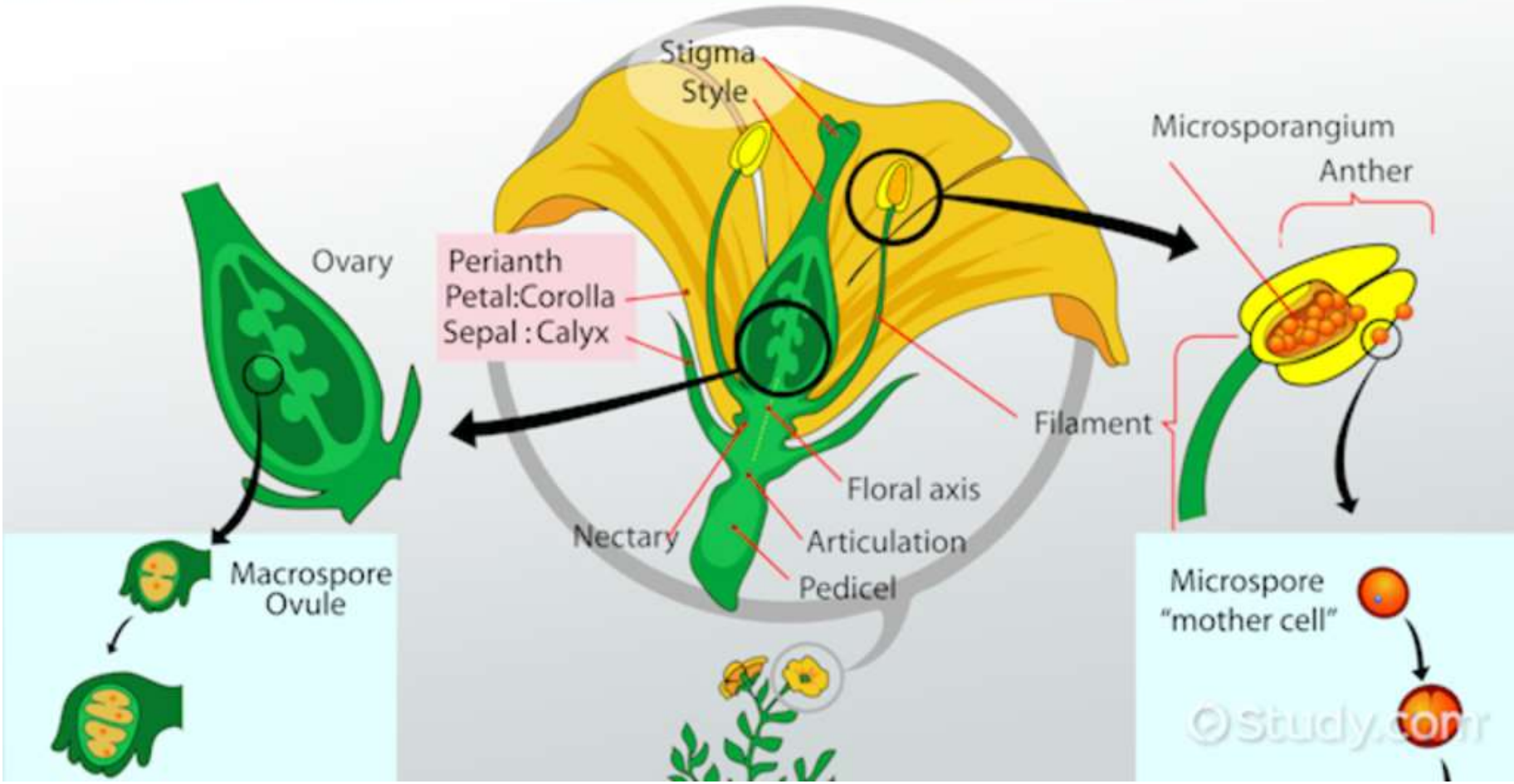
# FLOWER BUD DIFFERENTIATION, UNFRUITFULNESS, POLLINATION, PARTHENOCARPY

- **Plant** growth is the process by which a **plant** increases in size, creating more leaves and stems. **Plant** development is the process by which **plants** change from one stage of growth to the next. These stages include **juvenility**, maturity, flowering and seeding.

- In most fruit trees of the temperate zone, **flower buds** are fully differentiated before winter, but in olives, **differentiation** occurs during or at the end of winter. A period of chilling temperatures is needed to proceed irreversibly from **flower bud** induction to **differentiation**.

- **Plant fertilization** is the union of male and female gametes (reproductive cells) to produce a zygote (**fertilized** egg). It's a pretty straight-forward process that's similar for both flowering **plants**(angiosperms) and seed-bearing **plants**(gymnosperms).

# PLANT FERTILIZATION 101



**Unfruitfulness** is a major problem in many fruit crops and their varieties result in huge loss to growers and make fruit cultivation less profitable. **Unfruitfulness** in fruit crops refers to the state where the plant is not capable of flowering and bearing fruit.

- In botany and horticulture, **parthenocarpy** (literally meaning virgin fruit) is the natural or artificially induced production of fruit without fertilization of ovules. The fruit is therefore seedless. Stenospermocarpy may also produce apparently seedless fruit, but the seeds are actually aborted while still small.

- **Pollination** is the act of transferring pollen grains from the male anther of a flower to the female stigma. The goal of every living organism, including plants, is to create offspring for the next generation. One of the ways that plants can produce offspring is by making seeds.

- Insect **pollinators** include bees, (honey bees, solitary species, bumblebees); pollen wasps (Masarinae); ants; flies including bee flies, hoverflies and mosquitoes; lepidopterans, both butterflies and moths; and flower beetles.

- A **pollenizer** or **polleniser**, sometimes **pollinizer** or **polliniser** is a plant that provides pollen. The word pollinator is often used when pollenizer is more precise. A pollinator is the biotic agent that moves the pollen, such as bees, moths, bats, and birds. Bees are thus often referred to as 'pollinating insects'.

- The verb form **to pollenize** is to be the source of pollen, or to be the sire of the next plant generation.

# THANK YOU