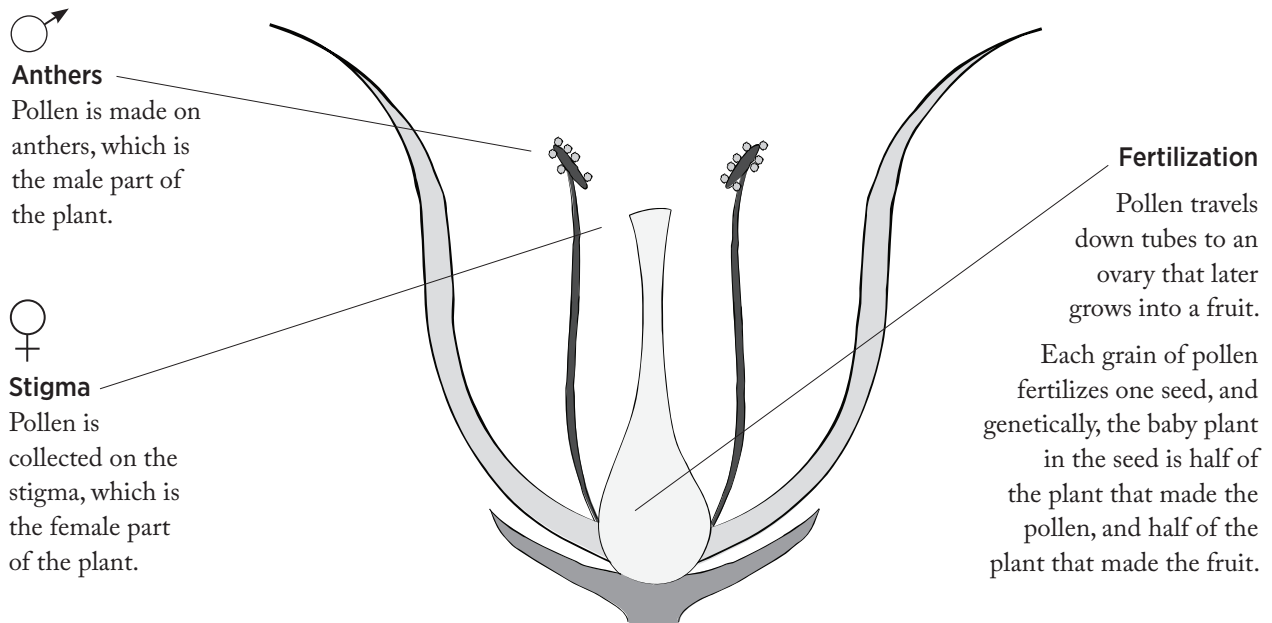


# What's in a Flower?

*The purpose of every flower is to fertilize each seed with a grain of pollen.*



## Types of Flowers

Complete	Incomplete	Open	Closed
Each flower has both male and female parts.	Each flower is either male or female.	Flower shape allows insects to reach the pollen and carry pollen from flower to flower.	Flower shape blocks insects from reaching the pollen.
Each flower makes pollen, and also makes fruit.	Some only make pollen; some only make fruit.	This kind of flower is cross-pollinating.	Since pollen stays within the flower, this kind of flower is self-pollinating.
May be open or closed.	Always open, so that they can be cross-pollinated.	Can be complete or incomplete.	Always complete, so they can self-pollinate.

Most plants have a combination of these flower types. Some plants, for example, have complete and closed flowers. Others may have complete and open flowers, or incomplete and open flowers.

Flip to the other side of this handout to see examples of these combinations, and to learn about how various types of flowers are pollinated.

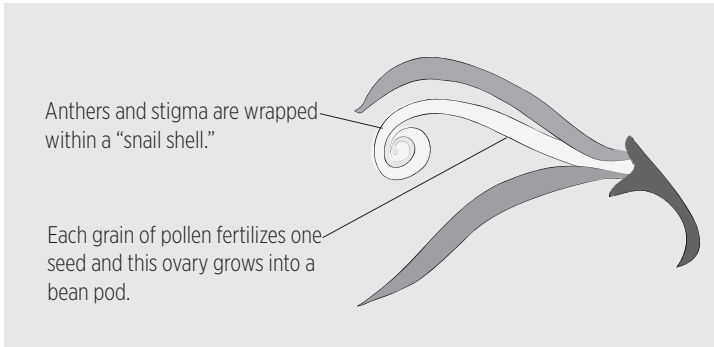
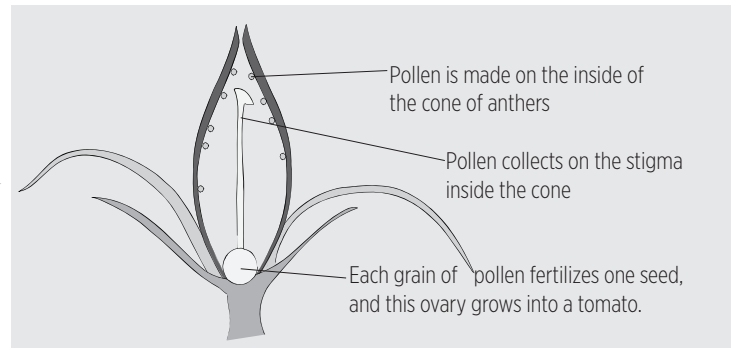


# What's in a Flower?

## Tomato

*Closed, Complete, Self-pollinating*

Pollination almost always happens inside each flower. Bees can't enter the closed flowers, so they don't generally cross-pollinate different varieties nearby.



## Bean

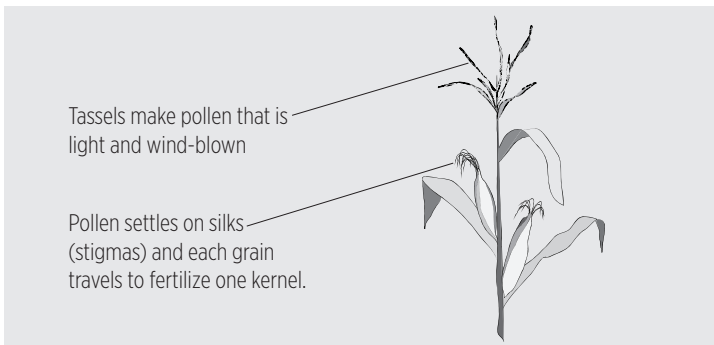
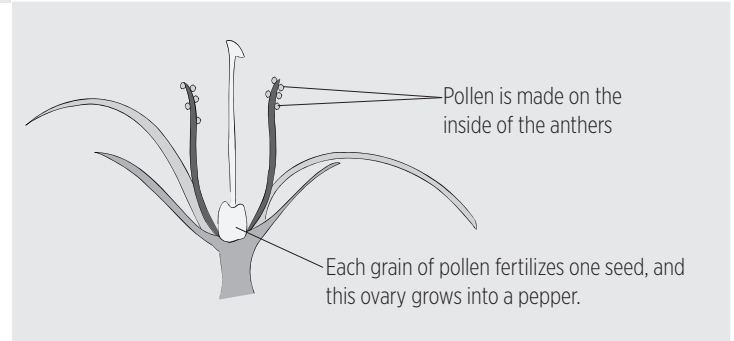
*Closed, Complete, Self-Pollinating*

Like the tomato, beans are self-pollinated. The anthers and stigma are both closed within a coil-like structure, so pollination takes place within each flower.

## Pepper

*Open, Complete, Cross-pollinating/Self-pollinating*

Since they are in the same family, the pepper and tomato flowers look similar. The pepper flower is complete, but the anthers don't make a cone, so insects can enter. As they move, they brush pollen onto the stigma, so some seeds are self-pollinated. They also carry pollen from flower to flower, so some seeds are cross-pollinated.



## Corn

*Open, Incomplete, Cross-pollinating (by wind)*

Flowers are either male or female, so they cannot self-pollinate. Corn pollen is small and dusty enough to be carried for great distances by wind, so different varieties must be far enough to prevent crossing.

## Squash

*Open, Incomplete, Cross-pollinating*

Flowers are either male or female, so they rely on insects to carry pollen. Since the flowers can't self-pollinate, they must be separated by a large distance from other varieties to prevent cross-pollination.

