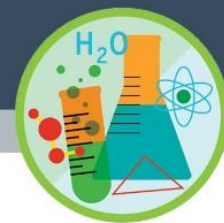




Grade 8



SCIENCE



Diversity and functions of plant parts

Subject	: Science
Grade	: 8
Term	: 1 st Term
Unit	: Diversity and functions of plant parts

Learning outcomes:

- Explore and draw the major parts of a plant
- Describe the basic functions of major parts of a plant
- Explain the adaptations of plants that lead to diversity
- Investigate the environment with a view to relate the adaptations of major parts of plants to their specific functions
- Collect and draw plant specimens with the specific adaptations in leaves, stems or roots
- Prepare a collection of plant specimens and preserve them with relevant information
- Appreciate the diversity among different parts of plants
- Accept that the exploration of environment should be carried out with minimum damage to the environment

Activity 1

Uproot a plant such as “Kuppameniya”/ “Monarakudumbiya” from soil without damaging to the roots, and wash properly.

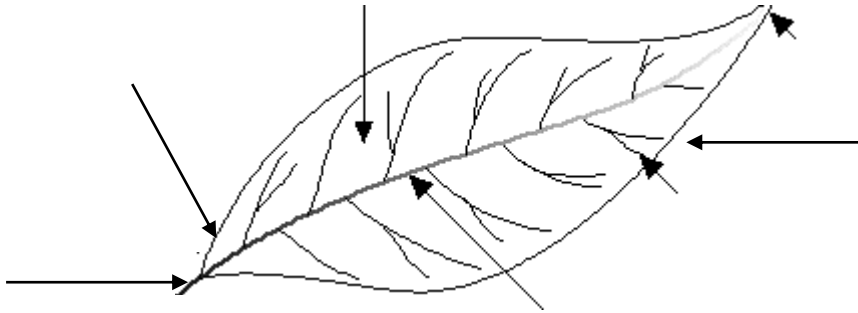
Observe the parts of the plant well and draw a labelled diagram of it.



Activity 2

Obtain different types of plant leaves (about 10) from your garden and observe them well.

1. There are a few parts of plant leaves which are common to all. Name those parts.



2. What is the main function of plant leaves?

.....

3. What are the raw materials required for it?

.....

4. What are the adaptations of plant leaves to make the process efficient?

.....

5. What are the functions other than the one mentioned above?

.....

.....

6. Study the adaptations shown by parts of the leaf that you have mentioned above. Draw the diagrams depicting the diversity of each part.

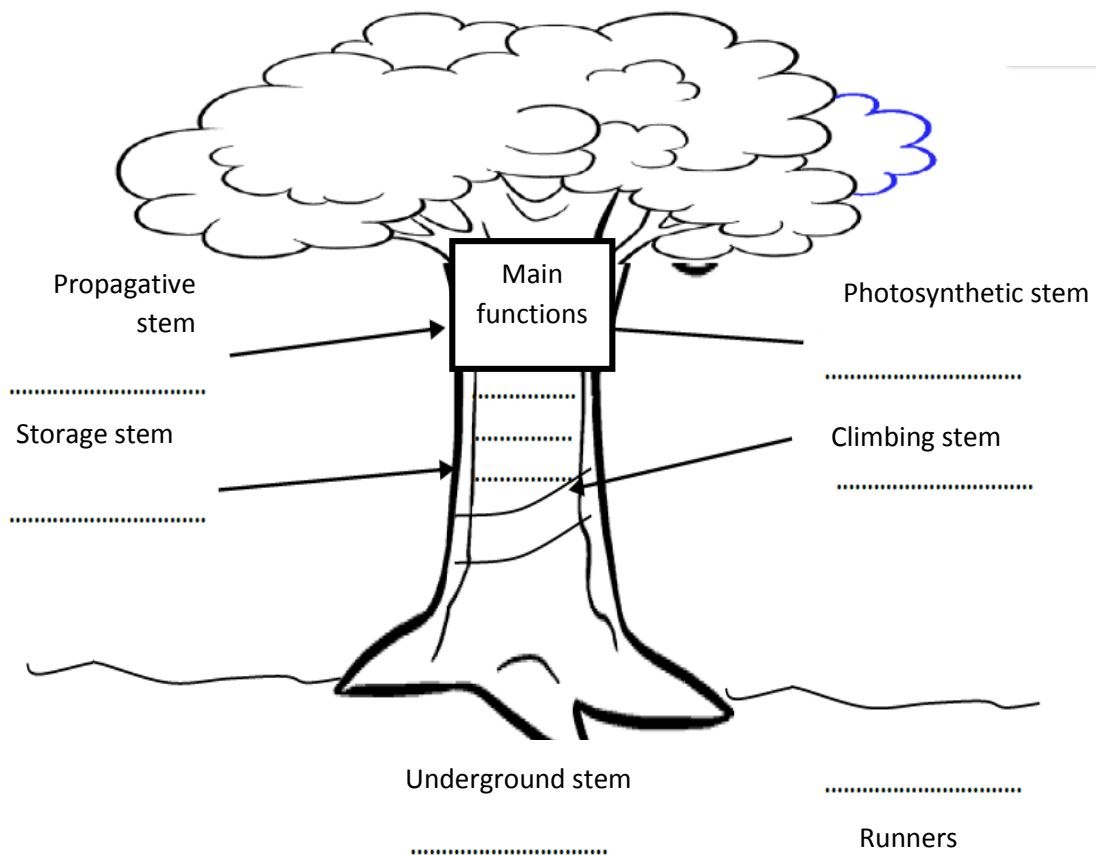


7. Fill the following table by observing the pattern of fixing the leaf to the stem of a plant (leaf arrangement).

Leaf arrangement	Examples
Leaves are on alternate side of the plant stem	
Leaf attachments paired at nodes and leaves in opposite directions	
Three or more leaves attach at each node on the stem in a whirl	
Leaves are attached in a spiral manner around the stem	

Activity 3

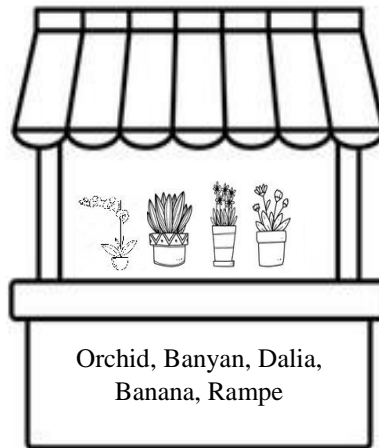
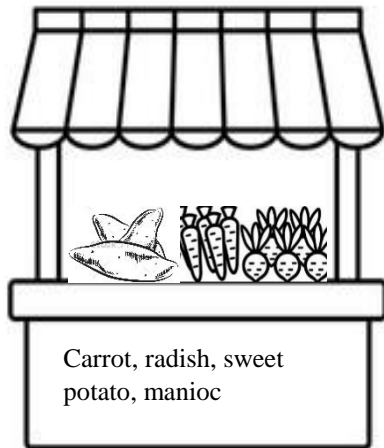
Following is a diagram of a plant stem. Fill it using suitable examples.





Activity 4

Amaya went to the fair of her village at “kuruvita” and saw various kinds of vegetables, plants and condiments.



Different types of plants, vegetables, condiments that Amaya saw at the fair have roots adapted to perform a specific function. Fill the following table using those plants.

Type of root	Function	Examples

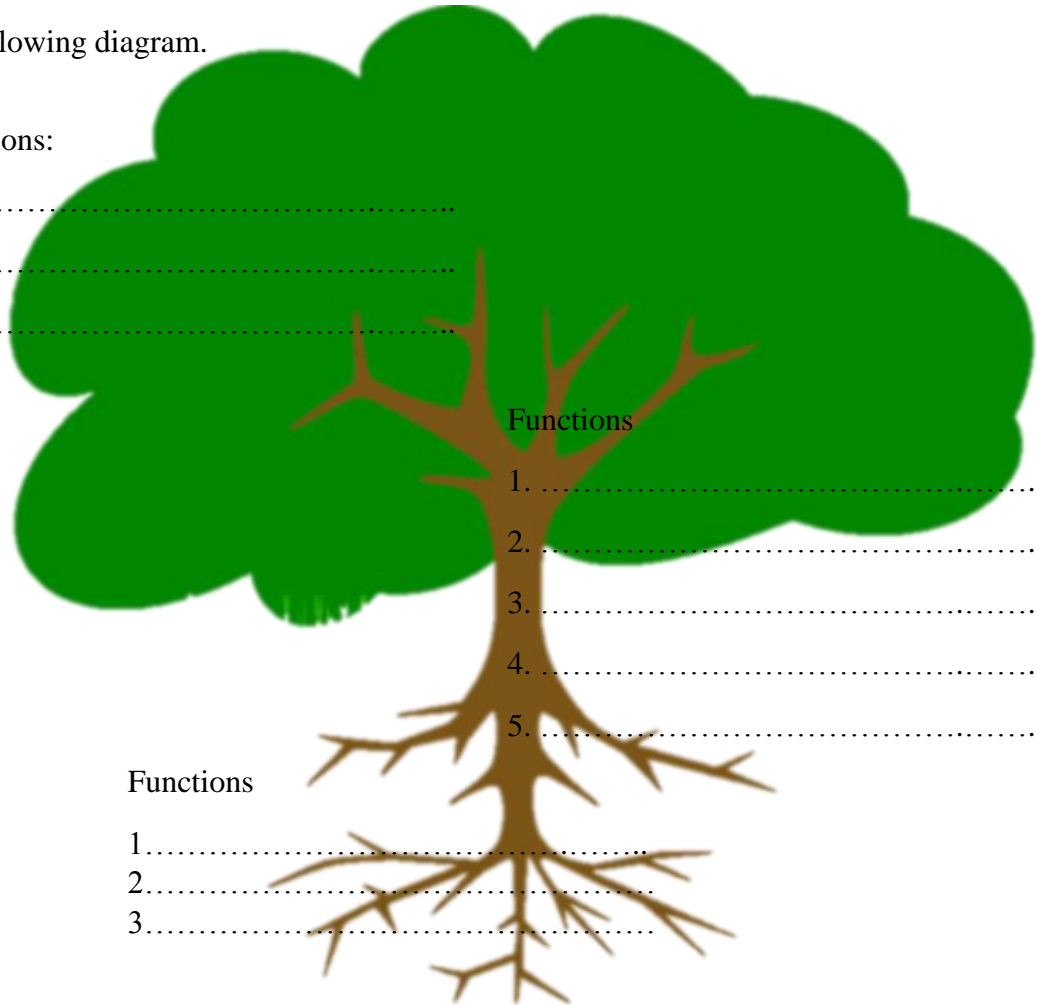


Summary

Fill the following diagram.

Functions:

1.
2.
3.



Exercises: Match the following functions with relevant parts of a plant.

- Tap root that store food
- Leaves are reduced to spines
- Transpiration occurs through this part
- Storage root
- A stem that performs perennation
- Has arial roots
- Has roots that aid in respiration
- Has a thick, waxy cuticle
- Has clasping roots

- Sonneratia*
- Stomata
- Temple tree
- Cactus
- Carrot
- Pepper
- Sugar cane
- Ginger
- Orchid