Matching Game

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 4.1, 4.2, ELA: 4

Purpose
An ice-breaker to introduce fun, interesting and surprising vegetable varieties.

Overview
Challenge participants to match a vegetable variety image to its name. Emphasis is on reasoning and whimsy, rather than correct matching.

Materials

- Variety images
- Variety names
- Answer key
- Scissors

Time
15 minutes
(5 min prep)

Instructions

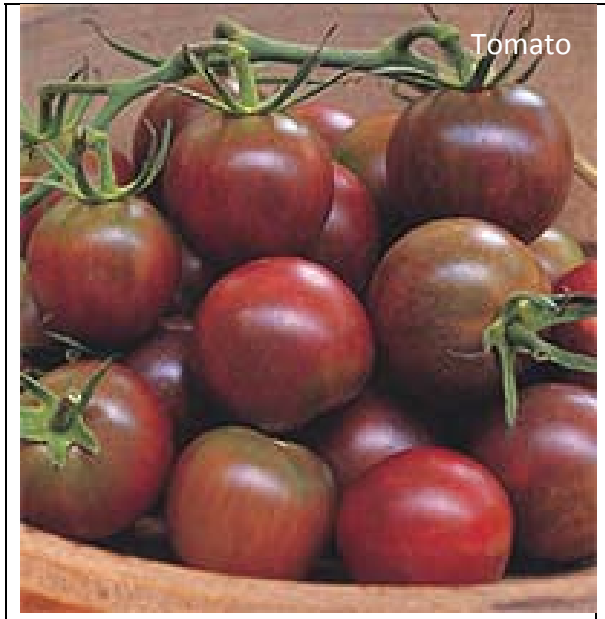
1. Cut out variety images and variety names in advance.
2. Set variety names around on each seat, before youth arrive.
3. As participants arrive, hand a variety image to each. Ask them to sit in the seat with the variety name they think corresponds to their image.
4. Conversation might emerge naturally as they share and compare what they have and try to find their correct match. Suggest talking with each other if they are having trouble!
5. Once everyone has matched up with a name, ask each person in the group to share what they have. Encourage sleuth work and more sharing if someone does not think they have the correct match. The leader can tell each participant whether they are correct or incorrect, but leave it up to the participants to re-match their images.
6. Ask participants what they learned. What was surprising? Did they learn anything new? How did they figure out their match?

Modify

Take it a step further by providing seed catalogs for participants to cut images and names from. Gather these and repeat the activity with the newly selected varieties.

✂ Cut out these variety names for the Vvi Matching Game

Red Meat	Red Giant
Yellow Oxheart	Rat-Tail
Black Pearl	Sunshine
Black Pearl	Bonbon
Black Pearl	Carmen
“P”	Bright Lights
Mr. Big	Baby Bear


Tomato

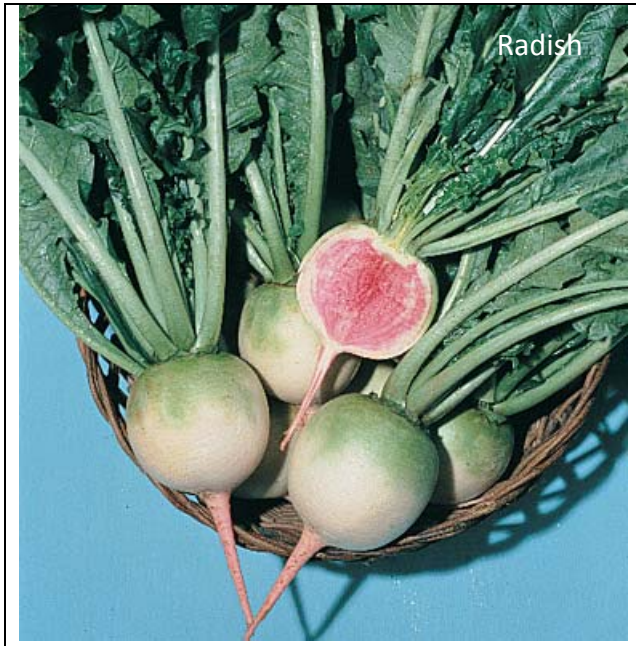

Bean


Ornamental Pepper

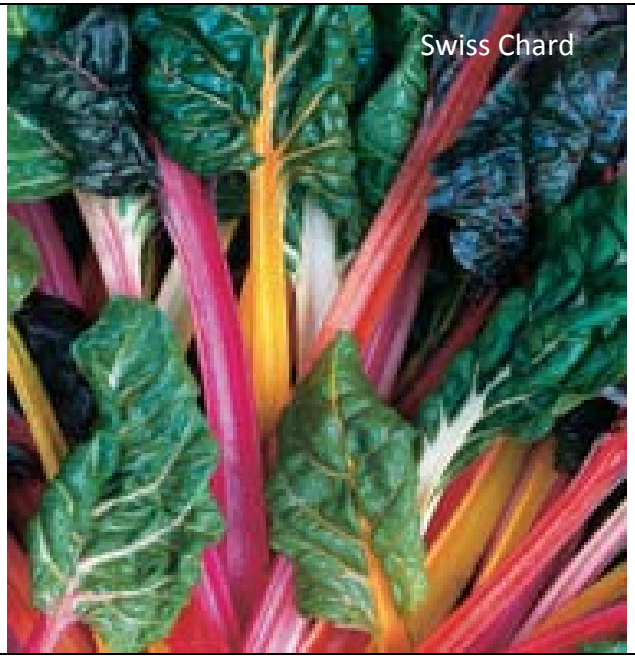

Mustard


Tomato


Pumpkin

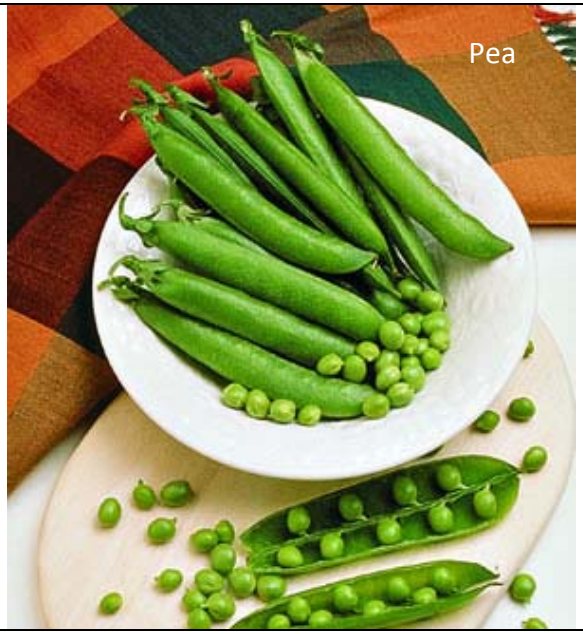

Radish


Pumpkin


Swiss Chard


Radish

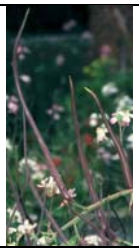

Radish


Pea

 Pepper	 Squash

Answer Key to Variety Matching Game

Vvi - Vegetable varieties investigation

			
Black Pearl Class: Tomato Photo courtesy Burpee Seeds	Black Pearl Class: Bean Photo Courtesy Territorial Seeds	Black Pearl Class: Ornamental Pepper Photo courtesy All American Selection	Red Giant Class: Mustard Photo Courtesy of Southern Exposure Seed Exchange
			
Red meat Class: Radish Photo courtesy Johnny's Selected Seeds	Yellow Oxheart Class: Tomato Photo Courtesy of Southern Exposure Seed Exchange	Baby Bear Class: Pumpkin Photo courtesy CSU College of Agriculture Sciences	Sunshine Class: Pumpkin Photo courtesy All American Selection
	 		
Bright Lights Class: Swiss Chard Photo courtesy All American Selection	Rat-Tail Class: Radish Photo Courtesy Kitchen Garden International	Mr. Big Class: Pea Photo courtesy All American Selection	Bon Bon Class: Squash Photo courtesy All American Selection	Carmen Class: Pepper Photo courtesy All American Selection

Shhh, don't tell. This is a trick question!

"P" variety is not actually 'P' at all, but rather is a French Breakfast type radish variety called Fire 'n Ice. This radish grew into a P shape because the radish root bumped into an obstacle in the soil such as a rock, and continued to grow around it.

Photo provided

Here is an image of a normal bunch of Fire 'n Ice radishes.

Photo courtesy Burpee Seeds

What's in a name?

Baby Bear
Baby Bear is a unique size and shape, and is often called "the perfect mini pumpkin" by growers. Deep orange, 1 1/2-2 1/2-lb. fruits are about half the size of a normal pie pumpkin. With slender, sturdy, easy-to-grip handles, they are very appealing to children. The **semi-hulless** seeds are good for roasted snacks. High yield. 1993 All-America Selections winner.

Black Pearl (bush bean)
This is a black-seeded edamame soybean. The plants grow to 2 1/2– to 3-foot tall and bear 1/4-inch, black, pearl-sized seeds. **Days To Maturity**: 85-85

Black Pearl (cherry tomato)
This is an early season cherry tomato on **indeterminate** vines bear 1 1/2-inch, purplish-black fruit, though in this picture they look more reddish. Days To Maturity: 65-65

Black Pearl (pepper)
Ornamental hot pepper, Nearly black-leaved, 14- to 18-inch-tall by 12- to 16-inch wide plants bear rounded, 3/4-inch fruit that matures from black to deep red. 2006 All-America Selection.

Bon Bon
Bonbon has the classic appearance of the perfect buttercup squash: deep green, smooth skin, and a prominent grey "button" at the base. 2005 All-America Selections winner. Why do you think this is named bon bon? What is a bon bon?

Bright Lights
Multicolor chard -
Stems of many colors including gold, pink, orange, purple, red, and white ... with bright and pastel variations. The taste is milder than ordinary chard. 1998 All-America Selections winner.

Carmen
'Carmen' is a sweet pepper with an unusual shape. Most gardeners think of a bell shape when "sweet" peppers are mentioned. 'Carmen' is an Italian bull's horn type which refers to its elongated shape, about 6 inches long. Carmen has a lovely sweet taste for salads and roasting, especially when partially or fully red-ripe. 2006 All-America Selections winner.

Mr. Big
You probably wouldn't guess that a garden shelling pea would be named Mr. Big! But if you saw this plant in real life, you would see where it got its name. Mr. Big is a very small vine (only about 16 inches), but they load up with huge pods. Easy to pick and shell! 2000 All American Selection winner.

'P'
This is actually 'Fire 'n Ice', a French breakfast type of radish. Can anyone guess why it's shaped like a 'p'? The **meristem**, or growing tip of the root grows down. This one hit an obstacle, such as a rock, and continued growing around it! Usually gardeners prepare their soil for root crops by digging a deep bed and removing such obstructions. If you are lucky enough to have a garden, consider growing an experimental bed of carrots and radishes with some obstacles carefully placed, and see what comes!

Rat-Tail
This is an unusual radish!! Usually we eat the root of radishes, but with Rattail, the edible part is the seed pod pictured here. Rattail radish plant get really big - 4- to 5-foot tall, with 3- to 6-inch, green, mildly pungent pods. Pick pods when they are the diameter of a pencil and eat like green beans!

Red Giant

Red Giant is a Japanese **heirloom** mustard green. The image you saw is of young red giant plants. Red Giant becomes much redder and much larger with maturity (as shown here; a single plant can grow up to 6 pounds!
Photo courtesy Mississippi State University

Red Meat
This 2-4" round radish is very sweet and tasty and becoming very popular in the U.S. This excellent Chinese radish is also known as Beauty Heart and Watermelon Radish because of its dark pink flesh.

Sunshine
Stunning, scarlet fruit.
Beautifully tender flesh is smooth, sweet, and bright orange for baking, mashing, and pies.
2004 All American Selection Winner.

Yellow Oxheart
If you've ever seen a real ox heart, you know where this tomato gets its name! This is a standard heirloom tomato, on **indeterminate** vines that bear small-cored, bright yellow, oxheart-shaped fruit. One Yellow Oxheart tomato can weigh up to 1 pound!


Leonardo da Vinci's Drawing of the Ox Hear

Matching Game Answer Key

Vvi

Defining BIODIVERSITY

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 1, 4.1, 4.2, 4.5, ELA: 1, 3

Purpose
As a group, build a working definition of biodiversity.

Materials

- Easel or chalkboard
- Marker or chalk

Time
15 minutes

Instructions

1. Working in a group, ask students what two words comprise the word, "biodiversity."

2. Next, invite students to define **diversity**, then **biological**, and record the responses.

Based on these definitions, craft a group definition of **biodiversity**. This can be your group's own definition, reflecting the specific words and values generated by the students. A couple of example definitions are included here for your reference. (A thorough list of biodiversity definitions can be found by searching online for "biodiversity definition")

- *"The variety of life forms: the different plants, animals and micro-organisms, the genes they contain and the ecosystems they form. It is usually considered at three levels: genetic diversity, species diversity and ecosystem diversity"*

- *"The variety of life on our planet, measurable as the variety within species, between species, and the variety of ecosystems"*

Fact or Fiction?

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 1, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, ELA: 1, 3, Social Studies: 5.3, 5.4

Purpose
To explore through discussion whether biodiversity is critical to human existence.

Overview
Work in groups to explore the validity of the following statement:

"Without biodiversity, none of our food could be produced."

Materials

- Paper
- Pencil/pen
- *Why biodiversity?* Cards

Prep

To make *Why Biodiversity?* Cards, cut out Why Biodiversity statements (on next page) and paste onto index cards.

Time
15-30 minutes

Instructions

1. Read the following statement: "Without biodiversity, none of our food could be produced," and write this statement where everyone can see it.
2. Divide students into two groups according to whether they believe this statement to be fact or fiction. (Alternatively you can hand divide the group.)
3. Ask each group to make a defense of their position and jot down notes. Bullet points are fine.
4. When both groups have exhausted their ideas, ask for a volunteer from each group to share.
5. When both groups have shared, facilitate a continuing discussion. Were they surprised about what they discovered? Does the whole group agree about the truth in this statement? Why or why not?
6. Pass out the *Why Biodiversity?* Cards. Ask each person to read the statement on their card and then put it into their own words. Are any of these facts surprising?

Why Biodiversity? cards

Cut out statements and paste on 10 index cards for activity: Fact or Fiction

1. Diversity is one of the main characteristics of nature and also the very basis of ecological stability.

2. The more numerous and diverse the varieties of any plant, the more successful will be its cultivation over a wide area, because the greatest number of different conditions -- as soils, climates and uses -- will be satisfactorily met. --*Liberty Hyde Bailey*

3. When vegetable varieties become extinct, we lose the distinctive flavors and appearances of these fruits and vegetables, and the genetic diversity that they otherwise contribute to the plant stock.

4. 30,000 vegetable varieties have become extinct in the last century, and one more is lost every six hours

5. Nearly 96% of the commercial vegetable varieties available in 1903 are now extinct.

6. As the number of crop varieties decreases (reducing the genetic diversity of these plant species), existing crops become increasingly susceptible to devastation by disease and pests – if crops are all the same, it's much easier for a new disease or pest to wipe-out the entire harvest. Indeed, the lack of genetic diversity has contributed to widespread crop-loss in the past – for example:

7. Lack of genetic diversity led to massive outbreaks of citrus canker in Florida in 1984 and in Brazil in 1991.

8. In 1970, U.S. farmers lost $1 billion worth of crops after a disease killed uniform corn varieties.

9. During the 1840's, the majority of the population of Ireland relied upon a single variety of the potato. As a result of the lack of genetic diversity, a fungus was able to destroy the entire potato crop, causing the infamous Irish Potato Famine.

10. Without biodiversity, none of our food could be produced. TRUE or FALSE? And why?

Biodiversity Collage

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 4.1, 4.3, ARTS 1,2

Purpose
To become familiar with biodiversity by creating a visual image of what biodiversity looks like.

Overview
Students clip from magazines any images that represent biodiversity to them. In addition to including images of nature and wilderness, encourage students to stretch – looking for signs of biodiversity in human and artificial environments.

Materials

- Magazines
- Scissors
- Gluesticks
- Poster board

Time
30 minutes – 1 hour

Instructions

1. To get started, ask the group to describe biodiversity. Students should feel free to share whatever comes to mind, without judgment or correction. This warm-up should refresh individual interpretations for students who already know something about biodiversity. For groups who may not be familiar with biodiversity, plan to spend more time introducing the term. (See Defining Biodiversity activity.)

2. Working individually or in pairs, cut images from magazines that represent biodiversity to you. As a group, use these pictures to make a collage and explain how each image represents biodiversity.

Modify
Make a power point presentation using online art to create a biodiversity slide show.

Catalog Writers!

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 4.1, ELA: 2

Purpose
To have fun and get acquainted with the interesting and unusual variety in vegetables through creative writing.

Overview
Students will view a selection of "variety cards" – pictures of vegetable varieties, and choose one to write a description of and name, with the aim of capturing customers' attention! Students are encouraged to use their imaginations as well as anything they already know about how things grow to accomplish the task.

Materials
- 2 copies of the same catalog
- Scissors
- Glue stick
- 4X6 unlined index cards

Time
15-30 minutes
(20 minutes prep)

Instructions
1. With two identical catalogues, find ten (or more, depending on how many are in your group; it's nice to have a few extra to allow for choice) interesting vegetable varieties. From one catalogue, snip only the photo, and from the other, cut the same image, including the name and description.
2. Glue each picture onto an index card, keeping the varieties with the names and descriptions in a separate pile. Reserve these for later.
3. Spread the nameless variety cards around on a table for students to examine. Working independently or in pairs, students will pick a variety card they like.
4. Students will name the variety and write a description for it. This is a creative writing exercise so there is no wrong answer! Encourage them to use colorful language, and to include specifics.
5. When everyone has had a chance to do this, have volunteers share their variety, it's name and description.
6. If there is time, ask students to compare their descriptions with the catalogue descriptions, using the reserved set of cards. Are they surprised? Based on the different descriptions, ask, "Which would you rather grow?"

Modify
K-2: ask your students to generate descriptive words that come to mind from viewing each picture, rather than writing a complete description. Provide scribe services as needed.

You be the judge!

Blueberry variety rating activity

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 1, 4.1, 4.3, 4.5, 4.6, ELA: 1, 2, Social Studies: 5.3

Purpose

- To provide youth with an opportunity to rate varieties based on taste, yield, ease/reliability, and overall satisfaction.
- To illustrate the importance of knowing variety name
- Familiarizes students with the process gardeners use to rate varieties.

Overview

Youth will be asked to pretend they are gardeners and have grown the varieties of blueberries provided. They will taste, assess yield, and read ease/reliability statements. Then they must rate each variety of blueberry *Rate this Variety* form.

Materials needed

- 3-4 varieties of fresh blueberries
- Container for each variety
- One *Rate this Variety* form: for every participant and variety
- Pencils
- Activity instructions and ease/reliability descriptions (below)

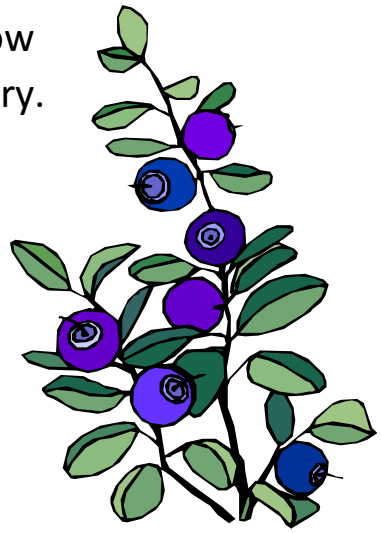
Instructions

1. Display blueberry varieties in baskets respectively labeled with variety names.
2. Assign different amounts of each variety to their containers, i.e. one basket is overflowing, one is 3/4 full, one is half full, and one is ¼ full.
3. Cut out the ease/reliability descriptions and assign each to a variety of blueberry. Make sure the statements correspond with their variety's respective "yield." Youth will use these descriptions to determine a rating for ease/reliability.
4. Set out *Rate this Variety* forms and pencils.
5. Remind participants to wash hands first. **Then ask participants to begin rating:**
   - Taste: Youth can taste one of each variety until all have had a chance to rate.
   - Yield: Each berry basket will have few, some, many, or tons of berries, which corresponds to the amount of berries harvested from the garden altogether for the season.
   - Ease/Reliability: See descriptions below and assign each to one of the blueberry varieties.
   - Overall: Based on all of the above, how would they rate each variety?
   - Review: What else would you say about each variety?
6. Encourage discussion throughout the activity. Ask questions such as:
   - Which variety tasted the best?
   - Why did you give that one a 2, and that one a 4 for yield?
   - If you only had room in your garden for one of these varieties, which would you grow? Why?
   - Why is it important to know variety names?

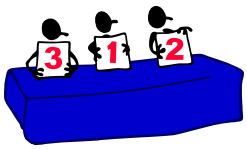
Modify

This activity can easily be modified by using other fruit (such as apples) or vegetables (such as carrots), depending on what is available.

Congratulations! You are a gardener, and you grow blueberries. This season you grew 4 varieties of blueberry.



Directions



Rate each blueberry variety based on taste, yield, ease & reliability, and overall, on a scale from 1 to 5. Use a **Rate this Variety Form** for each variety you rate.

1. Taste

Taste one berry from each basket and rate from one to five (5 = most tasty, 1 = least tasty).

2. Yield

Each berry basket has all the berries harvested from one bush on a single day. Based on the number of berries you see in the basket compared to other varieties, rate this variety on yield (5 = highest yield, 1 = lowest yield).

3. Ease/Reliability

Each blueberry variety has a description with it describing "your experience" growing this variety. Use this description to assign a score of 1-5 for ease and reliability (5 = difficult to grow, 1 = easy to grow).

4. Overall

Based on everything you have seen, read, and tasted, give the variety an overall rating (5 = best, 1 = worst).

5. Review

What else would might you say about this variety?

Ease/reliability descriptions for blueberry varieties:

This blueberry bush got attacked by several kinds of pests and also got infected with a mysterious fungus. Once I began checking on the plant daily and spraying it regularly with natural fungicide, the plant did well.

This blueberry, though I planted it in a less than ideal site in my garden, grew vigorously and produced well. There were no noticeable pests or diseases all season.

We had a very, very dry summer, and I was so busy I rarely watered this blueberry bush. It was clear the heat and drought decrease berry productivity from previous years but rest of the bush stayed pretty healthy and resistant to pests and diseases.

No matter what I did, I had a hard time getting this thing to grow! I started out doing a soil pH test and added the proper amendments. Then I nursed it through the entire season, carefully watering, pruning, and fertilizing but it just doesn't seem to produce much fruit. I have read everything about growing blueberries, but nothing seems to work with this plant!

Veggie Vote

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 1, 4.1, 4.2, 4.3, ELA 1, 3, Social Studies 5.3, 5.4

Purpose

This activity gives participants a chance to become familiar with some of the varietal characteristics that gardeners consider when selecting what to grow, and allows participants to determine what qualities are most important for their own purposes.

Overview

Students open an envelope with profiles of three different varieties of a particular crop, (either lettuce or beets). They are given a scenario that requires them to select only one variety of the crop to grow. Based on the information they have for each of the candidates, which "candidate" will they vote for and why? Can students defend their choice well, and convince others to also "vote" for their candidate?

Materials

- One 9X12" envelope beets with three variety profiles (Warrior, Chioggia, Golden)
- One 9X12" envelope lettuce with three variety profiles (Black Seeded Simpson, Freckles, Red Sails)
- Blank paper
- Pencils/pens

Time

15-30 minutes

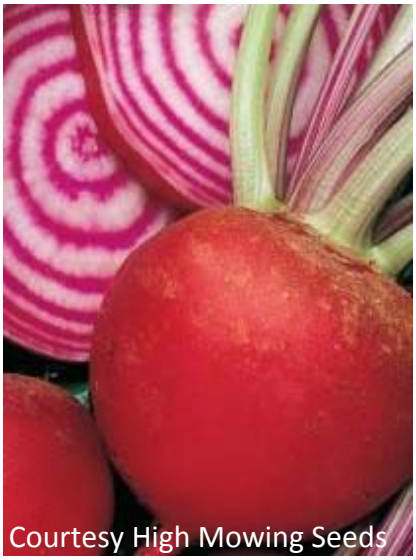
Instructions

Set out envelopes along with the following scenario:
Background: Your school has just received a grant to start a small vegetable garden. You have to make good use of your space, and only have room for one variety of each crop. You want to convince the others in your school garden group to vote for your variety "candidate."

1. Divide the group into pairs or groups of three.
2. Instruct students to choose one envelope, and read through the profiles of each "candidate." Each profile includes a photo, description, and gardener reviews.
3. Using the photo, descriptions and reviews available and their imagination groups should pick a "candidate" to support.
4. Each group will then create a one paragraph campaign to convince your school garden committee that this is the best variety to grow. Be persuasive!
5. Write the name of your winner and your "campaign speech" on a piece of paper.
6. Once you and the other groups are done, take turns giving your campaign speech to the whole group. If you chose different candidates, which speech is more persuasive? Take a vote and find out!

Taking it further

Follow up with a discussion about current political candidates and popular strategies for "getting the vote." Did you use some of these strategies to campaign for your variety?


Courtesy High Mowing Seeds

Chioggia Beets

Description

Early, heirloom, flattish-round, red beet. Sometimes called the Candystripe for the concentric pink and white rings in its root. Ornamental plants.

Days To Maturity: 45-55

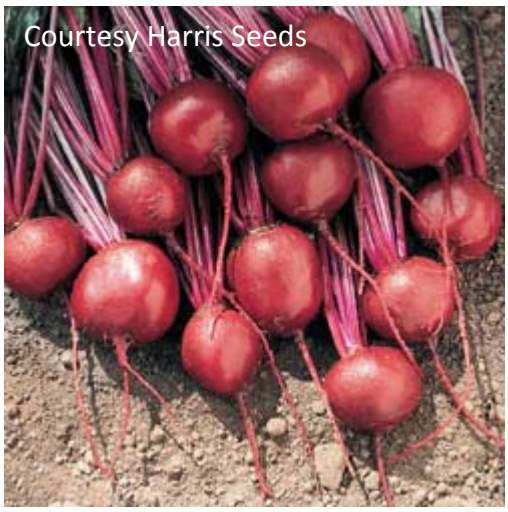
★★★★☆ Reviewer: from VA
Beets are sometimes a challenge in my garden's clay soil, but I liked this variety; I thought it produced bigger, earlier roots than 'Early Wonder Tall Top'. Doesn't bleed, which is a great advantage for cooking, but still very tasty, delicate beet flavor. Not super-productive (about 3 pounds from 10 row feet), but I would grow it again.

★★★☆☆ Reviewer: from BC
Really great to look at, but picky to grow and not flavourful at all. I'll skip these this year. Probably a great variety for kids to grow due to the novelty.

★★★★☆ Reviewer: from OR
They are wonderful, but darn it, they want to be babied, and I just don't have time for that nonsense. :-)

★★☆☆☆ Reviewer: from CA
Easy to grow, but not worth the trouble. Very bland. Tasted more like turnips.

★★★★☆ Reviewer: from PA
These have been the most trouble free beets I have grown to date. They produce sweet beets that are very good. They grew very quickly as well. Not overpoweringly sweet, which some may not like, but they are definitely sweet. They are a pretty target/ringed beet when sliced crossways.



Warrior Beets

Description

Hybrid. Dark-red, globe-shaped, smooth-textured, uniform, tender roots develop quickly and hold quality. Strong tops tinged with red, especially in cold weather.

Days To Maturity: 57

★★★★★ Reviewer: from Wayne County, NY
Very good variety. I have planted this variety for the last 5 years with no issues.

★★★★★ Reviewer: from NE
Where beets didn't do well, these made a nice crop. Taste was excellent, and a really tender texture. This is an outstanding variety. I had some old seed (at least 4 years old) that I found this spring. I planted a few as a test, great germination, and beets are growing strong and healthy. Great variety, my vote for best beet by more than a mile!!!

Golden Beets

Description

Orange-yellow root with yellow-stemmed, green tops used in salads when small.

Days To Maturity: 55

★★☆☆☆ Reviewer: from GA
I find the golden types to be less vigorous than the red types.

★★★★☆ Reviewer: from Monroe County, NY
Attractive, tasty, not terribly big roots.

Black Seeded Simpson Lettuce

Description

Looseleaf type. Heirloom. Light-green, crumpled leaves can be picked very young and are never bitter. Stands hot weather and drought.

Days To Maturity: 42-46

★★★★★ Reviewer: from Suffolk County, NY
Just the best lettuce ever! Grow it in windowbox type containers and harvest leaves as needed, overwinter in a sunny window for year round harvest. In the heat of summer (90+ degrees) move to an afternoon shade area and it won't bolt or go bitter.

★★★★★ Reviewer: from IL
This is an excellent traditional green lettuce. Produced well, and easy to grow. I always picked it young, and it made a terrific salad.

★★★★★ Reviewer: from Suffolk County, NY
Reminds me of my childhood. It's easy and pretty, especially with a sweet red salad dressing.


Courtesy Seeds of Change, Scott Vlaun

Freckles Lettuce

Description

Cos (romaine) type. 8- to 10-inch heads with semi-savoyed, bright-green leaves covered with dark-red speckles. Meaty leaves are slow to turn bitter. Pick baby leaves at 28 days.

Days To Maturity: 28-55

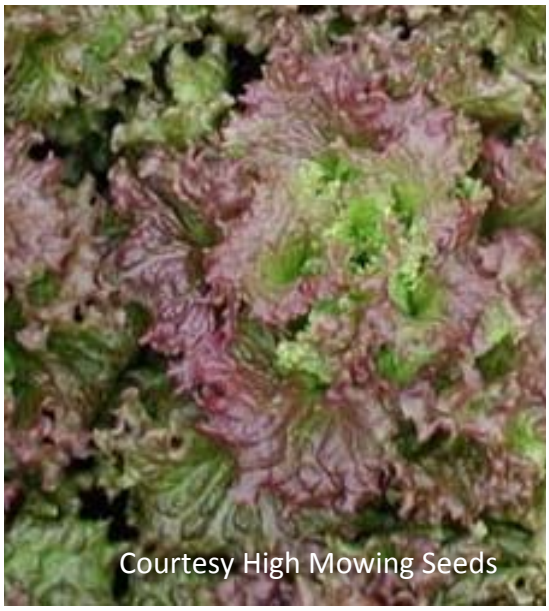
★★★★★ Reviewer: from VT
Well described above. Pretty. If allowed to go to seed, it volunteers nicely on it's own = good for low effort gardening.

★★★★☆ Reviewer: from PA
Very pretty Romaine type lettuce with the nice crunch you expect from a Romaine. The speckles make this one very special to look at. Flavor is laid back, as many lettuces are. In other words it is a mellow, slightly sweet flavor with great crunch and a beautiful appearance on the plate. Easy to grow, and as mentioned by another reviewer the slugs (and I have loads of slugs) do not seem terribly interested in it.

★★★★★ Reviewer: from IN
I love beautiful food and this lettuce is one of my favorites. It is easy to grow and tastes great. I sow it somewhat thickly and thin for leafy greens early in the season, making room for the heads to grow. Tolerates the heat well with protection from row covers. I will continue to grow this Vitamin-B rich romaine.

★★★★★ Reviewer: from Hamilton County, NY
Soft and Mellow taste. Slugs avoided. Good yield in Zone 3-4. Second planting also did well.

★★★★☆ Reviewer: from Cattaraugus County, NY
very nice romaine.70 days to maturity in my area. good late season lettuce.



Red Sails Lettuce

Description

Looseleaf type. Very open plants with deep-burgundy-red over light-green leaves that are slow to become bitter. Fast-growing, heat-tolerants, and relatively slow to bolt. Pick for baby leaves at 29 days. Grows well indoors under lights. All America Selection 1985.

Days To Maturity: 29-55

★★★★★ Reviewer: from CT
I find that this grows very easily in early spring and all through the summer. I can plant this in the heat of July and it produces fantastically great. Great soft sweet lettuce.

★★☆☆☆ Reviewer: from CA
I have had more problems with this lettuce than any other. Possibly because I gave it so many, many tries. It gets rave reviews, but it has never lived up to my most modest expectations. Red Sails has a higher juvenile mortality rate than the other lettuces, easily blown flat by rain or wind. I haven't got to the hoop-tunnel stage yet, and don't plan to, so Red Sails is out. I prefer hardier types of leaf lettuce. Also, it is not nearly as bolt-resistance as many of the claims would have it. Big thumbs down.

★★★★★ Reviewer: from NC
One of our favorites. Excellent yield, slow to bolt. Adds color and taste to salads. Seed is cheap at our local bulk seed dealer.

★★★★☆ Reviewer: from Erie County, NY
It's very ornamental & that's why I grow it. Colorful in a salad.

★★★★☆ Reviewer: from CA
My favorite lettuce. I plant in succession all year long. We use it in salads and feed it to our tortoises. They love it too.

Plants in our Daily Lives

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 4.6, 4.7

Purpose
To discover the role plants play in our daily lives

Overview
Students will examine their surroundings for items and determine whether each item was derived from plants in some way.

Materials

- Paper
- Pencil/pen
- Large newsprint (if graphing)
- Markers (if graphing)

Time
15 minutes

Instructions

1. Working in pairs, ask students to write down 30 items in their immediate surroundings (this can include clothing and anything in the room, or if outside, whatever they can see.)

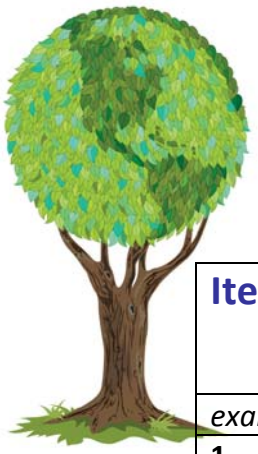
2. Have students create two columns next to their list, one entitled “Plants”, and one entitled, “No Plants.”

3. Ask students to assign each item to one of the columns; if plants or any plant part was used in the manufacture or use of any of the items, a check goes in the “Plants” column. If not, then students check “No plants.”

4. **Optional:** Tally group totals for both columns and create a bar graph with the whole group’s data

5. Come together as a group. What did students find? Which column had more checks? Were the results surprising? Why or why not?

6. Were there any items that students could not figure out? Were there any items that were put into both columns by different students? Discuss, and determine as a group to which column these items belong. If the group is unsure, ask for a volunteer to research this, and report back to the group next meeting.



Plants in our Daily Lives

Item	Plants Check this column if item comes from plants	No Plants Check this item if item does not come from plants
example: wooden chair	*Yes*	
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
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23.		
24.		
25.		
26.		
27.		
28.		
29.		
30.		
TOTAL		

A Favorite Meal

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 4.5, 4.6

Purpose
Develop evidence of the important role biodiversity plays in daily lives

Overview
Students will describe their favorite meal and name ten ways biodiversity played a role in getting that meal to their plate.

Materials
- Paper
- Pencil

Time
15 minutes

Instructions

1. Working individually, instruct students to name their favorite meal and write this down on a piece of paper

2. Challenge each student to name ten ways biodiversity played a role in getting this meal to each student's plate.

3. After five minutes, allow students to work in pairs to help each other to complete their list of ten.

4. Come together as a group and ask for volunteers to share their favorite meals and ten roles of biodiversity. Allow for comparison and further discussion.

Produce Sorting

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 1, 4.1, 4.3

Purpose
To learn about the relationships among crop, type, and variety.

Overview
Using a number of crops and varieties within a single crop, students will sort produce to understand crop, type, and variety characteristics.

Materials

- Local produce – 2 or more varieties of several crops
- Baskets for sorting
- Paring knife
- Cutting board

Instructions

1. Gather vegetable varieties of at least two or more vegetable crops from a farm stand or another location that can identify the produce down to variety. Often the grocery store does not supply such details. If you have enough varieties, you could even use one crop. For example, during peak season, an assortment of cherry tomato varieties provides a nice look at diversity within a crop and type.
2. Place produce in basket or bucket.
3. Ask participants to sort them into their proper crops, then into types (if applicable), and then varieties. Step aside and let participants struggle with this challenge alone. Step in occasionally with an encouraging word such as, “Great job! You only have two out of place.”
4. Ask youth why they think the varieties look different, how they imagine they taste, etc.
5. Read the variety names and see if the youth can guess the right name for each variety.
6. Cut and prepare the produce for a taste test. Were their hypotheses on taste correct, or were they surprised? Why might people grow some of these unusual varieties?

Modify: Seed sorting
If fresh produce is unavailable, substitute seed packages with variety pictures.

Interview skill-building

Vvi - Vegetable varieties investigation

Standards (NYS): Science: 1, ELA: 3, 4, Social Studies 5.3

Purpose
To practice and become familiar with positive interviewing skills

Overview
Students will learn interviewing skills in four parts; by 1. practice interviewing and being interviewed by a partner, 2. review 'Postive Interviewing Skills', 3. observe both effective and ineffective techniques modeled by an interview with the group leader, and 3. incorporate new skills into another practice interview.

Materials

- Pencils
- **'Practice Interview Form'** – 1 per student
- '**Rate this Variety Form'**– 2 per student
- '**3 steps to a great interview'**

Time
20 minutes – 1.5 hours

Instructions

Part 1: Interview partners

1. Review and modify the **Practice Interview Form**. This form has sample interview questions about a band or musical group, however it may be easily modified to reflect your students' interests.

2. Divide the group into interviewing pairs, and provide one **Practice Interview Form** and a pencil to each student.

3. Instruct students to interview their partner and record the responses on the form. Students should use the back of the form to ask follow up questions of their own, and record the answers.

4. Instruct students to switch after first partner has completed the interview.

5. After all students have had a chance to interview and be interviewed, come together as a group, and ask for volunteers to share what the experience was like. Ask questions like, "How did it feel to be interviewed? To interview someone else? What did you like about it? What was challenging? How do you think it might be different interviewing an adult/someone you don't know?"

Part 2: Review Positive Interviewing Skills

1. Invite youth to take turns reading each of the skills under '3 steps to a great interview', including Positive Interviewing Skills, Gather Quality Responses, and End Positively sections.

2. Ask whether these skills were observed in their own interviews. Which skills were used and which were not?

3. How did it feel to the interviewee when a particular skill was used? Not used?

Part 3: Interview Demonstration

The purpose of this exercise is to demonstrate how interviewing styles and techniques affect the quality of the interview, and to become familiar with potential obstacles and ways to overcome these obstacles in quality data collection.

1. Ask for a pair of volunteers to interview you in front of the group, using the Rate this Variety Form. Another adult may help by keeping the group focused on observing the interview. Be sure you have a vegetable variety name in mind (you can make one up), and the ratings can be fictional.

2. As the interviewee, you will give responses to the questions which cause the student to probe to get the answer needed to complete the form. For example, "How do you rate this variety of broccoli on taste? You might say, "Oh, it's pretty good." This forces the interviewer to ask a follow up question, such as "So, on a scale from 1-5, would that be a one, two, three, four, or five?" Also, ask plenty of questions that may come up in the actual gardener interviews. Do not correct any mistakes or poor interviewing techniques at this time.

3. Once the interview concludes, thank and applaud the volunteer interviewer. Ask the group to comment on positive interviewing techniques they noticed. Expand on their comments.

4. Next, ask the audience and the interviewer if they noticed anything that seemed awkward or difficult during the interview. Were questions asked in a way that preserved the quality of the data collected? Were responses gathered for all questions? Were all of the

interviewee's questions answered? Did the interviewer pose any questions of his/her own? If not, does the audience have any ideas for follow-up questions that could be asked?

Part 4: Interview partners - putting new skills to work!

1. Divide group into interviewing pairs again – this time with different partners. Distribute the actual Rate this Variety forms to each student.

2. Students will practice interviewing each other as they did in the first round, but this time they will pretend to be gardeners rating a vegetable variety.

3. Assign a vegetable variety, along with crop name, to each student, and have seed catalogs available for students to look up their variety. The ratings the "gardener" interviewee provides may be of their choosing, but they should be encouraged to appropriately challenge their interviewer to collect quality data.

4. During this exercise, leader(s) should observe the interviews in progress, making notes of positive skills being employed, as well as areas that may still need clarification.

5. Finally, come together as a group and comment on any improvements that took place in these interviews. Clarify any questions, and thank the youth for their active participation.

Practice **Interview Form:** *Rate this* **!**

READ THE FOLLOWING QUESTIONS TO YOUR PARTNER. THE CAPS ARE FOR YOUR USE; DO NOT READ THESE TO YOUR PARTNER.

Let's begin rating.

Please tell me one [band or musical group you have listened to].
ENTER NAME →

CHECK SPELLING WITH PARTNER

What [kind of music does this band play]?
ENTER MUSIC TYPE→

On a scale of one to five, with five being the best:

	1	2	3	4	5
1. How would you rate [this band] **overall?**	☆	☆	☆	☆	☆
2. How would you rate [this band] on **[rhythm]?**	☆	☆	☆	☆	☆
3. How would you rate [this band] on **[vocals]?**	☆	☆	☆	☆	☆
4. How would you rate [this band] on **[danceability]?**	☆	☆	☆	☆	☆
5. How would you rate [this band] on **[energy]?**	☆	☆	☆	☆	☆
6. How would you rate [this band] on **[instrumentals]?**	☆	☆	☆	☆	☆
7. How would you rate [this band] on **[solos]?**	☆	☆	☆	☆	☆

8. What additional thoughts would you like to share about [this band]?

Interviewee's name

Interviewer's name

Interview Form: Rate this Variety

READ THE FOLLOWING QUESTIONS TO YOUR GARDENER. THE CAPS ARE FOR YOUR USE; DO NOT READ THESE TO THE GARDENER.

Let's begin rating.

Please tell me one vegetable variety you have grown and eaten.
ENTER VARIETY NAME →

CHECK SPELLING WITH GARDENER

What crop is this?
ENTER VEGETABLE CROP NAME→

IF THE CROP IS **BEAN, CABBAGE, LETTUCE, MELON, PEA, PEPPER, OR TOMATO**, CHECK THE **MISTAKEN IDENTITIES** PAGE BEFORE CONTINUING.

On a scale of one to five, with five being the best:

	1	2	3	4	5
1. How would you rate this variety, **overall**?	☆	☆	☆	☆	☆
2. How would you rate this variety on **taste**?	☆	☆	☆	☆	☆
3. How would you rate this variety on **yield**?	☆	☆	☆	☆	☆
4. How would you rate this variety on **ease and reliability?**	☆	☆	☆	☆	☆

5. What **additional thoughts would you like to share about this variety**?

Gardener's user name
(the email used in the Gardener Profile)

Interviewers' team name

3 steps to a great interview!

Positive Interviewing Skills

- Smile and introduce yourself.
- Maintain good eye contact and speak clearly.
- Use good listening skills. When the person you are interviewing is talking, pay attention to what that person is saying.
- Read questions exactly as they are written.
- Do not skip any questions.
- Do not fill in missed questions yourself. If questions are accidentally skipped, leave them blank.

Gather Quality Responses

- Your voice is an important communication tool; use it to help the person you are interviewing understand the questions and responses without suggesting one choice over another.
- Repeat question and response options if the person does not give an answer among those options or gives more than one answer.
- Don't guess which category is closest to an unclear response. Repeat the response options (for example; one, two, three, four, or five stars) and ask the person to choose by saying something like, "So would that be one, two, three, four, or five stars?"
- Use a probe question, such as: "What did you mean by that answer?" or "Could you be more specific about that?" if you find the person's response confusing or off topic. If the person is silent try "Anything Else?"
- If the person you are interviewing asks for an interpretation, say something like, "Whatever that means to you," or "I'm sorry, I really don't know the answer to that," or "Let me repeat the question for you."
- When recording an open-ended question without specific response options, read the words back to the person. This gives the person a chance to make sure the response accurately reflects his or her opinion.
- If you have questions or concerns, ask an adult supervisor for help.

End Positively

- Thank the gardener for his/her time.
- Fill out the Gardener Card and give to the gardener.
- Ask the gardener if he or she has any questions for you.