



The diagram illustrates the structure of a flower and the process of double fertilization. The female part of the flower is the pistil, which consists of the stigma (A), style (B), and ovary (C). The ovary contains ovules (D), each with an egg cell. The male part is the stamen, consisting of the anther (G) and filament (H). The anther produces pollen grains (I). The pollen grain has a vegetative cell (J) and a generative cell (K). The vegetative cell produces a pollen tube (L) that grows down the style towards the ovary. The generative cell divides to form two sperm cells (M). One sperm cell fertilizes the egg cell (N), forming a zygote (O). The other sperm cell fertilizes one of the polar nuclei (P), forming a triploid endosperm (Q). The zygote develops into an embryo sac (R), which contains the embryo (S) and endosperm (T). The embryo sac is surrounded by the pericarp (U) and the seed coat (V). The seed coat is formed from the integuments (W) and the nucellus (X). The seed is formed from the ovule (Y) and the ovary (Z).

PLANTULE



The diagram illustrates the development of a seedling (plantule) from a seed. The seed is shown at the top, with the embryo (A) and endosperm (B) visible. The embryo has a cotyledon (C) and a shoot (D). The shoot grows upwards, forming the stem (E) and leaves (F). The root (G) grows downwards, forming the taproot (H) and fibrous roots (I). The plantule is shown at the bottom, with the shoot (J) and root (K) visible.