

Modified In-School Off-School Approach Modules (MISOSA)
Distance Education for Elementary Schools
SELF-INSTRUCTIONAL MATERIALS



**POLLINATION AND
FERTILIZATION**



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POLLINATION AND FERTILIZATION

At the end of this lesson, you will able to:

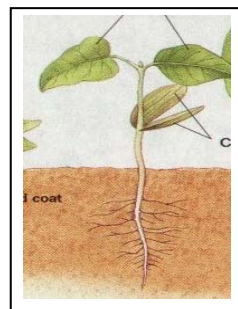
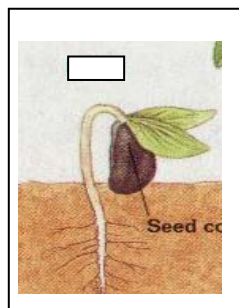
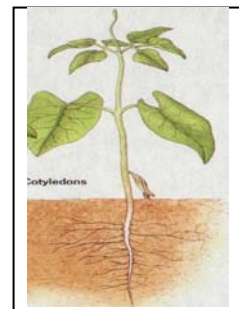
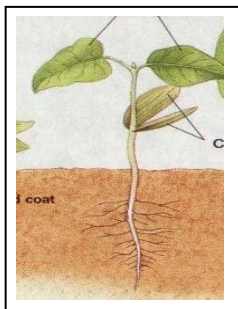
- explain the role of pollintation in plant reprodcution
- explain the role of fertilization in plant propagation



Try to Recall

Hi! Are you ready for the next task? Let us have a review on seed germination.

A. Arrange the pictures by writing numbers 1 to 5, to show the sequence in the stages of germinating seeds.



B. Describe the changes in germinating seed. Do it in your notebook.

Have you observed plants with flowers in your garden? Do you know the importance of flowers to plants? In the succeeding activities, you will learn how plants reproduce.



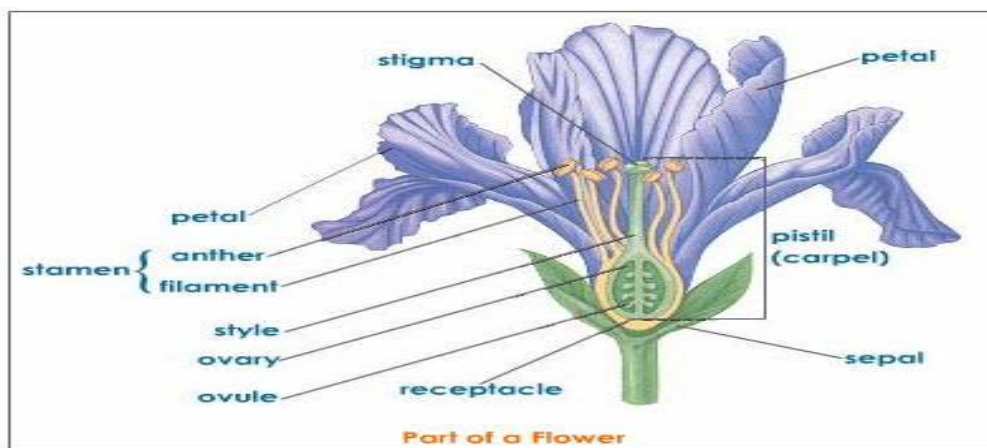
ACTIVITY 1

- You will need:

Hand lens, gumamela or bougainvillea flower

Do these:

1. Study the parts of a flower.



2. Using hand lens, observe and describe the pistil and the stamen of a real flower.
3. Open the ovary. Look for the ovule.
4. Touch the anther.

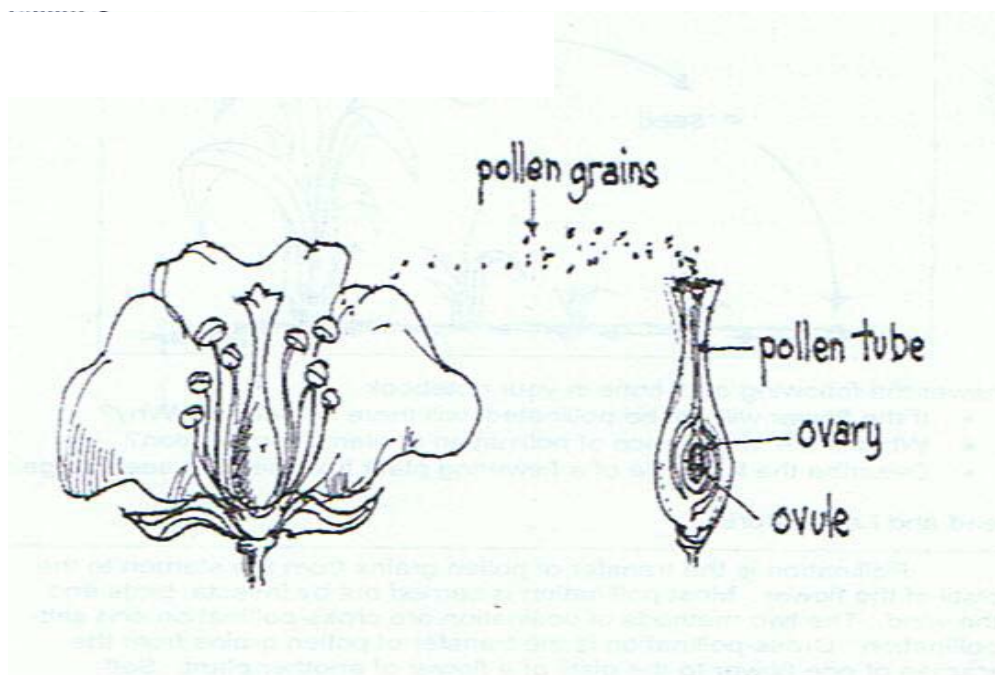
Ovules and pollen grains contain the sex cells of flowers needed for reproduction.

Answer the following questions in your notebook.

- What did you notice inside the ovary? What are these? What is their function?
- When you touch the anther, what did you notice on the tip of your fingers?

ACTIVITY 2

1. Study the illustration below.

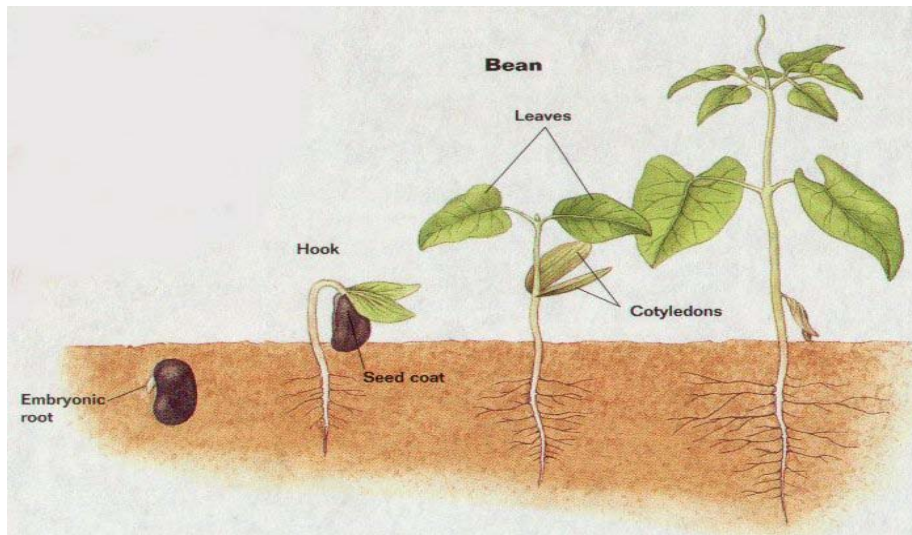


Answer these questions in your notebook:

- What happens when the male nucleus joins the female nucleus in the ovary? What will happen with ovules? What will happen with the ovary?
- If the male nucleus will not reach the ovary, will there be fertilization? Why?
- What do you think will happen if fertilization will not take place?

ACTIVITY 3

1. Study the life cycle of flowering plant from seed to seed stage.



Answer the following questions in your notebook.

- If the flower will not be pollinated, will there be seed? Why?
- What is the importance of pollination to plant reproduction?
- Describe the life cycle of a flowering plant from seed to seed stage.
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Read and Lear More:

Pollination is the transfer of pollen grains from the stamen to the pistil of the flower. Most pollination is carried out by insects, birds and the wind. The two methods of pollination are cross-pollination and self-pollination. Cross-pollination is the transfer of pollen grains from the stamen of one flower to the pistil of a flower of another plant. Self-pollination is the transfer of pollen grains from the stamen of one flower on the same plant.

Flowering plants can reproduce sexually because they have stamen and pistil. The stamen (male part) holds the pollen grains. Pollen grains are powdery materials. These are needed to fertilize the ovules (eggs). The pistil (female part) is shaped like a vase the long, narrow tube like part is the style. Notice that the style is connected to the ovary. Inside the ovary are the ovules.

The pollen grains drop on stigma and produce a tube like structure called a pollen tube. This pollen tube extends down the style and into the ovary are the ovules.

Fertilization will take place when a male nucleus in the pollen tube joins the female nucleus of the ovule. The ovule will develop into a seed after fertilization.

Pollination and fertilization must take place before reproduction in plants can happen.

I learned that:

Some animals are useful to people in the community:

- ☒ Pollination is the transfer of pollen grains from (male) anther to the stigma of the (female) pistil.
- ☒ There are two kinds of pollination: cross-pollination and self pollination.
- ☒ Fertilization takes place when a male nucleus in the pollen tube joins the female nucleus in the ovule.
- ☒ Pollination and fertilization must take place before reproduction in plants can happen.



Write your answer in your notebook.

- A. Why do flowers have attractive and colorful petals?
- B. What do you think will happen if pollination and fertilization will not take place?



A. True or False: Write true if the statement is correct, if false give the correct word/s to make the statement true. Do this in your notebook.

Example:

False (attractive) 1. Flowers have dull petals.

1. The stamen is the female part of a flower.
2. Ovules are found inside the ovary.
3. Pollination is the transfer of pollen from the anther to the stigma.
4. Pollen tube is produced when pollen grain drops to the anther.
5. Fertilization takes place when male nucleus joins the female nucleus of the ovule.

B. Explain the importance of pollination and fertilization in plant reproduction. Write your answer in your notebook.

Congratulations! What a job will done, keep it up.