

Unit 3

Medicinal Plants – *Aloe vera* L.

Before you read:

- **Look at the words and phrases in the box below. Underline the words and phrases you already know and check the meaning of the new ones in a dictionary:**

10/1



annuals, biennials, perennials, ephemerals, woody perennials, herbaceous perennials; monocotyledon, dicotyledon, embryo, epicotyl, hypocotyl, hilum; species, genus, family, order, phylum, division, kingdom; to cultivate, to be native to, to be distributed, to classify, to sprout; shoot, root, stem, bud, bract, petiole, pedicel, peduncle; taproot, fibrous root, corm, bulb, rhizome, tuber; spine, thorn, epidermis; corolla, petal, calyx, sepal, receptacle, pollen, pistil, carpel, stamen, filament, anther, ovary, ovule; pollination, germination; raceme, spike, panicle, cyme, spadix, umbel, capitulum, bostryx, cincinnus; polysaccharide, alkaloid, amine, carbohydrate, coumarin, glycoside, mucilage, phenol, saponin, tannin, terpene, urea, starch, volatile oil.

- **Now, listen and repeat the words from the box.**

Read or listen to the texts. Then complete the activities which follow:

SECTION 1

GENUS: *ALOE*, FAMILY *ASPHODELACEAE* 11/1



Aloe – a monocotyledonous genus with about 180 species, most of which are native to Africa, Madagascar and Arabia. Species belonging to this genus are herbaceous shrubs or trees, often with reduced stems. The leaves are basal or form a crown at the ends of branches. The plants produce anthraquinones but no alkaloids or starch. Several species of aloe are of economic importance and are cultivated. Some species are used as ornamentals.

Task 1

A. Match these terms with the definitions presented below:

Terms: 1) monocotyledon, 2) species, 3) genus, 4) family, 5) order, 6) cotyledon.

Definitions:

- subdivision of genus in plant and animal classification, containing members having certain permanent characteristics in common; plant or animal belonging to such a subdivision
- rudimentary leaf that forms part of a plant embryo. In many plants the cotyledon develops into the first leaf or one of the first pair of leaves to grow above the ground
- category in the classification of plants and animals that ranks higher than a family but lower than a class (e.g. the order *Carnivora* includes the cat, dog, bear, and other families, and is included in the class of mammals)
- any plant with a single cotyledon; an angiosperm of the subclass *Monocotyledoneae* including plants whose embryo possesses only one cotyledon (e.g. grasses), having stems with no annual rings (e.g. palms) and that are generally herbaceous in habit
- category of plant and animal classification ranking next below the family and next above the species; a group of animals or plants within a family, closely connected by common characteristics. It is subdivided into species
- group of related animals or plants forming a category ranking below an order and above a genus.

B. Write short definitions of:

- a) class, b) phylum, c) division, d) kingdom, e) dicotyledon

You may find the following verb groups helpful:

- to classify below and above; to be placed below and above
- to belong to, to be considered
- to denote, to refer to
- to be called, to be known as

Task 2

Read the definitions below, then analyze Fig. 3a and complete the labeling.

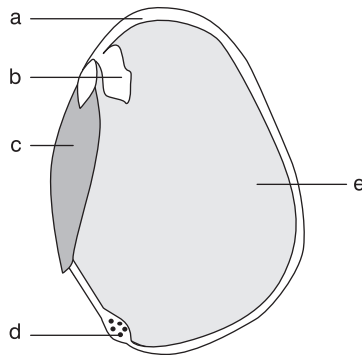


Fig. 3a: Seed

Definitions:

Hilum – mark or scar formed on a seed at the point where it was attached to the cone or flower.

Epicotyl of embryo – part of the stem of a plant embryo or seedling above the cotyledons.

Hypocotyl of embryo – part of the stem below the cotyledons in the embryo or seedling stage of a plant

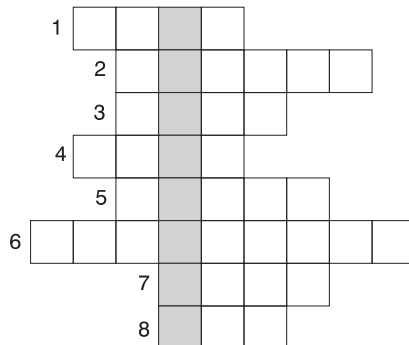
Cotyledon – rudimentary leaf that forms part of a plant embryo. In many plants the cotyledon develops into the first leaf or one of the first pair of leaves to grow above the ground.

Seed coat – protective covering of a seed.

Word puzzle

Analyze Fig. 3b and then complete the puzzle by answering the down clues. What is the keyword?

Keyword: _ _ _ _ _



1. Flattened, usually green part that grows as extension of a plant's stem. It serves as the plant's food manufacturing organ by means of photosynthesis.
2. The part of a flowering plant composed of the reproductive organs and their surrounding, usually brightly coloured petals.
3. A point of a stem from which a leaf or branch grows.
4. Main axis of a plant; stalk that supports leaves or flowers and may bear buds.
5. New or young growth, as from a bud, sprout. It is usually made up of a stem with leaves, buds and flowers.
6. Length of stem between the nodes.
7. It stores food. It absorbs water and dissolved nutrients from the soil. It is the lower part of a plant that grows downward, serving to anchor the plant in the soil.
8. Small swelling on a plant containing a rudimentary branch, stem, leaf, or flower.

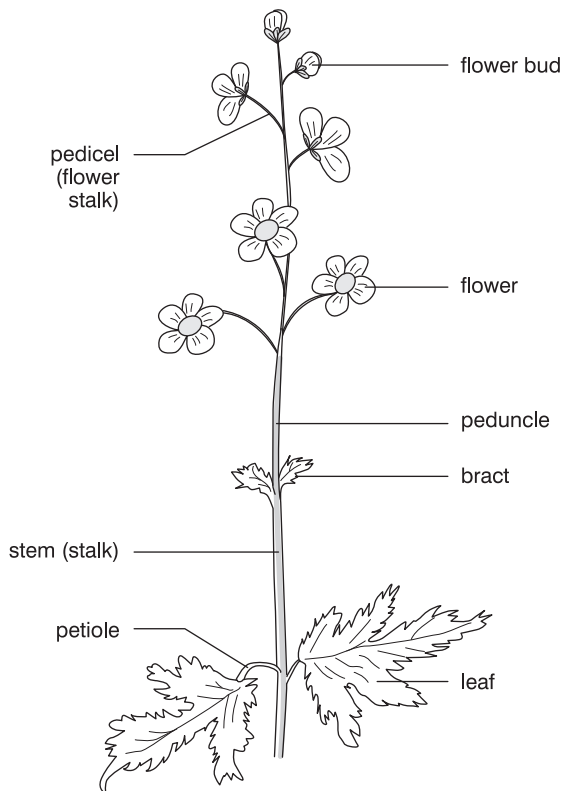


Fig. 3b: Flowering plant – shoot