



Flowers

Academic
Biology

Complete Flower

- A flower having sepals, petals, stamens, and pistils is complete flower.
- Lacking one or more of such structures, it is said to be incomplete Flower.

Flowers and the Environment

- Despite their often small size, flowers are contributing members to the world's ecosystem.
- Whether they are growing in a garden, populating a wild landscape or resting as mulch on the ground, their existence keeps the global environment healthy.



Benefits of Flowers

- Along with other plants, flowers absorb carbon dioxide from the atmosphere and replace it with oxygen, which humans and animals need to breathe.



This affects the overall composition of Earth's atmosphere, making it a hospitable place for life to continue existing.

Aesthetics

- Whether they are grown in home gardens and flourish in natural settings, flowers provide aesthetic beauty to any environment.
- Many also produce a sweet or otherwise pleasing fragrance. For instance, lavender scent is a key ingredient in many soaps, perfumes and aromatherapy products.

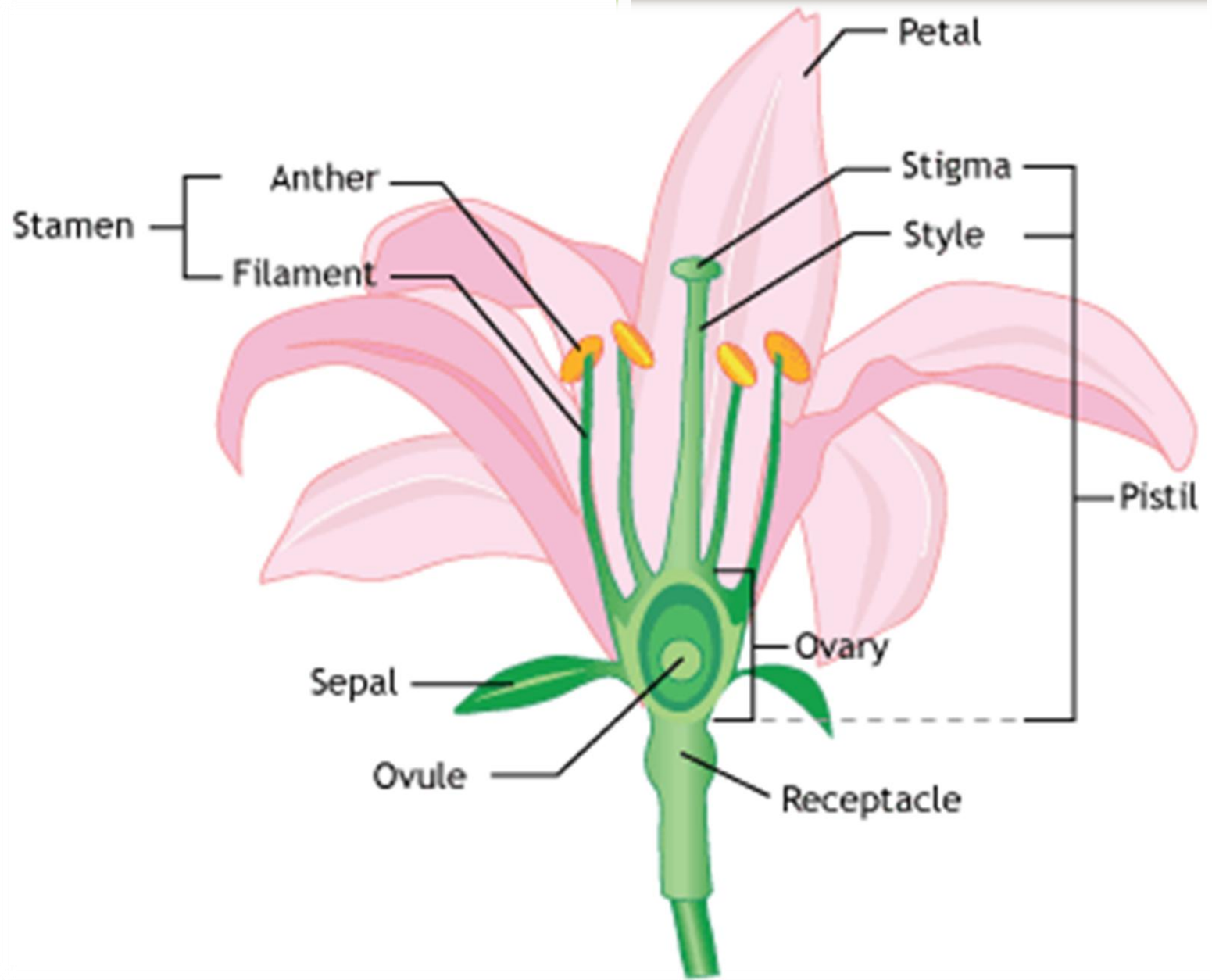


Mulch

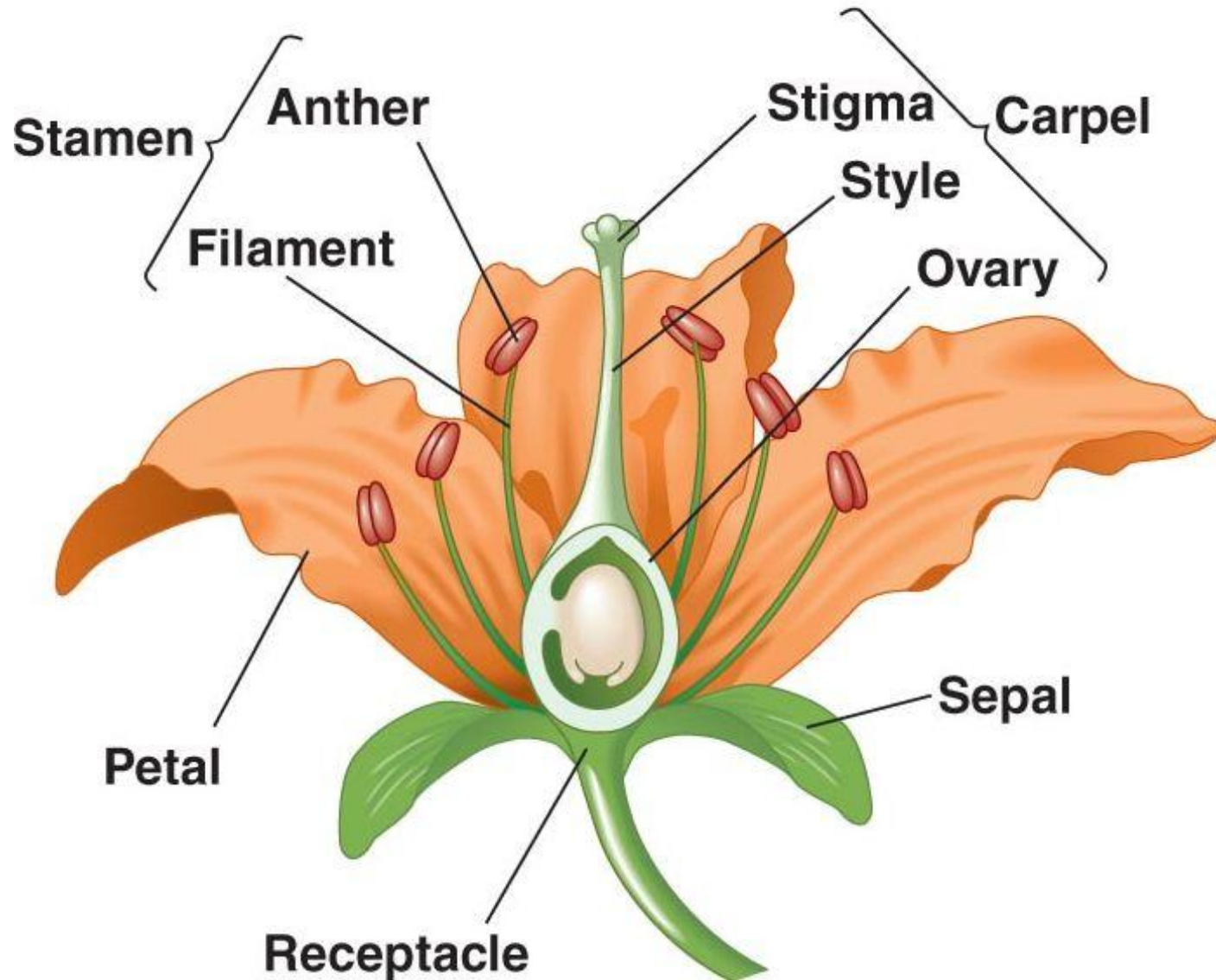


- Flowers are also part of the natural cycle of life and death on Earth.
- After dying, they lie on the ground as mulch or fertilizer for their neighbors. Gradually, they decompose and become part of a nutrient-rich soil that gives rise to new life.

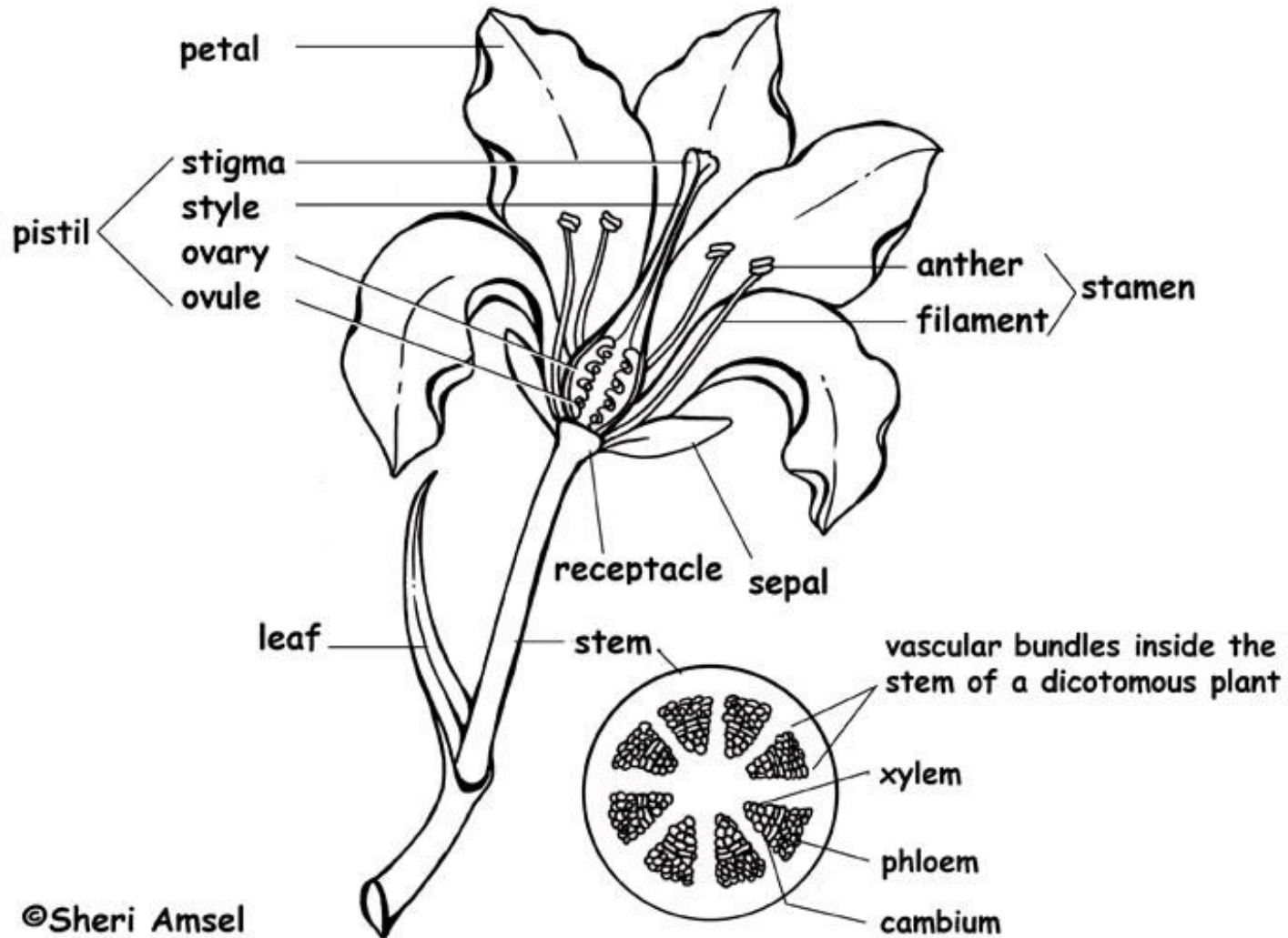




Structure of an idealized flower

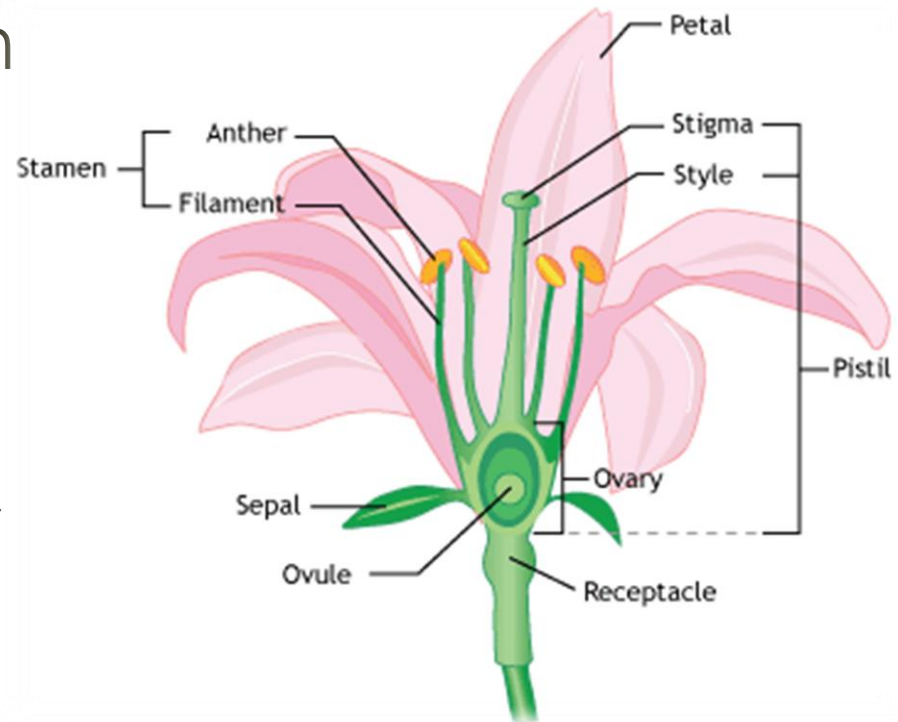


Parts of the Flower

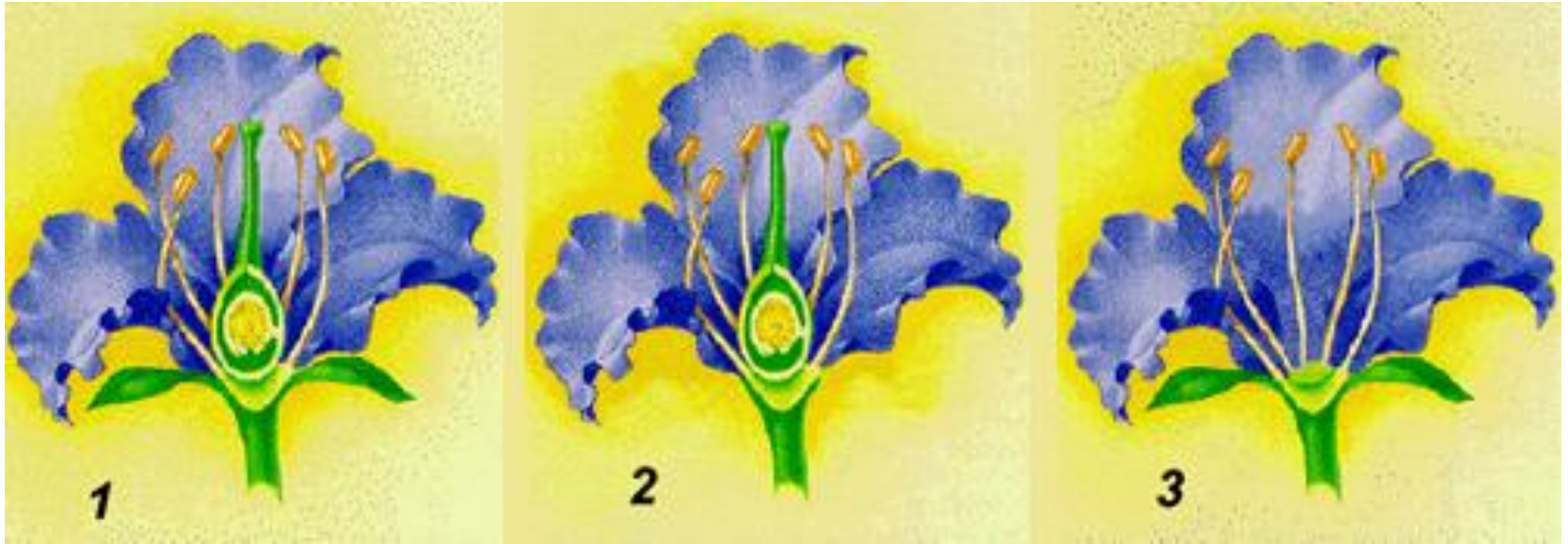


Perfect Flowers

- Perfect flowers, on the other hand, such as roses, are flowers that contain both a pistil and stamens, and therefore are both male and female.



Different Types of Flowers



Imperfect Flowers

- Imperfect flowers are flowers that only have one set of reproductive organs, so they are either male or female.
- There are two types of imperfect flowers.
- Staminate flowers contain only stamens, the male reproductive part of the flower.
- Pistillate flowers only contain the pistil, or female, reproductive part.

Difference between Perfect and imperfect flowers

- While perfect flowers can reproduce entirely within one bloom.
- Imperfect flowers need two separate flowers in order to pollinate themselves and create seeds.
- Imperfect flowers may be pollinated by animals, insects, weather or humans, but they will always need some sort of outside facilitation in order to reproduce.

What are monoecious plants?

- Monoecious is a term which is used to describe an organism which has both male and female sex organs present, as separate structures.
- The term is most commonly used in reference to plants, although some animal species are monoecious as well, in which case it is more commonly referred to as hermaphroditism.
- There are a number of advantages to being monoecious, making it a fairly common sexual configuration, although it might seem a bit unusual to humans.

Characteristics Monoecious

- In a plant which has monoecious characteristics, the plant produces both male and female flowers.
- Alders and corn are two examples of plants which are considered monoecious.
- The male flowers on the plant are capable of fertilizing the female flowers, and they can also cross pollinate with other plants in the vicinity.
- The male and female flowers usually look different, as one is designed to create pollen for distribution, while the other develops ova which can be fertilized, resulting in the development of seeds.

What are dioecious plants?

- In botany, dioecious is a term used to describe the sexuality of certain flowering plants.
- Dioecious plants are species in which each individual plant has only male or only female flowers, but normally not both.
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- Unlike the majority of flowering plants, these species cannot self-fertilize.

Dioecious vs Monoecious

- Dioecious plants make up about six or seven percent of plant species.
- The other main types of plant sexuality are described as monoecious and hermaphroditic. In monoecious plants, each individual plant has separate male and female flowers.
- In hermaphroditism, the most common type of plant sexuality, occurring in over 80% of species, male and female parts are found in each individual flower.

Dioecious vs Monoecious

- Most flowers are hermaphroditic. They can therefore produce both female reproductive cells.
- Female cells are called megaspores or seeds, and male reproductive cells, called microspores or pollen.
- However, this is not the case in dioecious flowers, which produce only one type of spore.
- Male, or androecious, flowers produce pollen.
- Female, or gynoecious, flowers produce seeds.