graders
- Supportive community to buy produce

Space:

- not much garden space! We use 3 beds 8X4 feet (1 for each week that we run the stand)
- A table to set up the stand - could be inside or outside
- *if starting seedlings, need grow lights or greenhouse space (possibly from a partnering farm or nursery)

Planning Garden for Farm Stand Crops

Things to keep in mind: garden space, time until harvest, school season



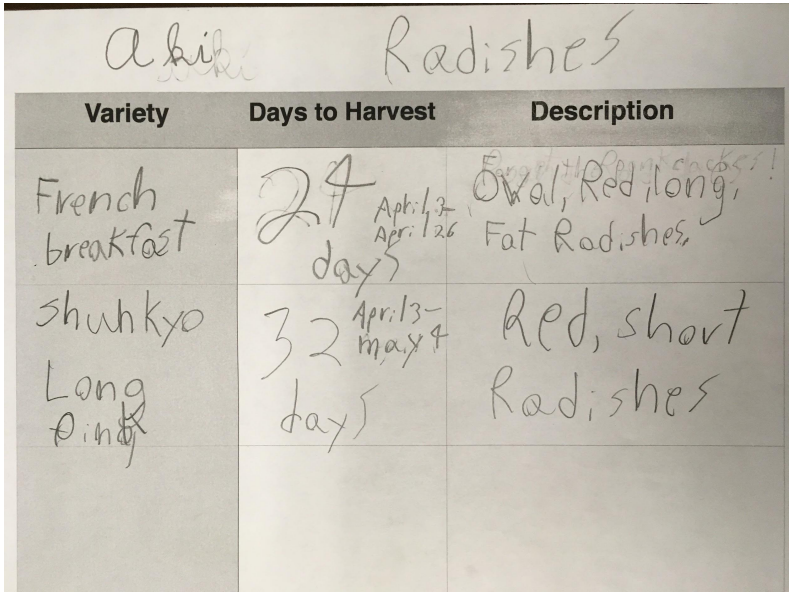






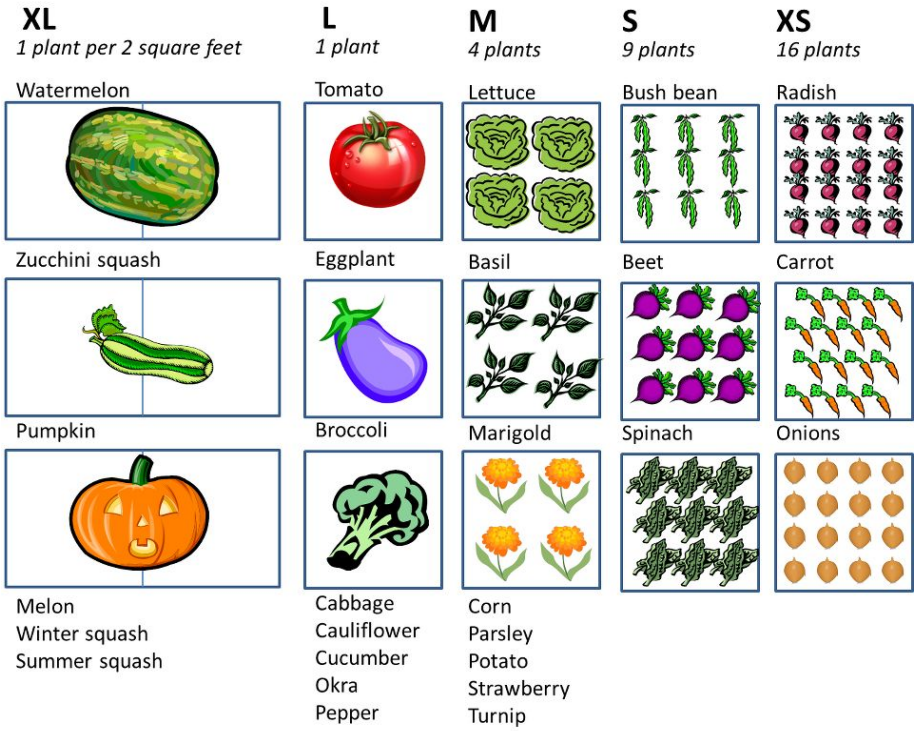

Planning Garden with Students

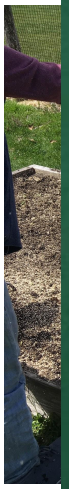
- Read seed packet or seed catalogue descriptions, looking for key information like “days to harvest” “cold hardy” “early variety”
- Mark farm stand date on the calendar - plan backward from desired harvest date
- Choose appropriate varieties
- Make class calendar with days to direct seed or start in trays (including succession planting)



Planting seeds and taking care

- Revisit seed catalogue or packets
  - Find seed spacing in inches
- Plan square foot garden
  - Measure garden bed perimeter and calculate area in feet
  - Graph garden bed with number of square feet
  - Create individual crop guides for square foot seed spacing in inches
  - Apply in garden bed!

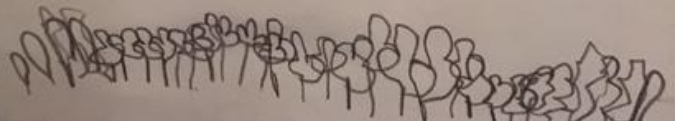


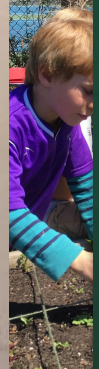


5/8/18

they have grown more than I thot.

The turnips





5/8/18

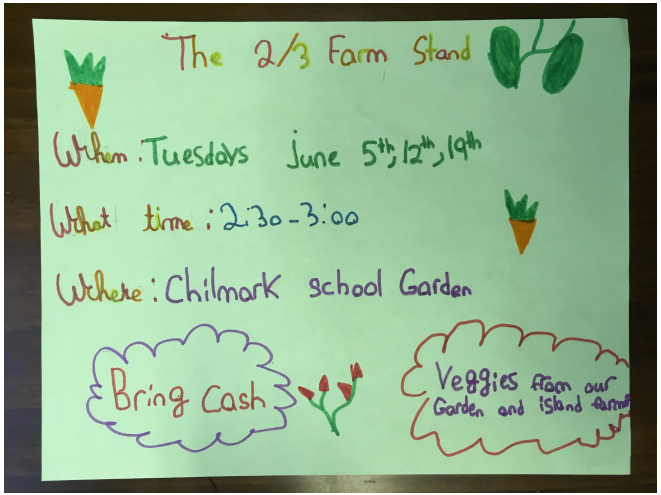
there is alot of carrot sprouts; in one box I conted 15 carrot sprouts.

Connecting with Local Farmers

- Our farm stand is possible only with the help of local farmers
  - We order wholesale from 3 farms in order to have a variety of produce
- Have a farmer come in and speak with the students beforehand, or take a field trip to a farm or farmer's market
- Making a social connection will help students appreciate the farming profession and the planning, patience and work that goes into selling produce

Preparing for farm stand

- Have students **make signs**
  - Advertise at nearby businesses, libraries, at school for families
- Send **letter home** to parents about unit and ask for permission for students to stay after school to help
- Find parent or garden club **volunteers** to help with day-of farm stand set up
- Make **wholesale orders** with farmers
- Make **price list** for students
  - Farmer can tell you what to sell it for or you can use market prices as guide
- Keep orders and **receipts on file**



Setting up the Farm Stand!

- Before class:
  - Send coordinator or volunteer to **pick up wholesale orders** and bring to school in coolers
  - **Create checklists for students** for each station with clip boards
  - **Group students** to work alongside a volunteer
  - Have **materials ready** for harvesting, labeling, packing up










1) Stand Set Up

- Set up tables and tent
- Clean jars for holding flowers and herbs
- Count money pre-sale
- Write price list on big chalkboard
- Write prices on mini chalkboards for individual produce
- Prepare day's vegetable tasting for customers
- Review price list spreadsheet
    - crop/ farm or garden/ price/how many sold

2) Garden Harvest

Example:

- 6 bunches of baby turnips/ 8 turnips to a bunch
- 6 bunches of cilantro/ 30 sprigs to a bunch
- 2 bags of baby lettuce
- 3 bunches of kale/ 10 leaves to a bunch

**If no volunteer for this group, have laminated "how to harvest" cards and/or revisit harvesting the week before stand*

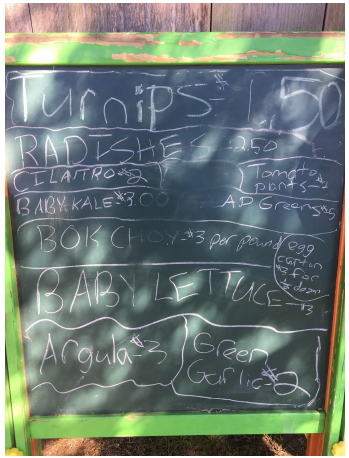
3) Farm Produce

Example:

- Allen Farm Eggs
    - Wash and dry
    - Pack into carton
    - Label "Allen Farm Eggs $3"
- Morning Glory Bok Choy
    - Weigh
    - If less than 1 lb, price at $2.75
    - If 1 lb or more, price at $3
- Thimble Farm Greens
    - Weigh into 8 oz bags
    - Label "Thimble Farm Greens $4"

Finish early? Make thank you cards for customers and farmer partners

1) Stand Set Up



2) Garden Harvest

3) Farm Produce

Farm Stand - Math Standards 2nd/3rd grade

Operations and algebraic thinking

- Represent and solve problems involving addition and subtraction
- Represent and solve problems involving multiplication
- Work with equal groups of objects to gain foundations for multiplication
- Use addition to find the total # of objects in arrays

Measurement and data

- Work with time and money
- Measure and estimate volumes and masses
- Represent and interpret data
- Measure and estimate lengths in standard units
- Relate addition and subtraction to length
- Understand concepts of area and relate area to multiplication and addition
- Recognize perimeter as an attribute of plane figures
- Partition shapes into parts with equal areas - express the areas of each part as a unit fraction of the whole


MOUNTAIN FRUIT

Katie Ruppel
katie@igimv.org

Suzie Scordino
suzie@igimv.org

Questions?