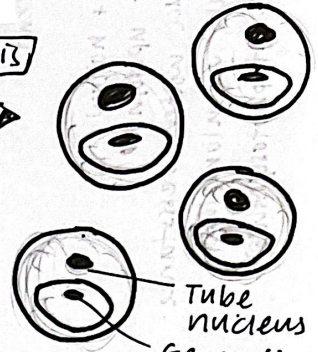
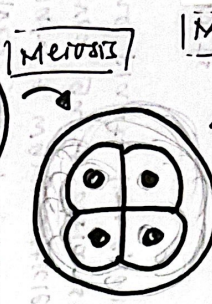
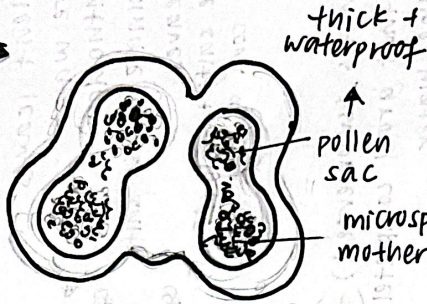
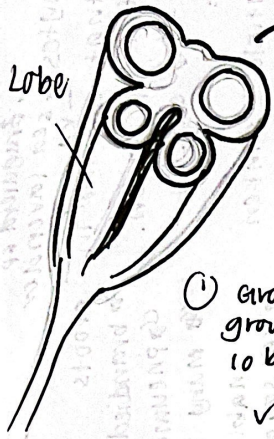


pollen grains + embryo sac

in anther

in ovary



- Group of tissues grows inside each lobe \rightarrow 4 pollen sacs

\checkmark microspore mother cells (2n)

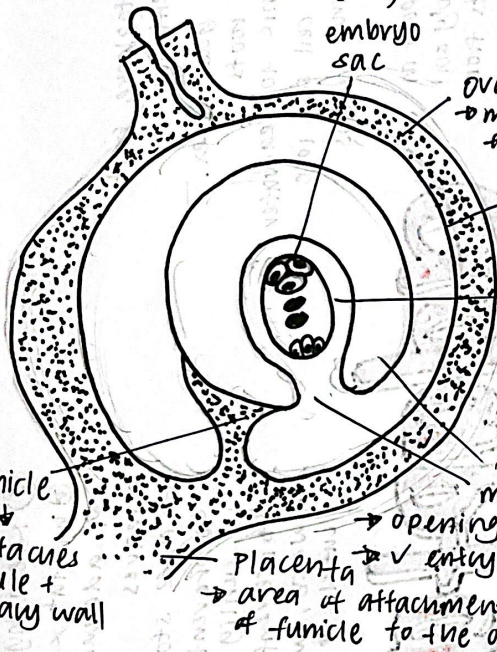
- divides by meiosis \rightarrow 4 (n) microspore cells

Tetrad

- each cell \rightarrow pollen grains

- nucleus $\xrightarrow{\text{mitosis}}$ 2 nuclei \rightarrow dry, shrink, split

- P.g. matures, \rightarrow wall of pollen sac breaks \rightarrow release pollen grains



ovary \rightarrow may contain more than one ovule

ovule \rightarrow develop from a layer of ovary

nucellus \rightarrow a mass of tissues inside ovary develops forming a lump

\rightarrow consists of parenchyma tissue

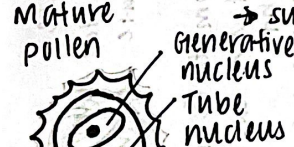
Integument \rightarrow 2 layers developed from nucellus

\rightarrow opening of integument

\checkmark entry of air + H₂O into seed for germination

Placenta \rightarrow area of attachment of funicle to the ovary

\rightarrow supply nutrients



- Wall of anther dry, shrink, split \rightarrow release P.g. from P. sac

- transferred to stigma by pollinating agent

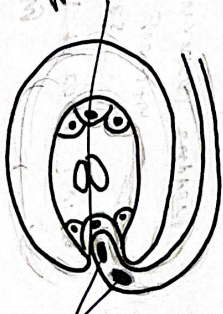
Pollen grain

- P.g. germinate + form pollen tube \rightarrow grows down towards ovule thru style

- g.n. move along the pollen tube + divide mitotically to form 2 male gametes (n)

- The end of pt. secretes enzyme \rightarrow digest style

- reaches embryo sac, \rightarrow pt. penetrates ovule thru micropyle \rightarrow tube nucleus degenerate \rightarrow Both male gametes enter



male gametes (n)



- megaspore mother cell (2n) $\xrightarrow{\text{meiosis}}$ 4 haploid (n) megaspore cell

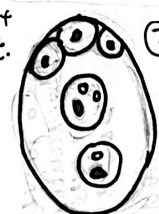
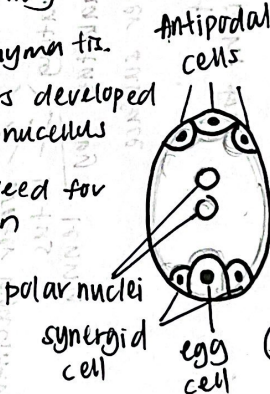
- 3 degenerate, 1 develops \downarrow mitosis $\times 3$

- produce a cell w/ 8 nuclei

- 3 nuclei move to one end \rightarrow antipodal cells

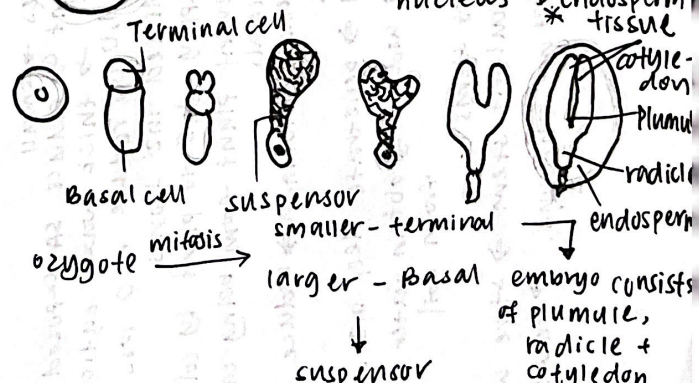
- 3 nuclei to another end \rightarrow 2 synergid cells \rightarrow 1 egg cell

- 2 nuclei @ centre \rightarrow polar nuclei



- 1 male gamete fertilizes egg cell \rightarrow 2n zygote

1 male gamete fuses w/ 2 polar nuclei \rightarrow triploid endosperm nucleus \rightarrow endosperm tissue



Basal cell

Terminal cell

suspensor

zygote

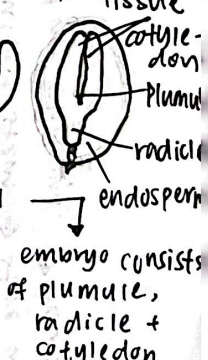
mitosis

smaller - terminal

larger - Basal

suspensor

- anchors the embryo to the wall of e.s.



embryo consists of plumule, radicle + cotyledon