



Sexual reproduction

Class 7

REPRODUCTION IN PLANTS



Features of Sexual Reproduction

- Two parents are involved (both male and a female).
 - Gamete formation and fertilization take place.
 - The whole process is slow and lengthy.
 - The variation occurs; offspring are different from parents, genetically and physically.
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- **Sexual reproduction** involves the fusion of male and female gametes. The male gametes are found inside the pollen grains and female gametes are found in the ovule. Pollination is the process of transfer of pollen grains from the anther of one flower to the stigma of the same or another flower.



Sexual Reproduction in Plants

- Reproduction in plants takes place sexually and asexually as well. But the majority of the flowering plants reproduce sexually. The flower is the reproductive part of a plant i.e., both male and female gametes are produced by flowers. Sexual reproduction in plants takes place in flowers. The complete flower typically consists of four parts:
 - Petals
 - Sepals
 - Stamen (male reproductive part)
 - Pistil/Carpel (female reproductive part)
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Unisexual and bisexual flowers

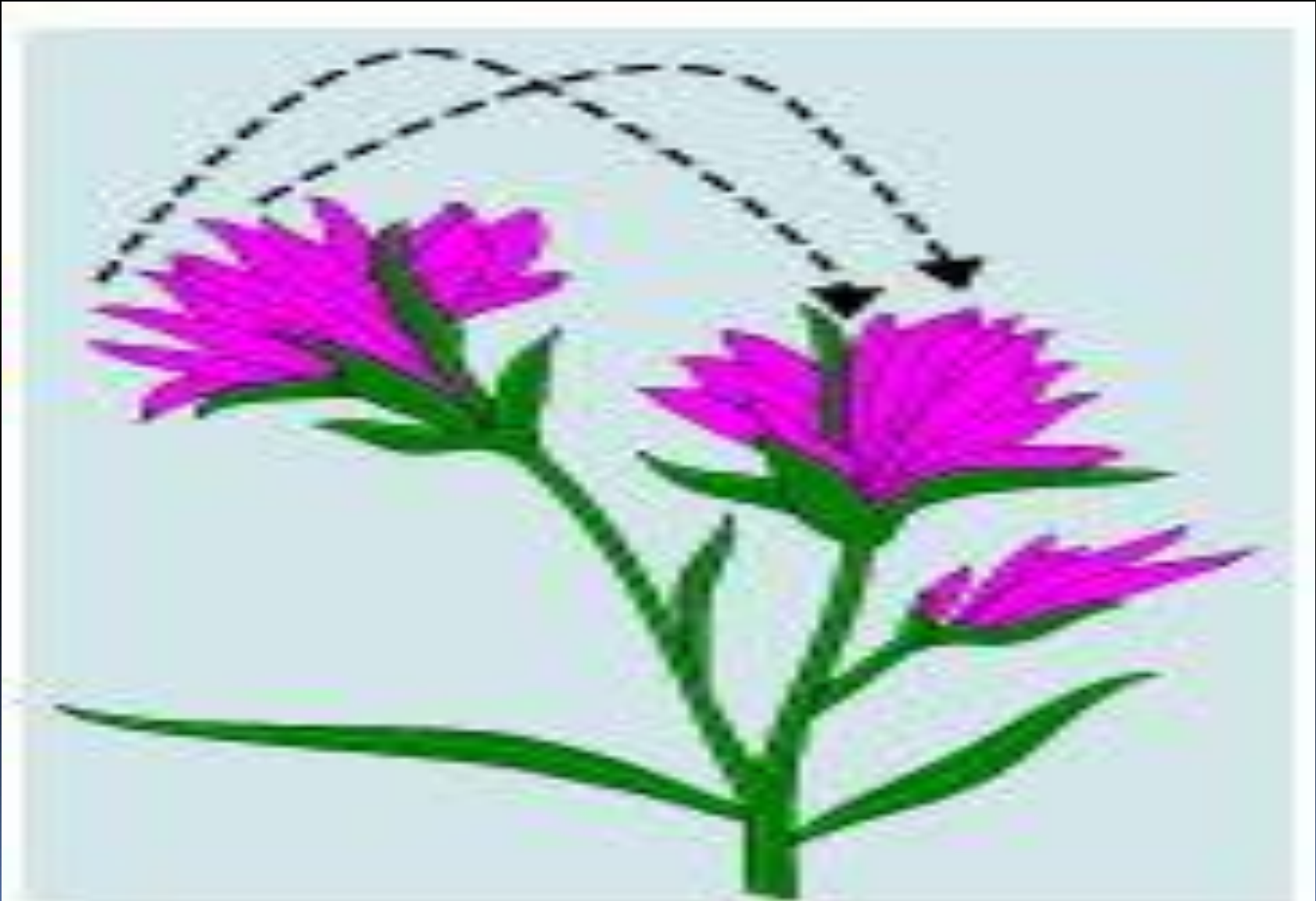
- A flower may consist of either stamen or pistil or both. Based on this, a flower can be either unisexual or bisexual. A bisexual flower is composed of all the four parts mentioned above, e.g. Rose, China rose. Whereas, plants like papaya and cucumber produce only unisexual flowers.
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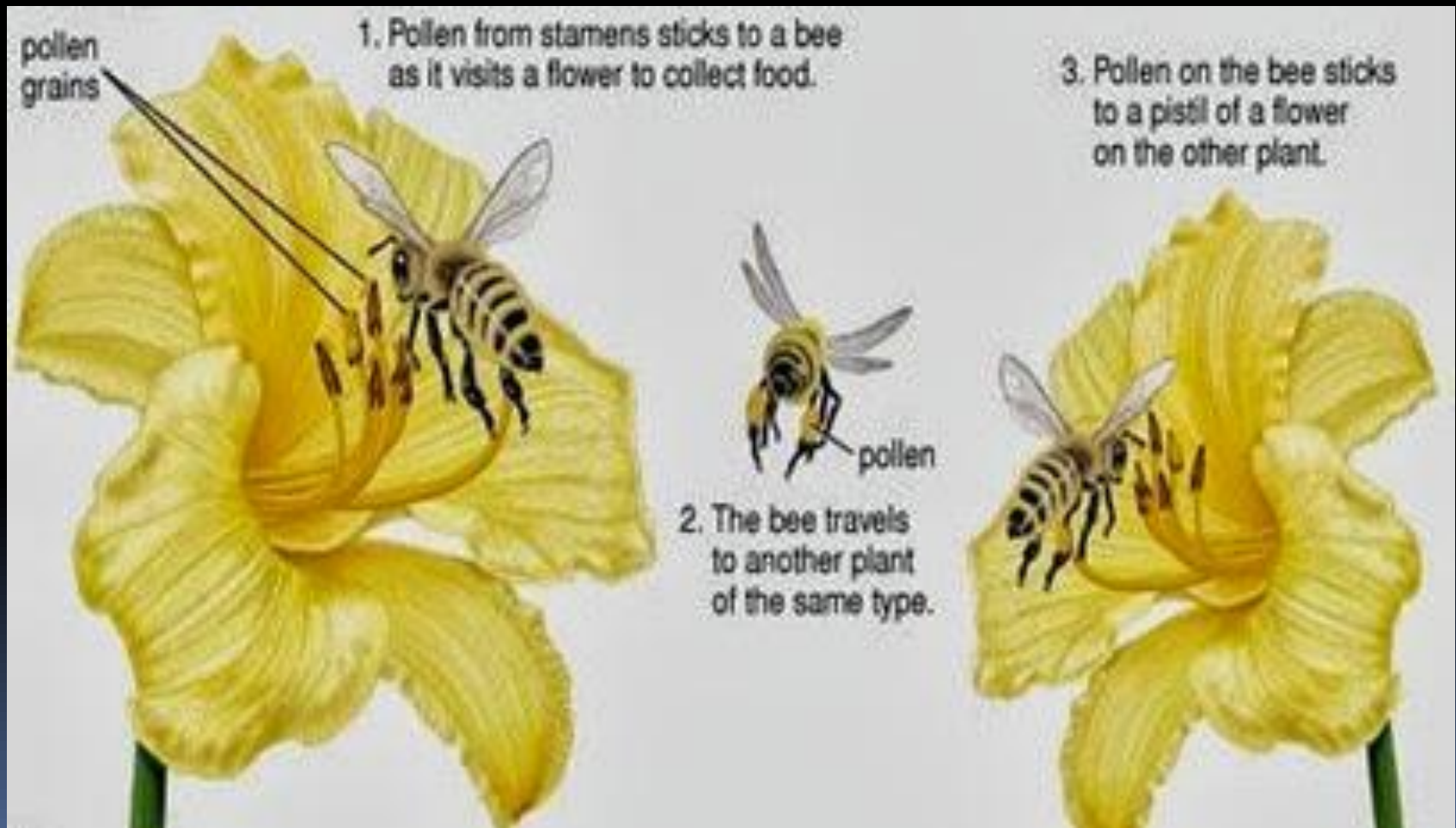
Pollination and Fertilization

- Depending on the pollen landing, pollination can be classified into two types-
 - **Self-Pollination:** A pollination where the pollen transfer takes place between the anther and stigma of the same flower.
 - **Cross-Pollination:** A pollination where the pollen transfer takes place between the anther and the stigma of different flowers of the same plant or different plants of the same species.
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Self pollination



Cross pollination





Reproduction in plants

Once pollen gets transferred to the stigma the male gametes from pollen grains release and fuses with egg in the ovule to form a zygote. This process of fusion of gametes is called fertilization. The zygote thus formed, divides and develops into an embryo, and later into a seed. The ovary develops into a fruit.

