A close-up photograph of a bumblebee with yellow and black stripes, carrying a small amount of pollen on its legs, as it moves across a green leaf. The background is a soft-focus green.

Con Edison's STEM Days Out: Why Be Smelly?

Many plants have smells that help them survive. Any part of a plant can have a smell: the flower, fruit, leaves, stem, roots, or seeds. See if you can answer these trivia questions about smelly plants!

Record your answers and check them at the end.



First: Think of your favorite food that is a plant.

What part of the plant is the food?

The six flowering plant parts are the root, stem, leaves, flower, fruit, and seed. If you are not sure, take your best guess.

Does it have a smell? Describe it.



Question 1: Roots that Smell

These plants store their sugars and energy in their roots, which give the vegetables their taste and smell.

Some roots, like horseradish, have a very strong taste and smell. Why be smelly?

- to make food taste spicy
- to attract pollinators
- to keep hungry predators and pests away
- to absorb water

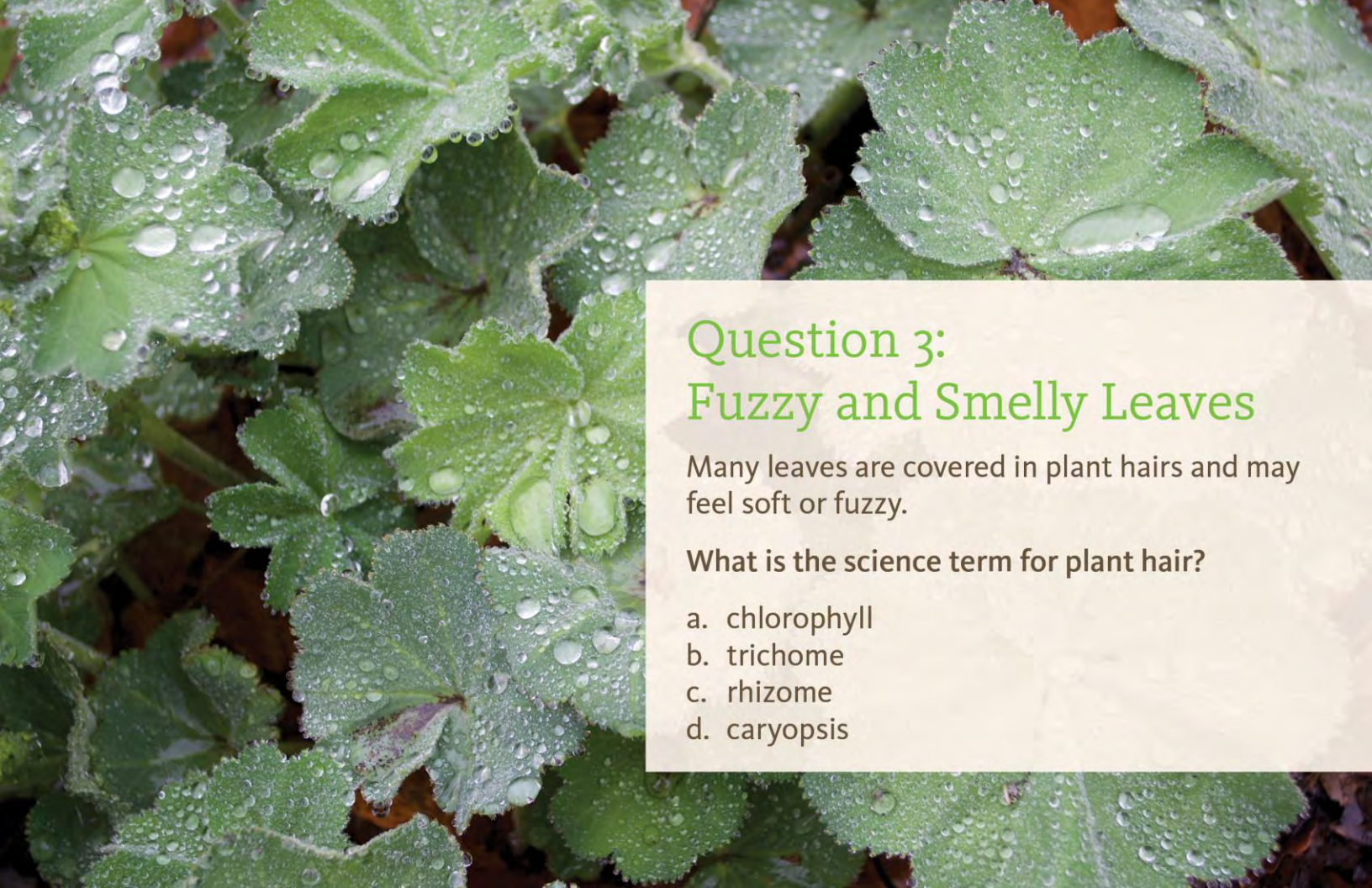


Question 2: Tricky Plant Parts

Ginger and turmeric are very smelly and flavorful plants.

What part of these plants typically can be found in the grocery store?

- a. flower
- b. fruit
- c. root
- d. stem



Question 3:

Fuzzy and Smelly Leaves

Many leaves are covered in plant hairs and may feel soft or fuzzy.

What is the science term for plant hair?

- a. chlorophyll
- b. trichome
- c. rhizome
- d. caryopsis



Question 4: Pollinator Pal

Spicebush is one of the first plants to bloom in the spring. Many animals love the smell of this plant, including birds, butterflies, and bees.

What pollinator likes to lay eggs on the spicebush plant?

- a. swallowtail butterfly
- b. carpenter bee
- c. ruby-throated hummingbird
- d. monarch butterfly

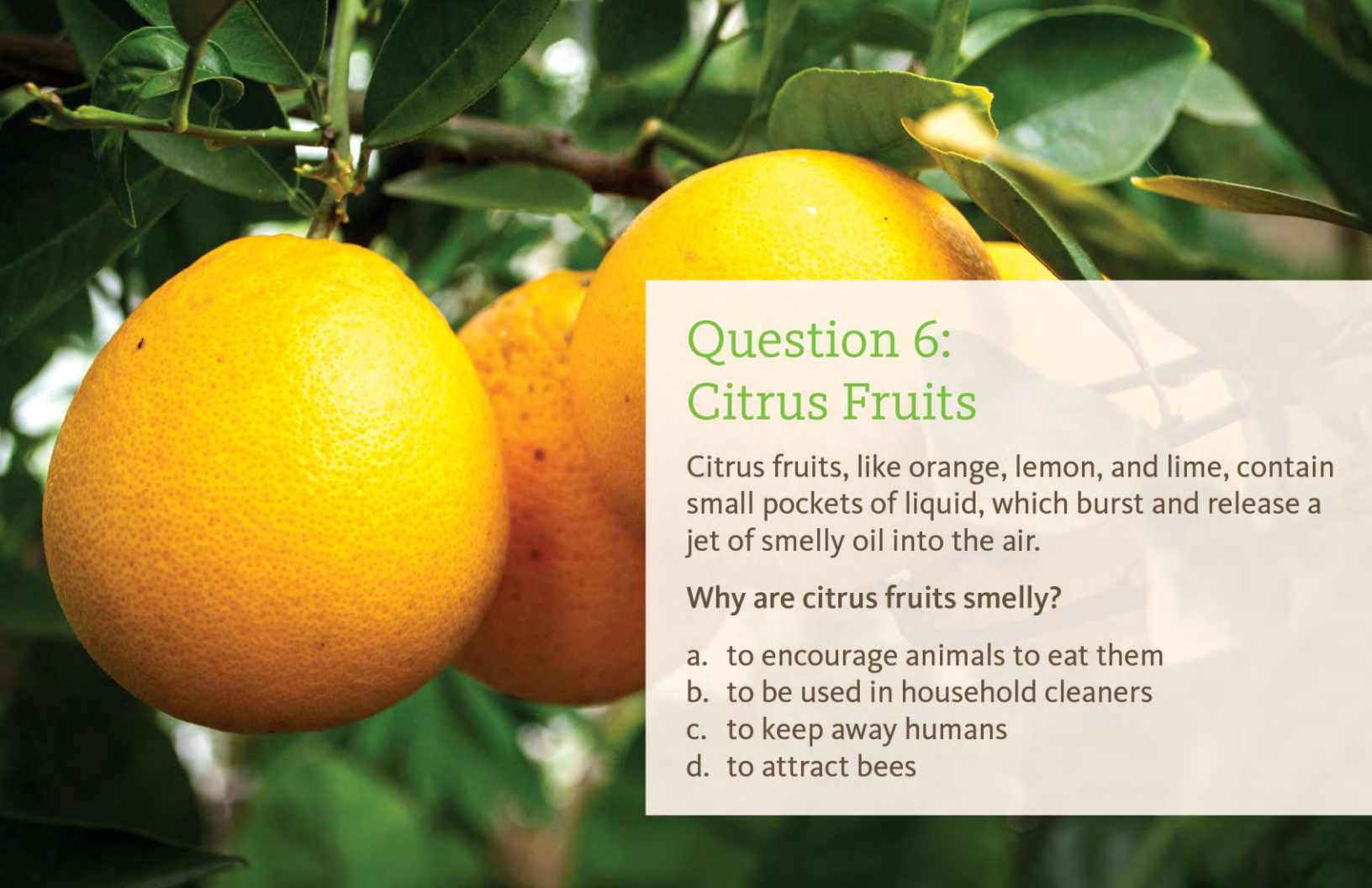


Question 5: Fragrant Flowers

Plants use scents to attract pollinators. Many plants are dependent on pollinators to help them make more plants, or reproduce.

What pollinators depend on smell to find flowers in the dark of night?

- a. owls
- b. butterflies
- c. bees
- d. bats



Question 6: Citrus Fruits

Citrus fruits, like orange, lemon, and lime, contain small pockets of liquid, which burst and release a jet of smelly oil into the air.

Why are citrus fruits smelly?

- a. to encourage animals to eat them
- b. to be used in household cleaners
- c. to keep away humans
- d. to attract bees



Question 7: Ancient Smelly Plants

The ginkgo tree is the only living species of its kind, all others being extinct. It is found in fossils dating back 270 million years.

What fleshy part of this plant has a strong smell?

- a. flower
- b. fruit
- c. seed
- d. root



Question 8: Trees that Smell

The sassafras tree has roots, leaves, and bark that smell spicy and sweet when crushed.

This tree was used to flavor which drink?

- a. iced tea
- b. root beer
- c. cola
- d. coffee



Trivia Answers

Question 1:

c. to keep hungry predators away

When these roots are chopped or chewed, they release a chemical that can repel pests.

Question 2:

d. stem

Although ginger and turmeric may look like the roots of a plant, they are in fact stem tissue. A stem that grows like this is called a rhizome.

Question 3:

b. trichome

These essential oils on each plant hair or trichome can keep away small hungry pests and microbial attacks.

Question 4:

a. swallowtail butterfly

The caterpillars of the spicebush swallowtail will only eat the leaves of spicebush and a few other plants. The butterfly lays its eggs on this plant so when the baby caterpillar hatches it has food right away.



Trivia Answers

Question 5:

d. bats

Some flowers have a musty, rotten odor that attracts bats. Some bats also use echolocation to find flowers!

Question 6:

a. to encourage animals to eat them

Animals will eat the fruits and poop out the seeds to grow away from the mother plant. The amount of acid in citrus fruits was adapted by the plant over time to keep away pests while still attracting other animals.

Question 7:


c. seed

Although a ginkgo seed might look like a fruit because of its fleshy coat, this tree does not make any flowers or fruit!

Question 8:

b. root beer

Sassafras parts were used to flavor the original root beer before it was banned for health reasons. The same flavor is replicated today in sassafras flavoring.



Brooklyn Botanic
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