

Purpose

Plant a bed of crops based on the folktales *Tops and Bottoms*, *The Turnip*, and *Stone Soup*. Plant different varieties of lettuce to observe how plants are similar and different in appearance to their parents. Use the garden bed to teach the following standards:

2.E.1.1 Summarize how energy from the sun serves as a source of light that warms the land, air, and water.

2.L.1.1 Summarize the life cycle of animals including:

- Birth
- Developing into an adult
- Reproducing
- Aging and death

2.L.1.2 Compare life cycles of different animals such as, but not limited to, meal worms, ladybugs, crickets, guppies, or frogs.

2.L.2.1 Identify ways in which plants and animals closely resemble their parents in observed appearance and ways they are different.

2.L.2.2 Recognize that there is variation among individuals that are related.

2.H.1.1 Use timelines to show sequencing of events.

2.G.1.1 Interpret maps of the school and community that contain symbols, legends and cardinal directions.

2.G.2.1 Give examples of ways in which people depend on the physical environment and natural resources to meet basic needs.

2.G.2.2 Explain how people positively and negatively affect the environment.

RI.2.2 Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson or moral.

RI.2.3 Describe how characters in a story respond to major events and challenges.

RI.2.5 Describe the overall structure of a story, including describing how the beginning introduces the story, how the events unfold in the middle, and how the ending concludes the action.

RI.2.6 Distinguish differences in points of view of characters, including by speaking in a different voice for each character when reading dialogue out loud.

RI.2.9 Compare and contrast two or more versions of the same story by different authors or from different cultures.

NC.2.OA.3 Determine whether a group of objects, within 20, has an odd or even number of members.

NC.2.OA.4 Use addition to find the total number of objects arranged in rectangular arrays with up to 5 rows and 5 columns; write an equation to express the total as a sum of equal addends.

NC.2.MD.1 Measure the length of an object in standard units by selecting and using appropriate tools such as rulers, yardsticks, meter sticks and measuring tapes.

NC.2.G.3 Partition circles and rectangles into two, three, or four equal shares.

- Describe the shares using the words halves, thirds, half of, a third of, fourths, a fourth of, a quarter of.
- Describe the whole as two halves, three thirds, four fourths.
- Explain that equal shares of identical wholes need not have the same shape.

Prior to Planting

- Read one version of *Stone Soup* and/or *The Turnip*, tell students they will be growing a turnip/stone soup garden.
- Measure the bed and divide the bed in half. Grid one half of the bed in square feet. Divide the other half of the bed into thirds by making three equal-sized columns.
- Make seed mats for carrots and turnips. Which seed mat has an odd number and which has an even number of seeds per square foot?

- Discuss how people positively and negatively affect the environment. How does the garden affect the environment? How are we using the physical environment and natural resources to meet our basic needs?
- Discuss how to divide half of the bed into equal shares (thirds) that are the same shape and the other half of the bed into equal shares that do not have the same shape.

Growing

- Create a timeline for each crop to show sequencing of the plant's life.
- Measure the temperature of the soil, air and water. How does the sun's energy heat each one?
- Compare the number of square feet of each crop. Are all equal shares represented by the same shape?
- Once the seeds have germinated, find the total number of plants per square foot, write an addition sentence to show the total number of plants in each crop. Is this number even or odd?
- Reread the first version of the folktales. Determine the central message, lesson or moral. How do the characters respond to events and challenges? What is the overall structure of the story?
- Read a different version of each story. Compare and contrast the different versions.
- Observe various life cycles in the garden (cabbage worms/ladybugs etc.) Can you find evidence of the different stages?
- Compare the different lettuce varieties. How are they alike and different? How does that compare to siblings in a family?









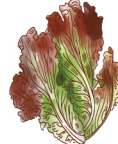
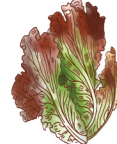










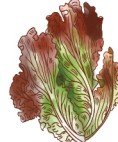
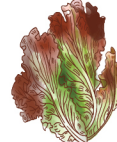










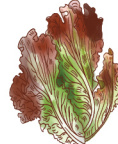
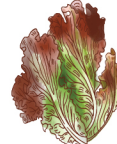










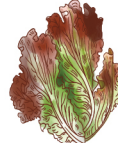
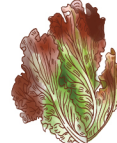


Harvest

- Use the harvest to make Stone Soup, ask parents to contribute additional items needed. Have a Stone Soup Celebration to "share" the harvest.

- Make turnip pancakes to serve with the Stone Soup.
- Have students work in small groups to act out each story. How does their version compare to the original? How does it represent our culture?

Your Notes & Ideas

Folktales & Families Garden Bed

4' x 12' garden bed



Turnips
9 per ft²



Carrots
16 per ft²



Red Romaine Lettuce
4 per ft²



Cabbage
1 per ft²



Green Romaine Lettuce
4 per ft²



Green Bibb Lettuce
4 per ft²