

Seed structure & Germination

Seed :. Is a mature ovule that include a seed coat (testa) ,food supply (endosperm) and embryo .

A-Bean seed (Dicot)

Micropyle : a small opening on the surface through which the pollen tube grew .

Hilum : The elliptical area at which the ovule was attached to the ovarian wall .

Cotyledon : Food storage organs for the embryo .

Embryo : develops into the new sporophyte and conitiend .

Epicotyle : The small portion of the embryo located above the attachment of the cotyledons to develop first true leaves (plumules) .

Hypocotyle : The small portion of the embryo located below the attachment of the cotyledons to develop lower end (radicle) .

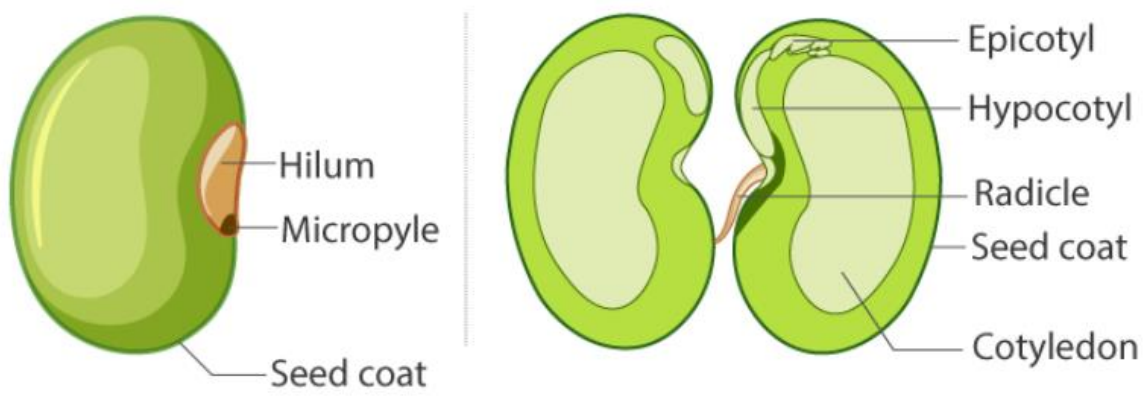
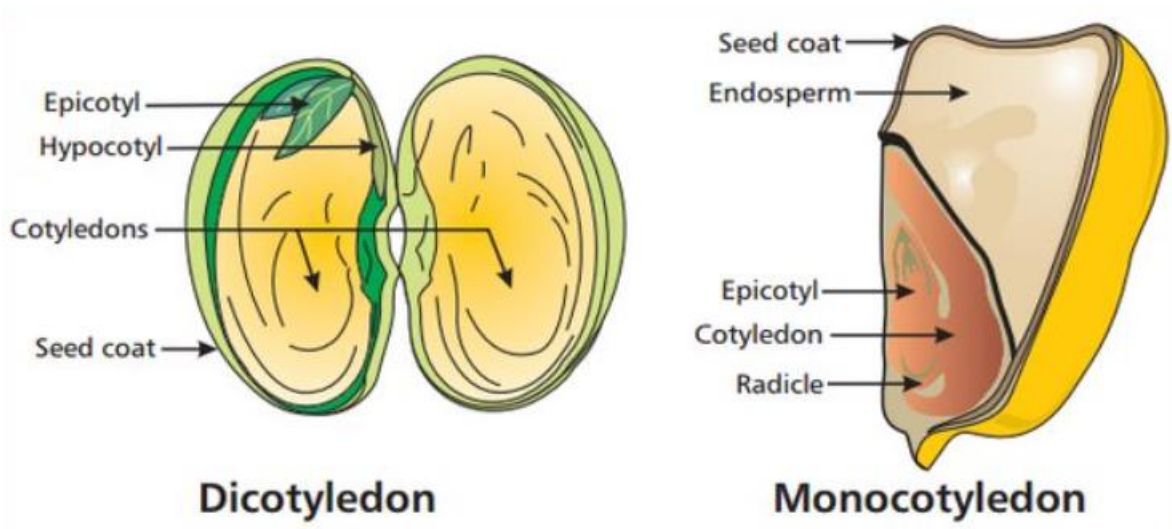
B-Corn seed (Monocot)

Cotyledon , plumule and radicle .In addition :

Endosperm : stored food for the embryo .

Coleorhiza : sheath enclosing embryonic root of grass embryo .

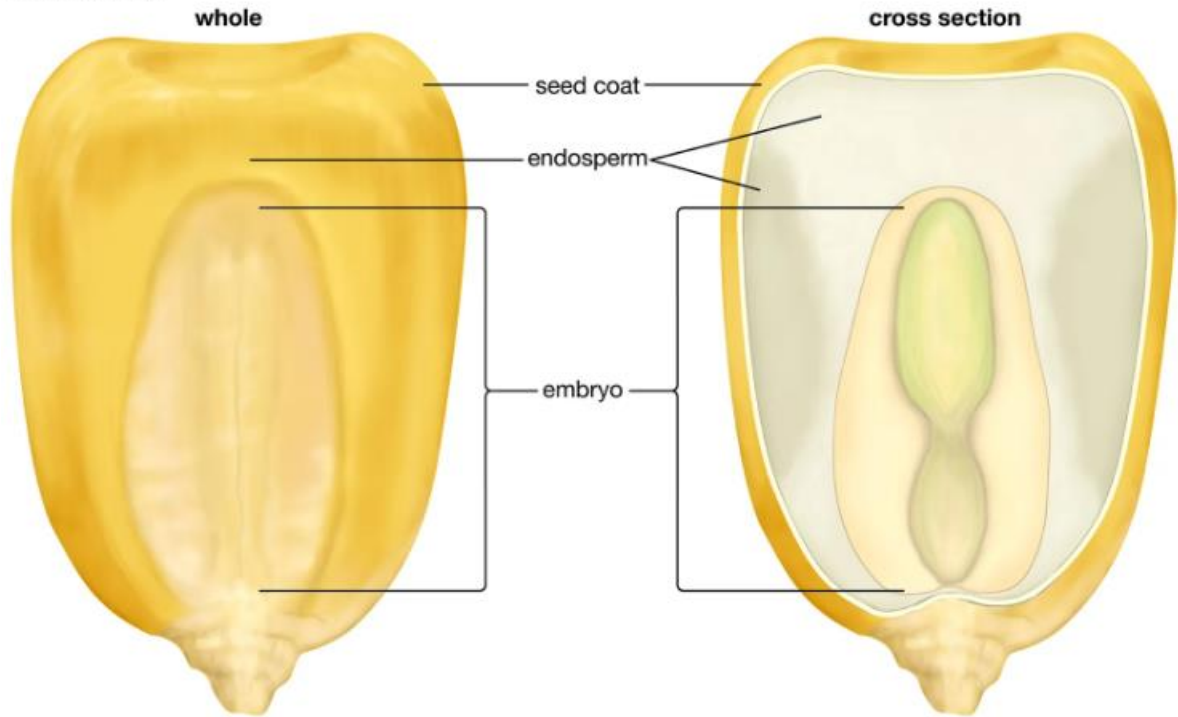
Coleoptile : A sheath the covers the emerging leaves .



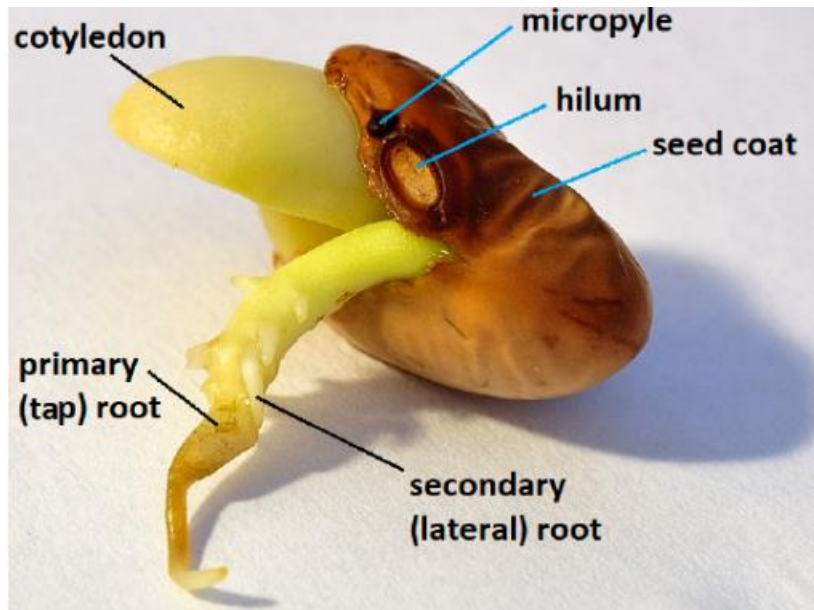
(a) Lateral view of a seed

(b) A mature embryo with its parts

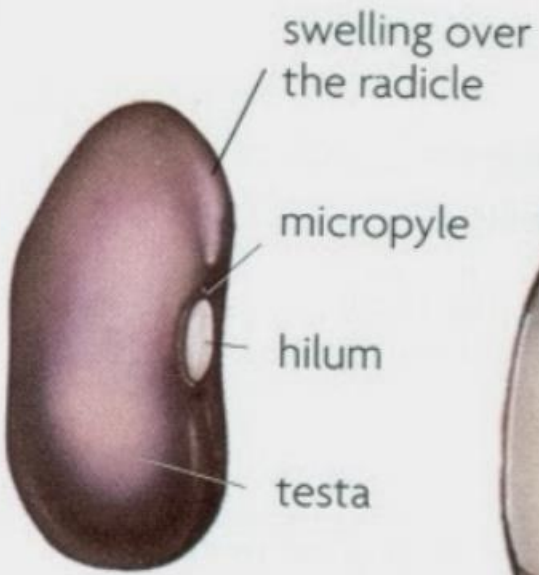
Corn kernel



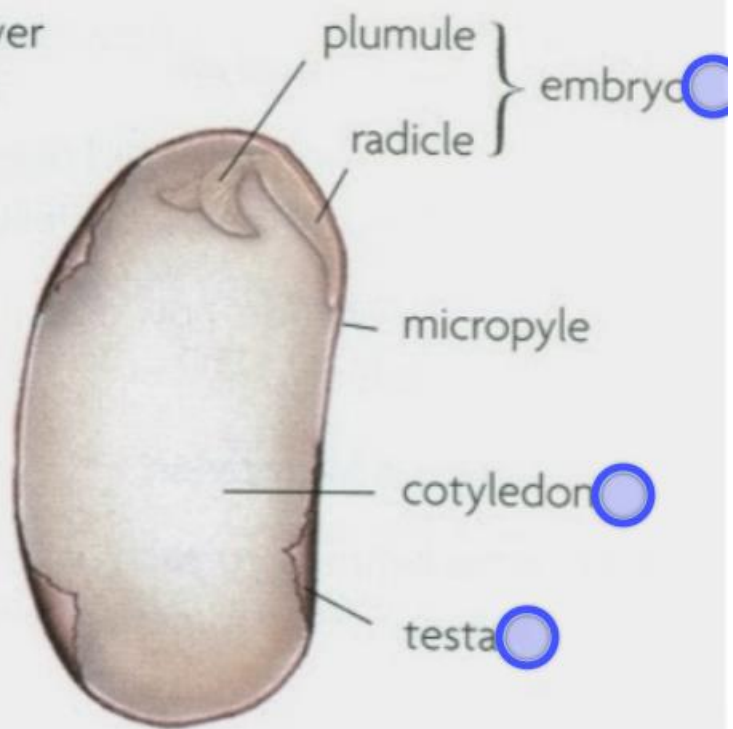
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Whole bean seed

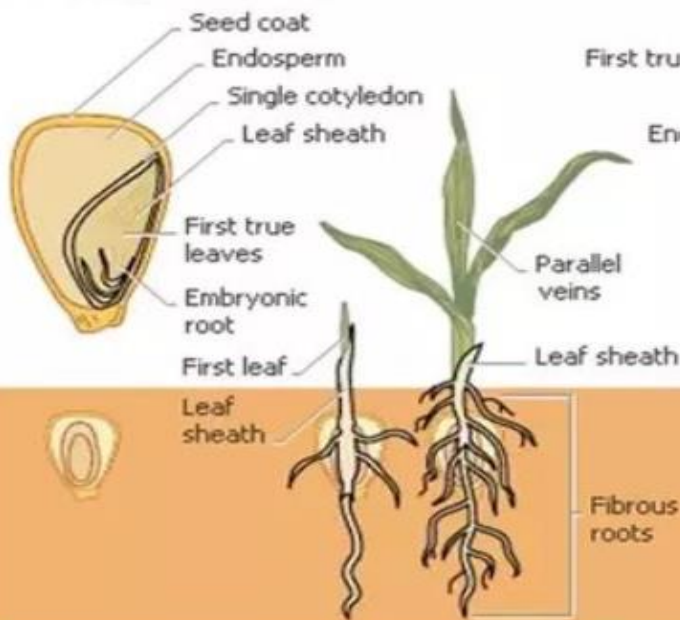


Bean seed split lengthways



MONOCOT & DICOT SEEDS

Monocotyledon (corn)



Dicotyledon (bean)

