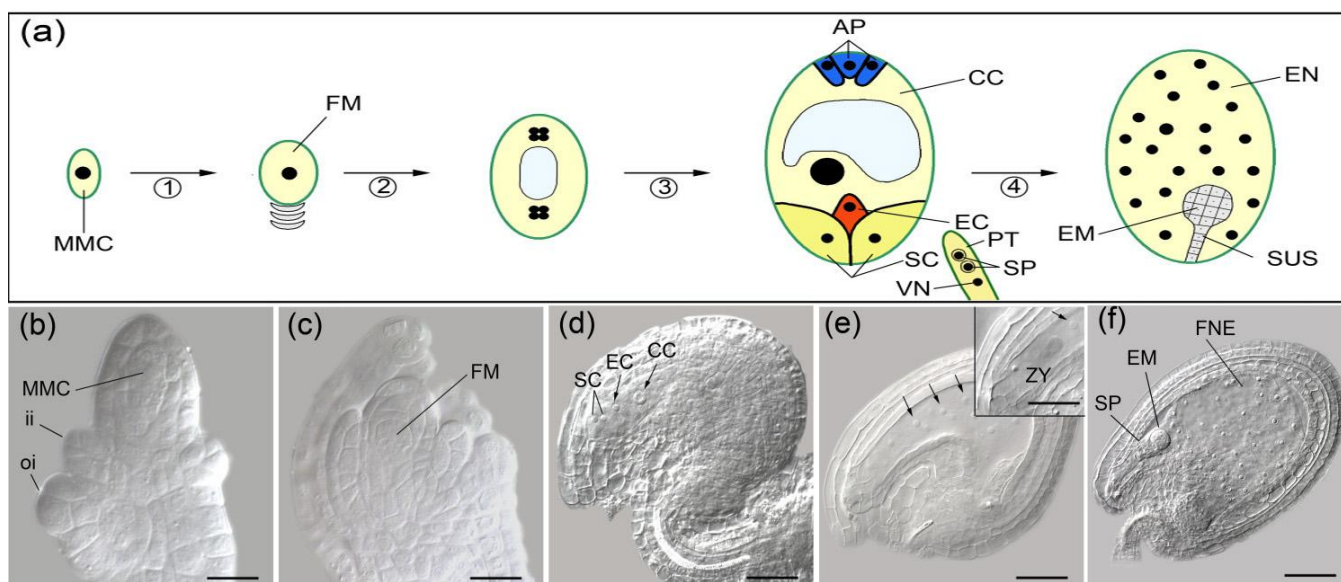


UNIT 01 · PRACTISE · 3-3

Flower pathway: double fertilisation explained

Follow the gametes into the embryo sac



Published Arabidopsis illustration with microscopy: follow panel (a) from left to right. Panel (d) shows the egg apparatus before fertilisation; panels (e–f) show early seed development.

EC / SC / AP	Egg cell / synergid cells / antipodal cells
CC / PT / SP	Central cell / pollen tube / sperm cells
EM / EN	Embryo (2n) / endosperm (3n)

One sperm fuses with the egg; the other fuses with the central cell. In this Arabidopsis model, the polar nuclei have already fused.

Johnston et al., Genome Biology 8:R204 (2007), doi:10.1186/gb-2007-8-10-r204. Image excerpt by CopperKettle and David Perez, [Wikimedia Commons](#), CC BY 2.0. Supplied JPG reproduced unchanged.

3. For a plant with $2n = 20$, calculate the usual chromosome number in the primary endosperm nucleus. [2 marks]
