

Chickering GROWS

THIS WEEK IN THE GARDEN

November 16, 2020

WHAT'S GROWING

We are excited to GROW with you!

TIP OF THE WEEK

Let's learn something NEW!

WORD OF THE WEEK

Horticulture has its own lingo!

DIY PROJECT

Want to try a gardening experiment?



BEST BUDDS BY SWISS

MOTHER, I AM
ALMOST FOUR DAYS
OLD! STOP TREATING
ME LIKE A BULB!



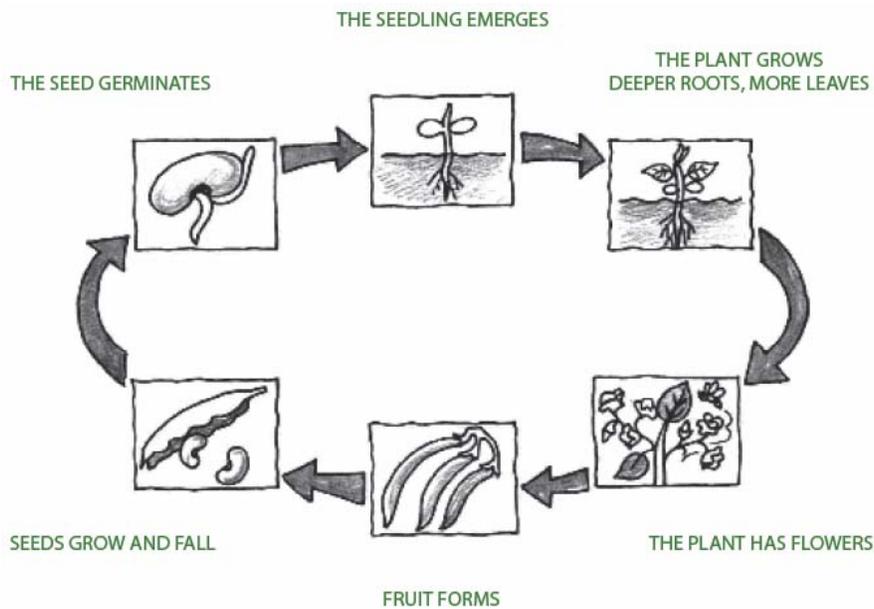
SWISS

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WHAT'S GROWING?

Welcome new and returning gardeners to Chickering GROWS! Our fall and winter garden projects will overlap, as we shift from fall into winter. While **Zinnias** bud and bloom, **Amaryllis** bulbs will just be waking up! Unlike the zinnias, you are not growing Amaryllis from seed. Did you know that a **bulb** is not a **seed**! The Amaryllis bulb started from seed and has been growing for about 5 years to the right size in order to grow a flower!

HAPPY GROWING!



TIP OF THE WEEK: PLANT LIFE CYCLE

After several weeks of growth, your zinnia plant is in the **vegetative stage**. This is the stage of growth between germination and flowering. This phase is characterized by **meristems** producing leaves. Your plant is busy carrying out photosynthesis and accumulating resources needed for flowering and reproduction. The Amaryllis bulb is also in this phase but has been dormant for some time. Unlike seeds, which only contain enough nutrients to get a plant started, bulbs contain enough nutrients for an entire season of growth and flowering. Let's learn more about the different stages of plant growth!

STAGE 1: SPROUT Each seed contains a small amount of nutrients to germinate and grow their first pair of leaves. Amaryllis seed stock sprouts look like grass!

STAGE 2: SEEDLING As the plant's roots develop and spread, a boost of quickly absorbed, well-balanced nutrients fuel the rapid growth from spindly seedling to healthy plant.

STAGE 3: VEGETATIVE Nitrogen is a key component of chlorophyll, the green pigment in plants, so it is the critical nutrient when their energy is focused on growing stalks and foliage.

STAGE 4: BUDDING Phosphorus is in extra high demand at the start of the plant's reproductive cycle, the transition from growing leaves to forming buds.

STAGE 5: FLOWERING Potassium plays a primary role in producing and transporting the sugars and starches plants use up as they develop healthy flowers and fruit.

STAGE 6: RIPENING When flowers and fruit are verging on full maturity, they need a week or two of just water without nutrients, a process known as "flushing," so they can use up all of the nutrients already absorbed.



WORD OF THE WEEK: MERISTEM

Most plants continue to grow throughout their lives. Plants grow through a combination of cell growth and cell division. Cell growth increases cell size, while cell division increases the number of cells. As plant cells grow, they also become specialized into different cell types through cellular differentiation. Once cells differentiate, they can no longer divide.

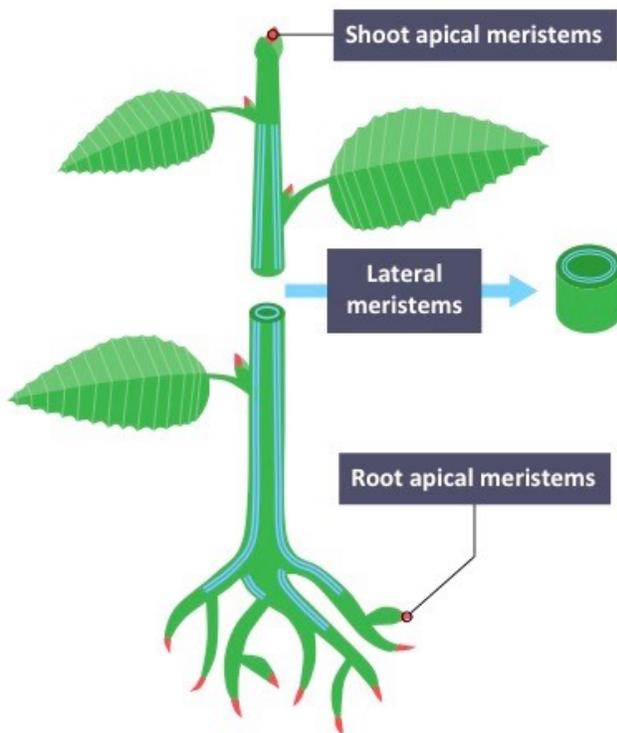
How do plants grow or replace damaged cells after that? **Meristem**, a type of plant tissue consisting of undifferentiated cells that can continue to divide and differentiate, is the key to continued growth and repair of plant cells!

PRIMARY MERISTEMS

Apical meristems give rise to the primary plant body and are responsible for the increase in length or height, or extension of roots and shoots.

SECONDARY MERISTEMS

Lateral meristems are responsible for an increase in width and thickness.



Apical Meristems

Causes **primary** growth
(i.e. lengthening of plant)

Occurs at tips of shoots and roots

Produces new leaves and flowers

Lateral Meristems

Causes **secondary** growth
(i.e. widening of plant)

Occurs at the cambium

Produces bark on trees

DIY: SPROUT BEANS IN A CD CASE



This simple and thrilling experiment will SHOW you how seeds germinate! Germination takes place after a dormant seed is exposed to the right elements that allow it to take in water. The seed swells bigger and bigger until the coat pops! Now air can get into the seed, so the oxygen from the air helps the baby plant absorb the nutrients packed into the seed. This creates energy to grow! Through the transparent case you will actually see the bean plant roots and shoots develop and grow! Ready to get your hands dirty?

MATERIALS

- A transparent CD case
- Potting soil, just a handful
- Bean seeds, small enough to fit into the case
- Elastic band
- Water (spray bottle best)

EXPERIMENT

- Remove the insert from your CD so that you are left with the transparent case
- Open the case and place onto a flat surface, with the inner part facing upwards
- Moisten potting soil with a little water so damp to the touch with no water visible
- Place a hand full of soil onto the bottom inner part of the CD case
- Add two or three beans to the dirt, preferably in the center
- Close the lid and secure it with your elastic band
- Place the CD case in an area that gets a good amount of sunlight daily
- Make sure soil doesn't dry out! If it looks dry, open the case and spray with water to dampen
- The bean will lay dormant for about 7 days. At first you will see a root appear from the coat of the seed. This allows the plant to have access to more water. Next, shoots begin to grow, which then develop stems and leaves. These parts grow upwards to harness the sun's energy for more development.
- Once the bean has sprouted and the root and shoot development are sturdy, the sprouts can be placed into pots where they will have more room to grow.
- Continue to care for your plant and in a few months, you will harvest its produce, which is a wonderful and rewarding feeling!

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ANY QUESTIONS? ASK US

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