

Released SOL Test Questions

Sorted by Topic

SOL 4.2 PLANTS

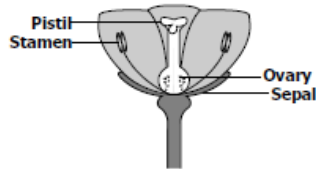
The student will investigate and understand basic plant anatomy and life processes. Key concepts include

- the survival of plants and animals depends on photosynthesis;
- plants and animals have different structures and processes for obtaining energy; and
- plants and animals have different structures and processes for creating offspring.

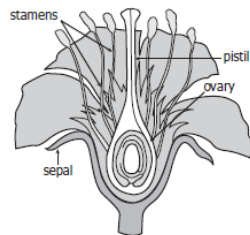
PLANT PARTS

- Which of these is a **function of a leaf**?
 - Carrying nutrients throughout the plant
 - Converting sun's energy into sugar
 - Creating shade for the plant
 - Absorbing water from the ground
- Which **part** of a sunflower plant **absorbs** water and nutrients?
 - Roots
 - Stems
 - Leaves
 - Flowers

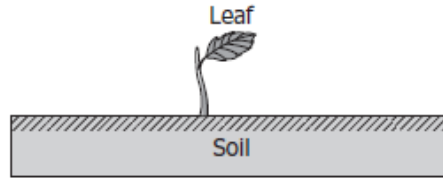
- In a flower, what most likely happens when **pollen** from the stamen gets into the ovary?
 - The plant dies.
 - A seed develops.
 - The flower closes.
 - The sepals fall off.



- The two structures most **plants** use to gather nutrients and energy to live are —
 - roots and leaves
 - roots and flowers
 - stems and roots
 - stems and leaves



- What **part** of the flower produces **pollen**?
 - ovary
 - sepal
 - pistil
 - stamen



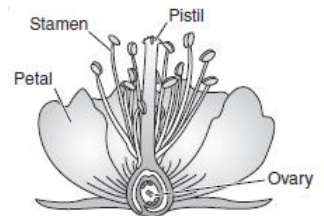
- The picture shows a sprouting bean plant. The **leaf** produced will help the plant by —
 - absorbing water from the air for nourishment
 - using sunlight for energy in food production
 - reproducing more bean plants for survival of the species
 - adding support for the plant as it grows taller

Violet Plants

Parts	Function
Roots	Anchor plant, absorb water
Stem	Support and transport
Leaves	Produce energy
Flowers	?

- The table lists the parts of a violet plant and their functions. What is the **function** of violet **flowers**?
 - Release oxygen
 - Produce seeds
 - Absorb sunlight
 - Promote growth

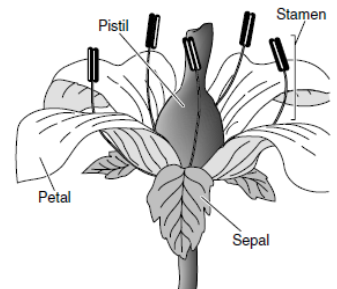
- Pollen** is produced in the —
 - ovary
 - pistil
 - petal
 - stamen



- Which of these is a main function of this **plant's roots**?
 - Making seeds
 - Producing pollen
 - Absorbing nutrients
 - Storing chlorophyll



- Which of these **plant parts** forms the seeds?
 - The stamen
 - The pistil
 - The sepals
 - The petals



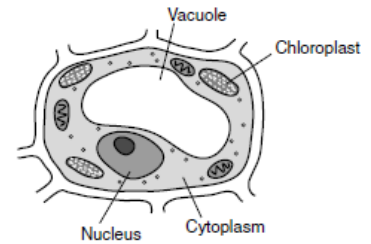
11. What do plants take in through their root systems?
 - e. Light
 - f. **Water**
 - g. Carbon dioxide
 - h. Oxygen
12. During pollination, pollen is transferred from a stamen to a —
 - a. Petal
 - b. Stem
 - c. Sepal
 - d. **Pistil**
13. Which plant part develops into a fruit?
 - a. **Flower**
 - b. Stem
 - c. Leaf
 - d. Root

PHOTOSYNTHESIS

14. **Photosynthesis** occurs in which of these organisms?
 - a. **Sunflower plant**
 - b. Mushroom
 - c. Sunfish
 - d. Luna moth
15. Which of the following do **plants** need to make their own food?
 - a. Flowers
 - b. Bacteria
 - c. **Sunlight**
 - d. Oxygen
16. The substance that makes **plants** green is known as —
 - a. water
 - b. calcium
 - c. **chlorophyll**
 - d. carbon dioxide
17. Which of these is a process that allows plants to convert light energy into food energy?
 - a. Reproduction
 - b. Excretion
 - c. Digestion
 - d. **Photosynthesis**
18. Why is **photosynthesis** important for plants?
 - a. **It collects sunlight which is used to make food for plants.**
 - b. It gets rid of plant waste products.
 - c. It changes plant sugar into stronger chemicals.
 - d. It helps attract insects to plant flowers.

19. In which plant **cell structure** does photosynthesis occur?

- a. Vacuole
- b. **Chloroplast**
- c. Cytoplasm
- d. Nucleus



20. In plant cells, chloroplasts —
 - a. act as the cell's control center
 - b. **enable plant cells to produce their own food**
 - c. allow materials to move into and out of the cell
 - d. support and protect the cell
21. For the native birds and mammals of Virginia to survive, plant life must be conserved. What do plants provide directly to all animals?
 - a. **Oxygen**
 - b. Minerals
 - c. Light
 - d. Hydrogen

22. Which gas is given off by **plants**?

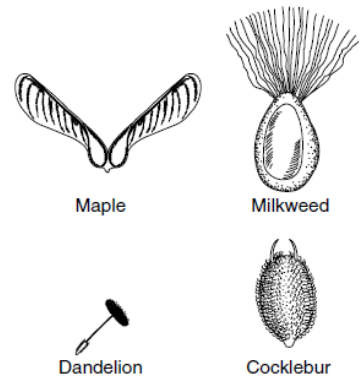
- a. Hydrogen
- b. Nitrogen
- c. **Oxygen**
- d. Helium

SEEDS

23. The wind helps many **plants reproduce** by —
 - a. cooling the plants
 - b. giving the plants moisture
 - c. **spreading the plants' pollen**
 - d. strengthening the plants' root systems

24. Which of the following **seeds** is probably carried by animals?

- a. Maple
- b. Dandelion
- c. Milkweed
- d. **Cocklebur**



25. Which of the following is a benefit that many flowering plants get from animals?
 - a. Shelter from direct sunlight
 - b. **Seeds carried to new places**
 - c. Oxygen to use in photosynthesis
 - d. Moisture to prevent wilting