

The Great Pumpkin Story

Pumpkins are not vegetables... they're fruits!

Pumpkins, gourds, and other varieties of squash are all members of the family Cucurbitaceae, which also includes cucumbers, gherkins, and melons.

Pumpkins have been grown in America for over 5,000 years. They are indigenous to the western hemisphere and were completely unknown in Europe before the time of Columbus.

There was probably some kind of pumpkin served at the first Thanksgiving Day feast. Pumpkins and other forms of squash were an important component of the Native American diet along with maize and beans. Pumpkin plants have long, sprawling vines that cover the ground. Pumpkin seeds are planted sometime between the last week of May and the middle of June. After seeds are planted, they will sprout (germinate) in seven to ten days, depending on the variety. During this time, seeds need moisture and warmth. Once seeds have germinated, they will send up their first leaves, called seed leaves (or cotyledons).

Next, the true leaves will appear. Yellow flowers begin to appear after the first three weeks of growth.

Male flowers, which produce pollen, are seen first.

About a week later, the female flowers bloom. Female flowers are easy to spot because each will have a tiny pumpkin at its base. Flowers bloom for less than a day and will not open in cold, rainy weather, but each plant will produce many flowers. When both male and female flowers bloom, bees transfer the pollen from the males to the females—this is called pollination.

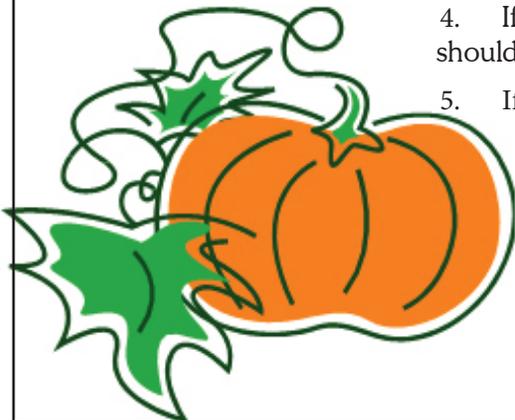
Once pollinated, the fruit at the base of the female flower develops into a full-sized pumpkin. During this time, the plant continues to flower, and many pumpkins will form on a single plant. The pumpkin contains seeds that can be saved to grow new pumpkins the following year. While growing, pumpkins require a lot of moisture and sunlight. It takes about 90–120 days after planting for a pumpkin to reach its full size. Pumpkins are picked in October when they turn bright orange.

Pumpkins are a good source of nutrition. They are high in fiber and low in calories, fat, and sodium. They are loaded with vitamins A and B and potassium. The seeds are very high in protein and are an excellent source of B vitamins.

Pumpkin Patch Problems

The kids at Discovery Elementary have been given one acre (an acre is about the size of a football field, including the end zones) to plant a pumpkin patch. The pumpkins are going to be sold as part of a fund raiser for PE equipment. The pumpkin seeds have been donated, but there are still plenty of questions...

1. If the field is 280 feet long, and each pumpkin seed is 4 feet apart, how many pumpkin seeds will be planted per row? $280 \div 4 = 70$
2. If the field is 156 feet wide and each row is 6 feet apart, how many rows of pumpkins can be planted? $156 \div 6 = 26$
3. How many total seeds will be planted? $70 \times 26 = 1,820$
4. If each pumpkin plant produces (yields) six pumpkins, how many pumpkins should they have for sale? $1,820 \times 6 = 10,920$
5. If the pumpkins weigh 12 pounds each and can be sold for 25¢ per pound, how much money will they raise for new PE equipment?
 $12 \times .25 = \$3.00$
 $10,920 \times 3.00 = \$32,760.00$



What would happen if someone forgets to water the patch?
What could increase the number of pumpkins per plant?
What could lower the number of pumpkins per plant?
What happens if there is an early frost?