CHAPTER 5

HOW DO PLANTS REPRODUCE?

Objectives of this Chapter:

- Explain how plants reproduce sexually and asexually.
- Identify plants which can reproduce sexually and asexually
- Differentiate self-pollination from cross-pollination.

BIG IDEA

- Plants use different parts to reproduce.

You can see different types of plants everywhere. They differ in size shape, color, smell, and even in their mode of reproduction.

Like animals, plants needs continuously reproduce themselves. Some reproduce through their seeds while some utilize other means. In this chapter, you will learn more about the different ways of plants reproduction.

LESSON16

SEXUAL REPRODUCTION IN PLANTS

IMPORTANT QUESTION

How do plants reproduce sexually?

Some plants reproduce using their parts like their roots, stem, and leaves. However, there are some plants which reproduce by using their accessory part – the flower.

A complete flower has the following parts: receptacle, sepals, petals, stamens, and pistils (carpels).

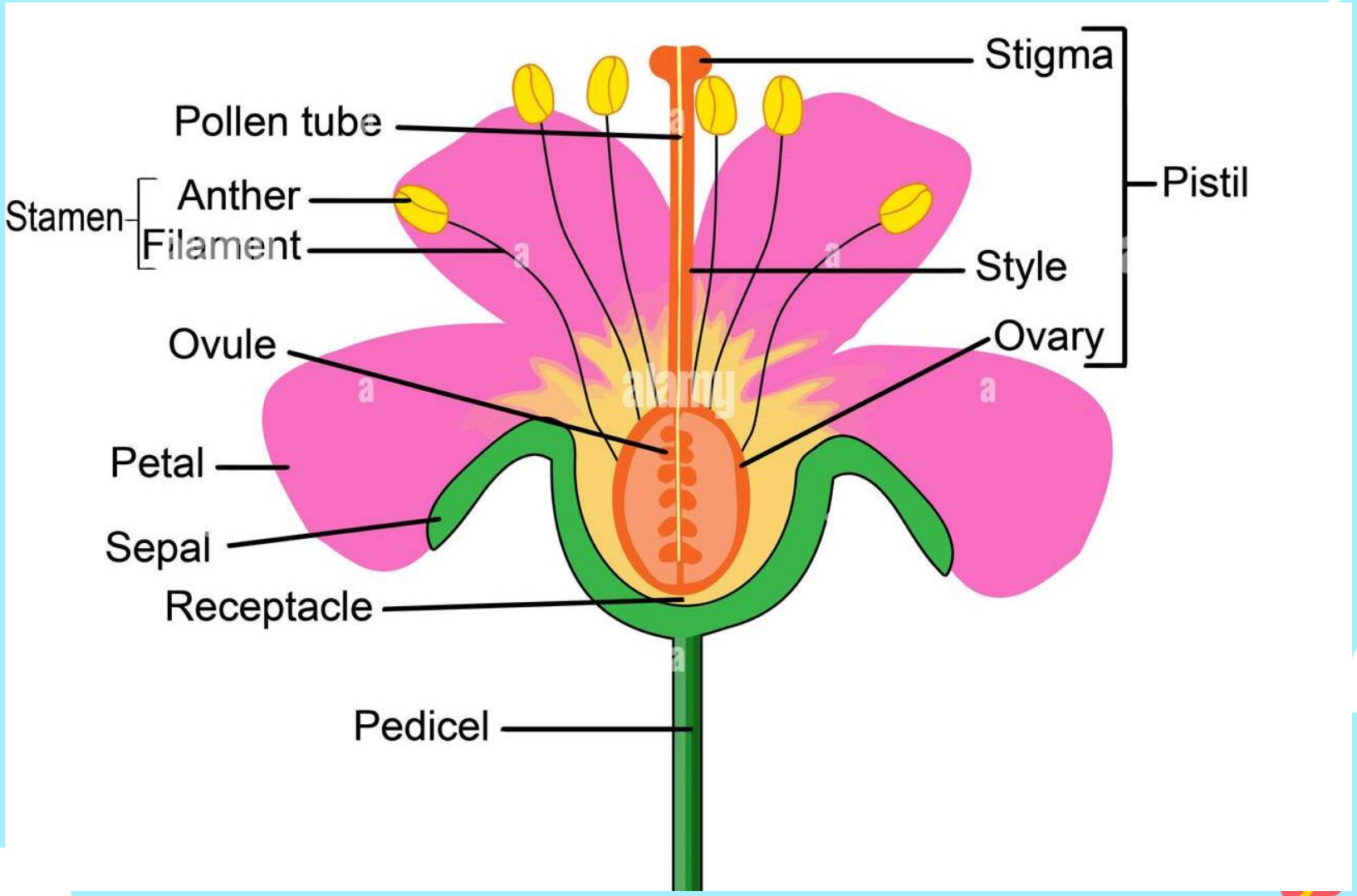
- The **receptacle** is the enlarged upper end of a flower stalk which bears the flower or group of flowers.
- **Sepals** are modified leaves which enclose and protect the other parts of a flower when its still a bud. When the flower bloom, the sepal supports the bottom of the flower. A group of sepals is called **calyx**.

- **Petals** form the most obvious part of a flower. Most petals are brightly colored to attract insects for pollination. A group of petals is called **corolla**.
- **Stamen** is the male part of flower. It can consist of the filament and the anther. The **filament** holds the anther in a position tall enough to release the **pollen**. The anther consist of two lobes that contain pollen sacs. Pollen sacs have pollen grains that are released by the anther when they mature.

- The **pistil** is the female part of a flower. It consist of the stigma, style, and ovary. The **style** is a stalk that connects the stigma to the ovary. It is tall enough to trap pollen grains. The stigma is a swollen structure at the end of the style. It receives the pollen grains. The mature stigma secretes a fluid that stimulates the pollen grains to germinate.

Flowers are the attractive parts of the plant which are used for reproduction.

Parts of a Flower



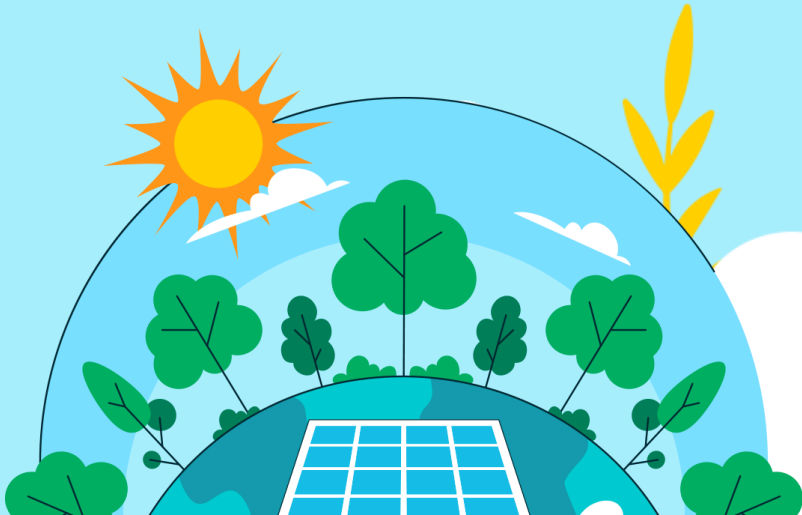
Pollination

Plant sexual reproduction happens when pollen grains are transferred from the anthers (male) into the stigma (female). The transfer of the pollen grains the anther to the stigma is called **pollination**,

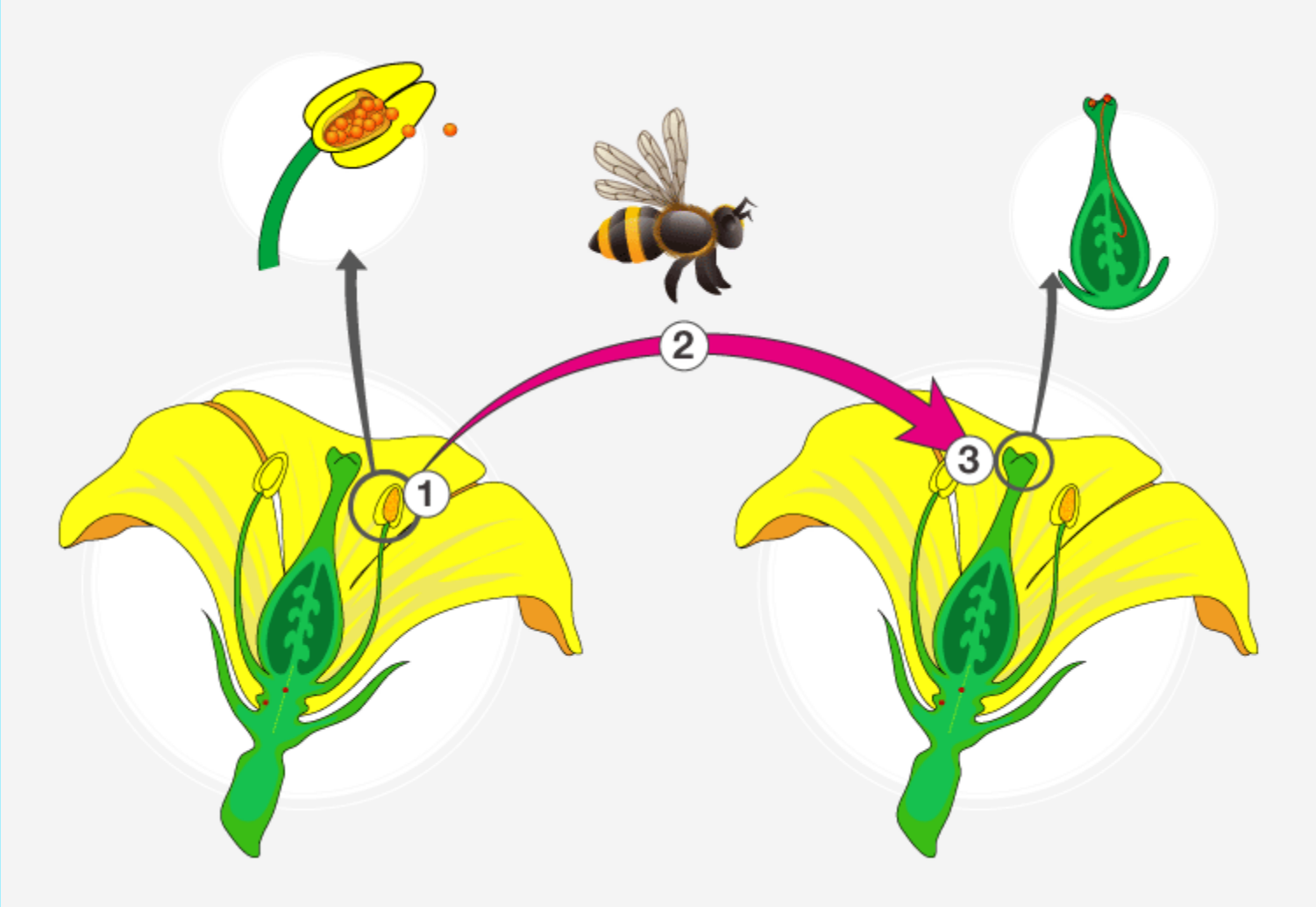
Pollination is usually brought about by wind, insects, or birds. Animals and other agents that aid in sexual reproduction of plants are called **agents of pollination**.

There two kinds of pollination, **self pollination and cross pollination.**

- **SELF-POLLINATION-** is the transfer of pollen grains from the anther to the stigma of the same flower or a different flower that belongs to the same plant.
- **CROSS-POLLINATION-** is the transfer of pollen grains from the anther of a flower to the stigma of another flower that belongs to another plant but of the same kinds. Cross-pollination is the most common form of pollination.



Once a pollen grain enters the stigma, it swells and grows a long tube that travels through the style until it reaches the ovary. The tube releases the sperm cells into the ovule to fertilize the egg cell. The fertilized egg cell and the ovule itself develops into a seed. The ovary then enlarges and thickens its walls to become a fruit. This will be the receptacle for the seeds. These seeds can eventually grow into new plants.



In cross-pollination, pollen grains are transferred from the anther to the stigma of a flower in another plant of the same kind.

THANK YOU!!