GRADE 1V

GROWING PLANTS WITHOUT SEEDS

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

- *describe how some plants reproduce asexually*
- *demonstrate ways of propagating plants asexually*
- *demonstrate the propagation of a plant from other parts: a stem cutting, tuber, enlarged root, leaf, and bud*

Try to Recall

ACTIVITY 1

- Read the sentences.
- Unscramble the letters to know what it describes.
- Write your answers in your notebook.

Example: The method of growing plants from seeds.

X E S U A L reproduction **S E X U A L** reproduction

1. It develops by the union of pollen tube and ovule.

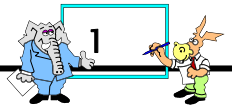
D E S E _____

2. It contains the female egg cells.

U O E V L _____

3. It enlarges to form the fruit.

A V R Y O _____



4. The process of transfer of pollen grains from the anther to the pistil

P O I L L A N N O I T _____

5. The union of the sperm cell and the egg cell.

R E F T I L I A Z O N I T _____

Do the following activities:

ACTIVITY 1

- You will need:
  one piece onion
  water
  plastic or glass container

- Do these:
  1. Get the onion.
  2. Place it in a plastic or glass container.
  3. Pour water into the container. Make sure that at least ⅓ part of the base onion is in the water.
  4. Record what you observe.

ACTIVITY 2

- You will need:
  mayana plant
  water
  glass

- Do these:
  1. Get a stem of a mayana plant.
  2. Cut some leaves off the lower part of the stem.
  3. Put it in the glass.
  4. Look at the cutting each day.

ACTIVITY 3

- You will need:

  katakataka plant

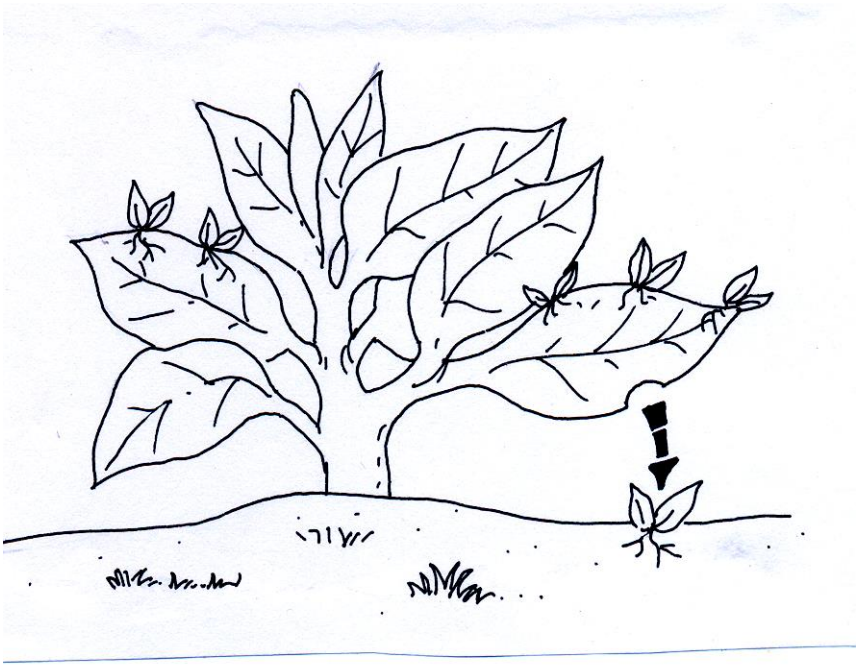
- Do these:

  1. Cut a *katakataka* leaf off a stem.
  2. Put it in a cool place.
  3. Record what you observe.

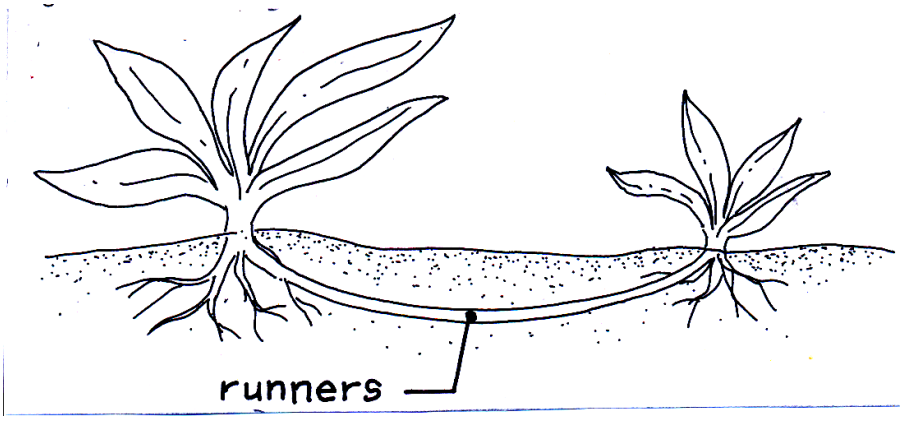
- **Read and Learn More:**

Asexual reproduction is where there is no union of sex cells. It makes use of plant parts like the stem, leaf, or root to grow into a new plant. This kind of asexual reproduction is called vegetative propagation.

The katakataka plant develops small plants along its edge. These small plants grow and develops root. Then they fall off the ground and continue to grow.



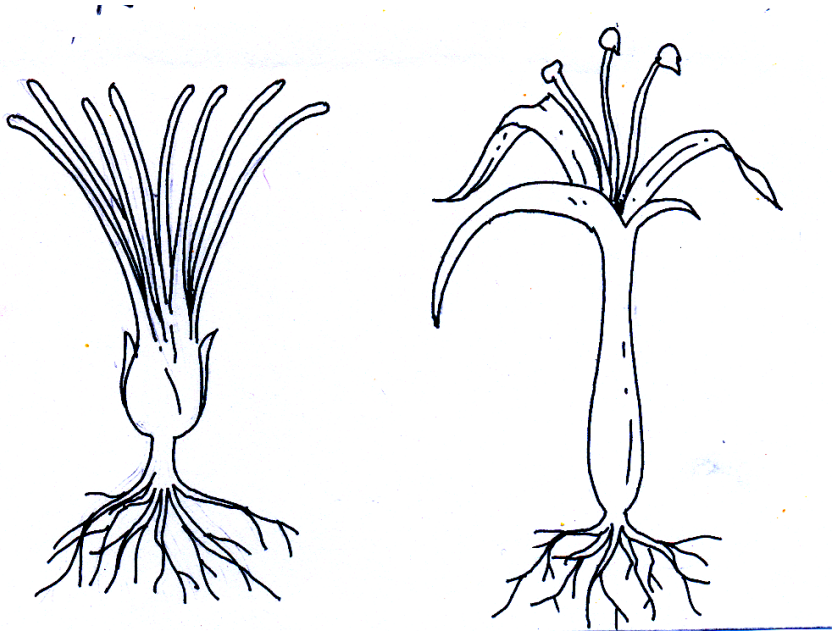
Some plants grow stems that grow along the ground from the parent plant. These stems are called runners. Examples are the strawberry and the Bermuda grass. From these runners small plants can grow.



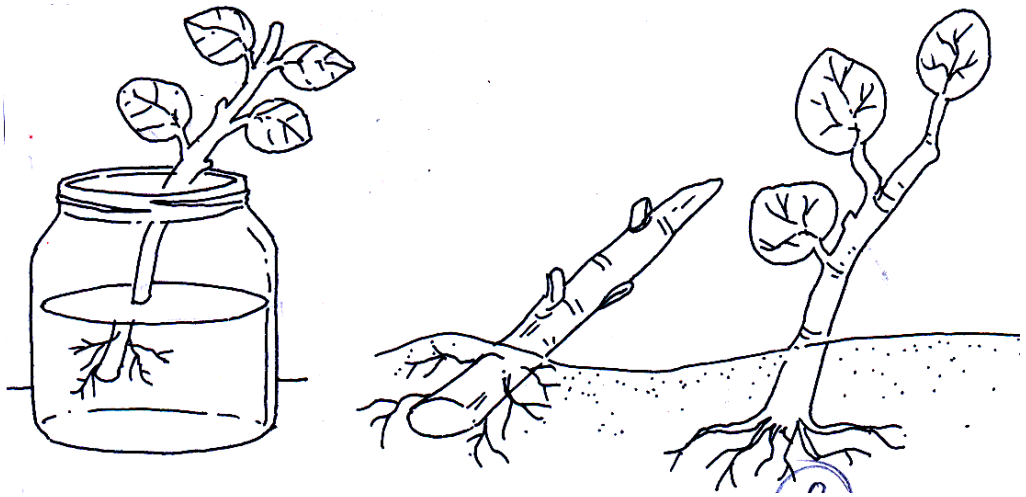
The ginger and the gabi plants have a special kind of roots. These are called tubers. Each tuber can produce many new ginger and gabi plants.

Plants like potato and cassava grow from roots. Many plants can just be grown by dividing one piece of it and planting it in the soil. These plants can easily grow.

Plants such as onions and garlic are reproduced by planting their bulb. A bulb is an underground bud. It consists of a short stem covered with thick leafy layers.

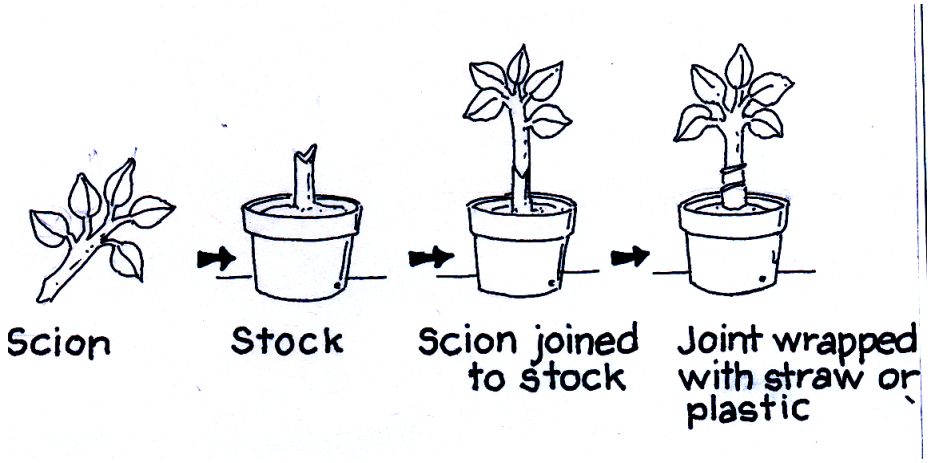


The most common method of producing new plants is by cuttings. Cuttings are portions of stems, roots, or leaves that are removed and rooted in sand, loose soil, or water.

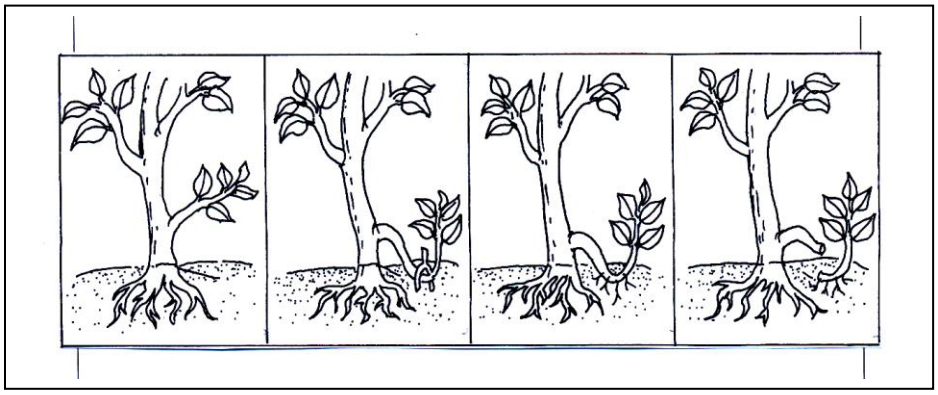


There are also artificial ways of growing or propagating new plants. These are grafting, layering, marcotting, and budding.

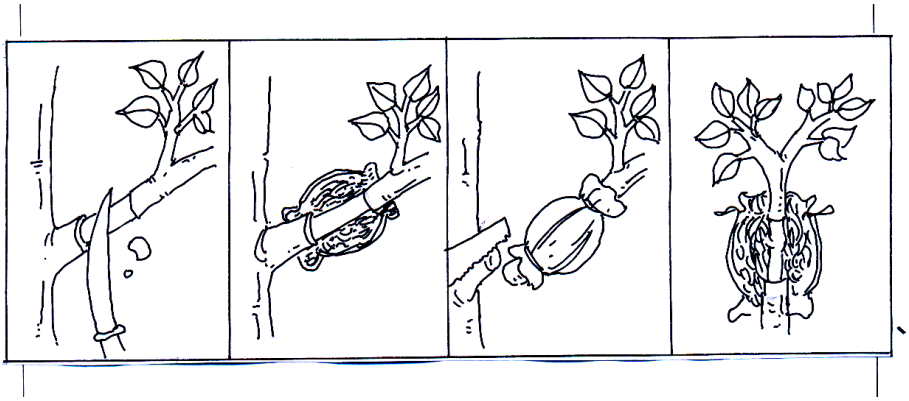
Grafting is one method used in producing woody plants and fruit trees. Examples are mango, santol, durian, and others. It is also used in producing ornamental plants. Grafting is done by splicing together two stems. The rooted part is called stock. The cutting joined to the stock is called scion.



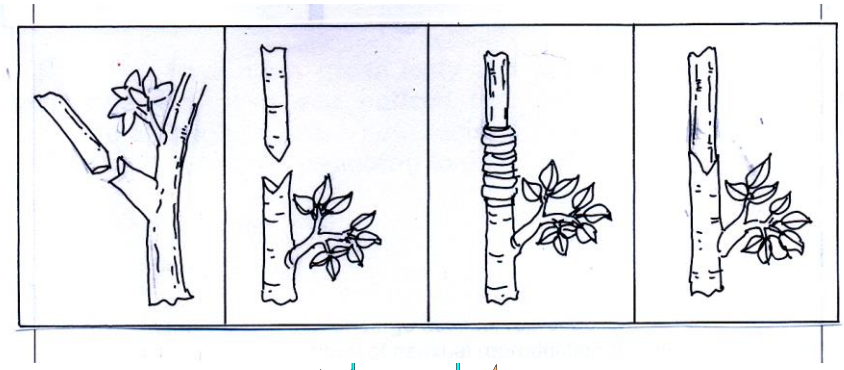
A new plant may grow many stems close to the ground. Farmers cover these stems with soil. Each stem grows its own roots. Each stem becomes a new plant. This way of growing plants is called layering.



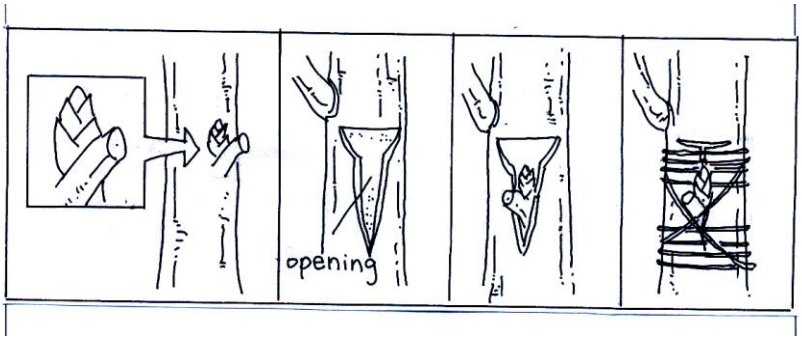
Another way of growing new plant is by marcotting. A healthy, mature branch is selected. The bark of the stem is removed. Coconut husk with good soil is wrapped around the branch. Roots will come out of the branch in a few months.



In grafting, a branch from one plant is attached to the branch of another plant. The branch from the other plant will then get the food and water that pass through the stem of the mother plant.



In budding, a bud from one plant may be attached to another plant. This is done by making an opening in the mother plant. Then the bud from another plant is fitted to the mother plant. When the bud grows, it is cut off from the mother plant and then planted in soil.



I learned that:

- ☑ Some plants do not grow from seeds.
- ☑ Asexual reproduction refers to the growing of new plants in other ways.
- ☑ Natural vegetative reproduction is the development of new plants from the roots, stems or leaves of the plant.
- ☑ Artificial vegetative reproduction is the development of new plants by layering, grafting, marcotting, grafting, and budding.

Apply It

1. **You have many green leafy and yellow vegetables in your garden. But you noticed that you only have one malunggay plant. You decided to reproduce more of its kind, what will you do?**

2. **Do these:**

   - Choose one area in your garden.
   - Find out the name of the plants growing there.
   - Identify plants that undergo asexual reproduction.
   - Identify which method of asexual reproduction they undergo.
   - Record your findings in the Table below.

Name of Plant	Method of Asexual Reproduction

Test Yourself

- **Read the sentences below. Choose the correct answer in the hexagon. Write the answer in your notebook.**

Asexual Reproduction	Grafting
Sexual Reproduction	Cuttings
Natural Vegetative Reproduction	Bulb

_____ 1. Growing of plants from seeds

_____ 2. Growing of plants in ways other than seeds

_____ 3. The method of asexual reproduction undergone by a *katakataka* plant

_____ 4. An underground bud consisting of a short stem and thick leafy layer

_____ 5. A method of asexual reproduction wherein two stems are spliced together

- **Fill in each blank with the correct answer. Write the answers in your notebook.**

1. Horizontal stems are called _____.
2. A ginger is an example of a _____.
3. An onion is a _____.
4. A tuber is an underground _____.
5. The process of growing a new plant using a part of plant is _____.

- **Explain the advantages of the different artificial vegetative ways of growing plants.**