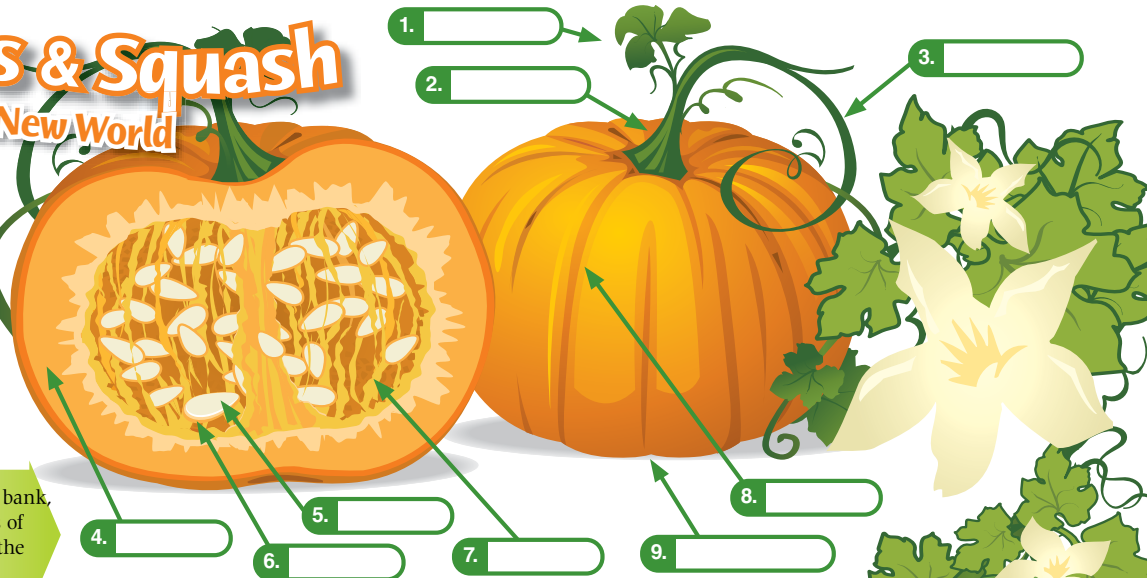


Pumpkins & Squash

Treasures of the New World

Pumpkins and Squash are members of the “Cucurbita” family. This family also includes cucumbers, gourds, and zucchini. These annual plants grow on vines and are native to the Americas. Pumpkins and squash can be used to make soups, breads, and pies. Pumpkins and gourds are also grown for ornamental purposes, and for feeding livestock.

Activity Using the word bank, identify the parts of the pumpkin by filling in the numbered blanks.



Blossom end – The scar at the bottom of the pumpkin that was once a flower that was pollinated and developed into fruit.

Brain – The slimy and mushy mass of string and seeds inside a pumpkin.

Leaves – Absorb light energy from the sun for photosynthesis.

Pulp – The edible inner layer of the skin, also called the “meat.”

Ribs – Indented ridges running from top to bottom on the outside of the pumpkin.

Seed – The beginning of a new pumpkin that can be planted or roasted and eaten as a tasty snack.

Seed coat – The outer layer of the seed.

Shell – The skin and the pulp of the pumpkin.

Stem – Located on top of the pumpkin, the stem is attached to the vine to transport nutrients to grow the pumpkin.

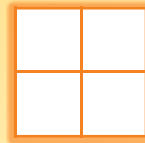
Tendrils – Attached to the stem or vine, tendrils twist around objects to anchor and protect the plant.

Standards: ELA - Grade 3-8: Reading 2.0; Grade 3: Reading Comprehension 2.3

What Will the Squash Look Like?

Solve the Punnett square to determine the genotypes and phenotypes for the color of the offspring when a female Onyx (dark green) squash and male Gold Rush (yellow) squash cross. Dark green is the dominant color. When two different varieties cross, their offspring are called hybrids.

How a person, animal, flower, plant, and/or fruit looks depends on the genes inherited from the parent. Each parent plant gives one gene to the offspring. Two genes determine the genotype (genetic makeup) and the phenotype (a trait or characteristic).



Onyx (dark green) = Bb Heterozygous

Gold Rush (yellow) = bb Recessive Homozygous

How many of the offspring are dark green? _____

What is the percentage of dark green offspring? _____

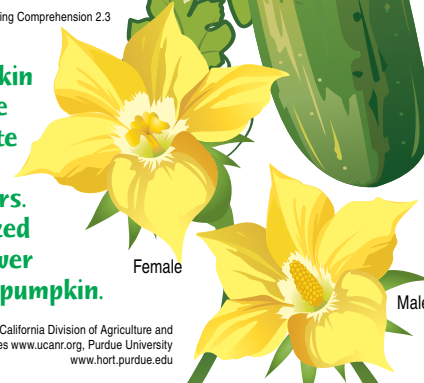
Convert the percentage into: Fractions: _____ Decimals: _____

How many of the offspring are yellow? _____

What is the percentage of yellow offspring? _____

Convert the percentage into: Fractions: _____ Decimals: _____

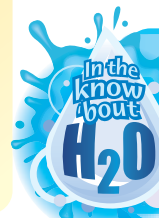
On a pumpkin plant, there are separate female and male flowers. The fertilized female flower becomes a pumpkin.



Female

Male

Sources: University of California Division of Agriculture and Natural Resources www.ucanr.org, Purdue University www.hort.purdue.edu



It is best to water pumpkin and squash plants at the roots rather than sprinkling from the top. Drip systems deliver water straight to the roots.

Standard: Science - Grade 7: 2.b, 2.c; Mathematics - Grade 3: Number Sense 3.1; Grade 4: Number Sense 1.4; Grade 5: Statistics, Data Analysis, and Probability 1.3; Grade 6: Number Sense 1.0