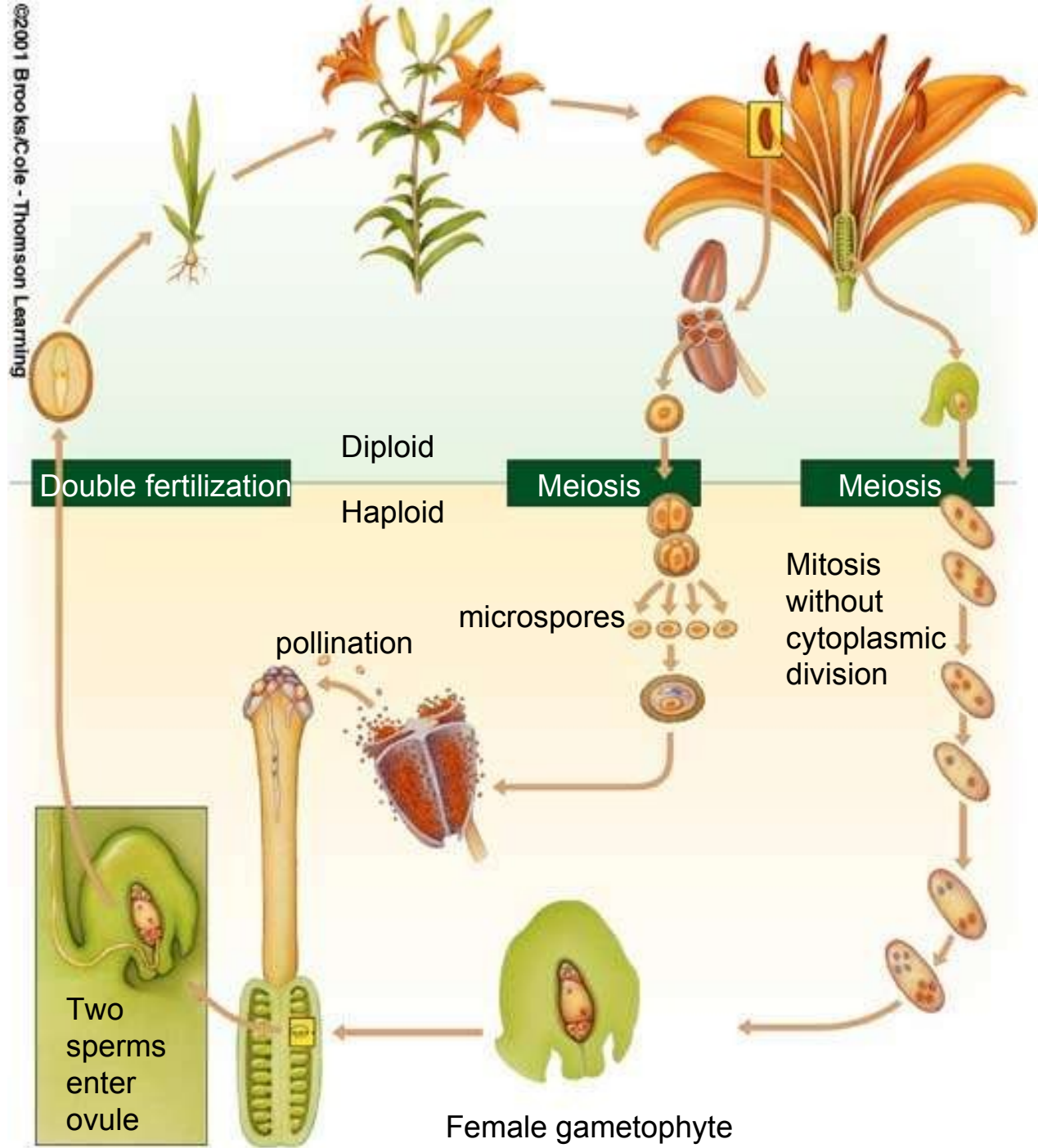


Angiosperms – flowering plants

- The angiosperms are seed-bearing vascular plants
- In terms of distribution and diversity, they are the most successful plants on Earth
- The structure and function of this plant group help explain its success

Flowering Plant Life Cycle



Plant Life Histories

- ***Annuals*** complete life cycle in one growing season
- ***Biennials*** live for two seasons; flowers form in second season
- ***Perennials*** grow and produce seeds year after year

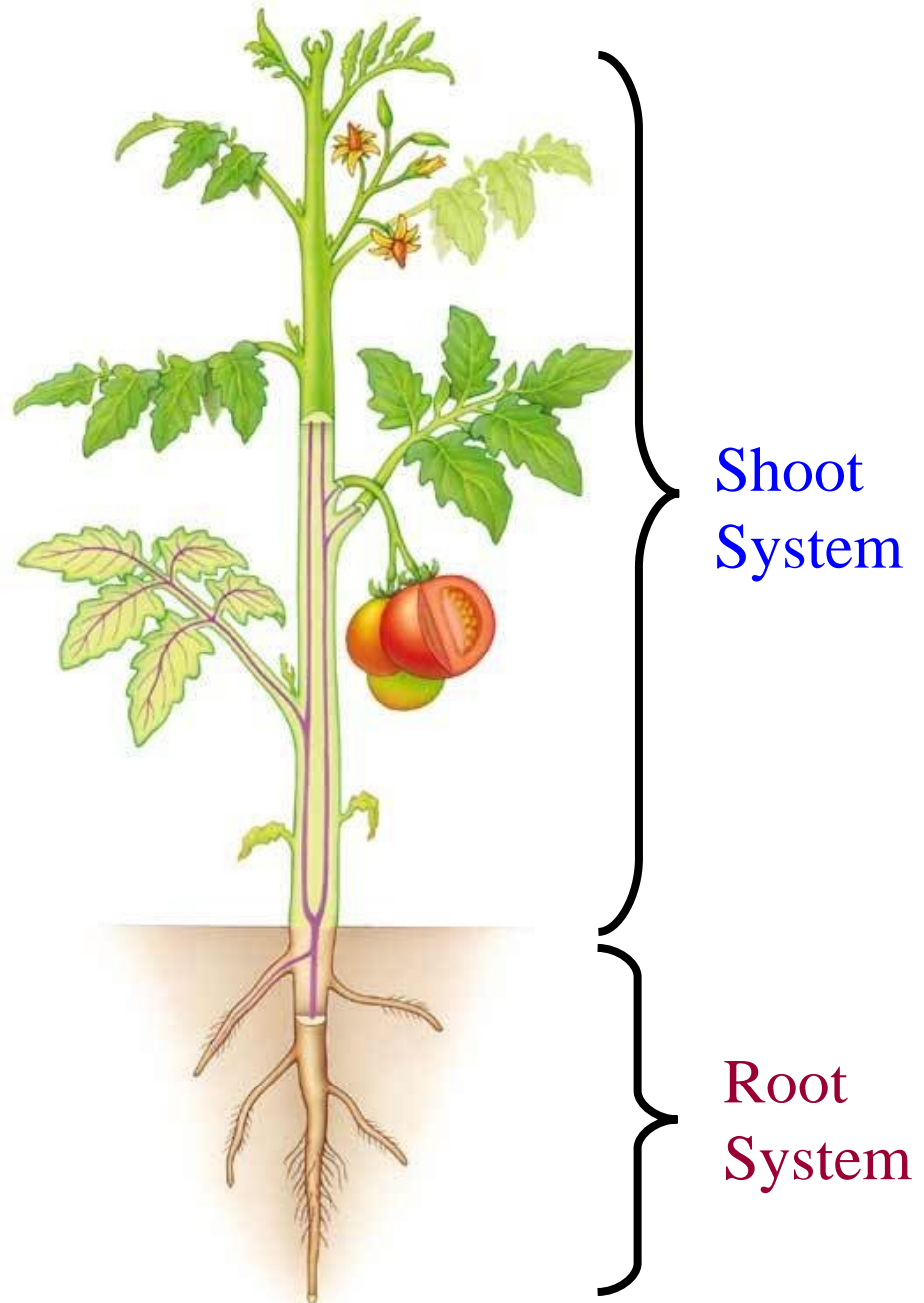
Shoot and Root Systems

Shoot system

- produces sugars by photosynthesis
- carries out reproduction

Root system

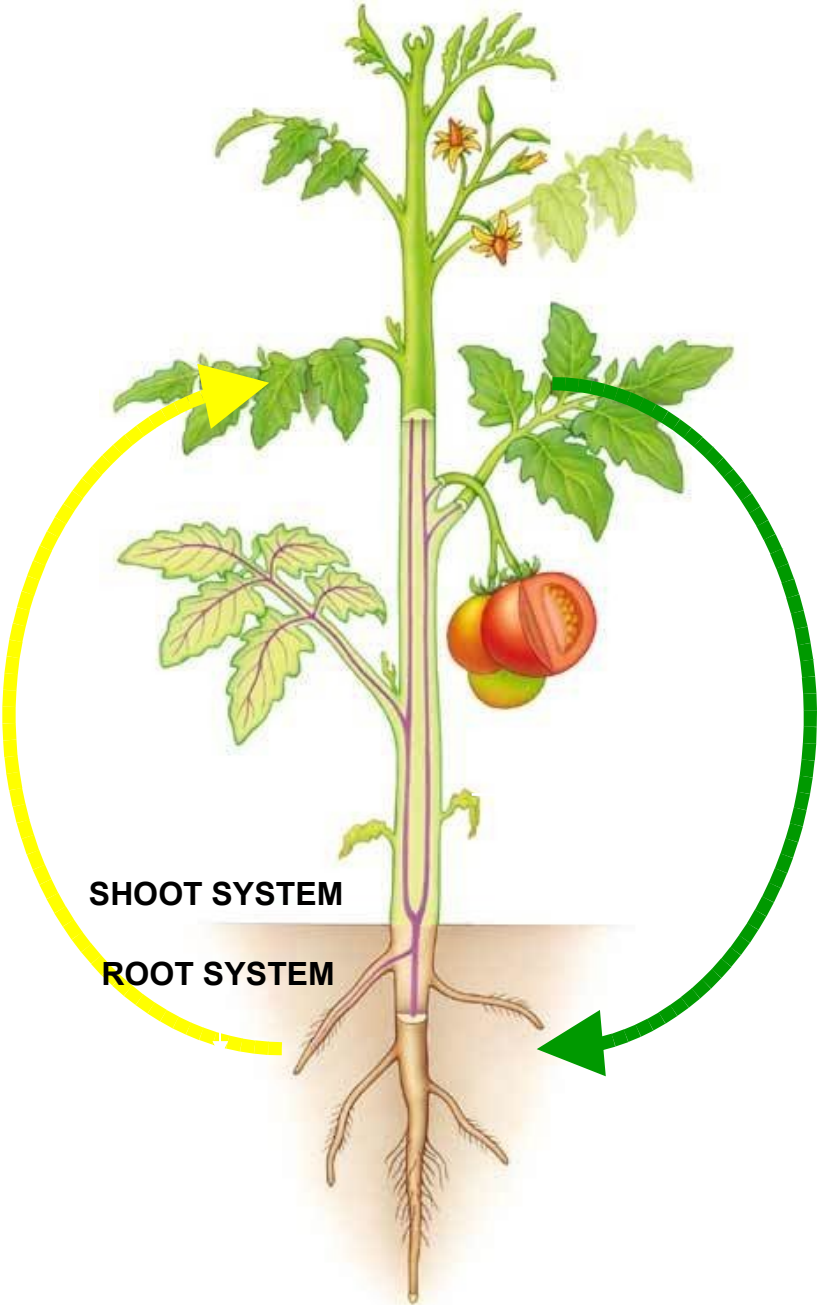
- anchors the plant
- penetrates the soil and absorbs water and minerals
- stores food



Shoot and root systems are interdependent

water & minerals

sugar

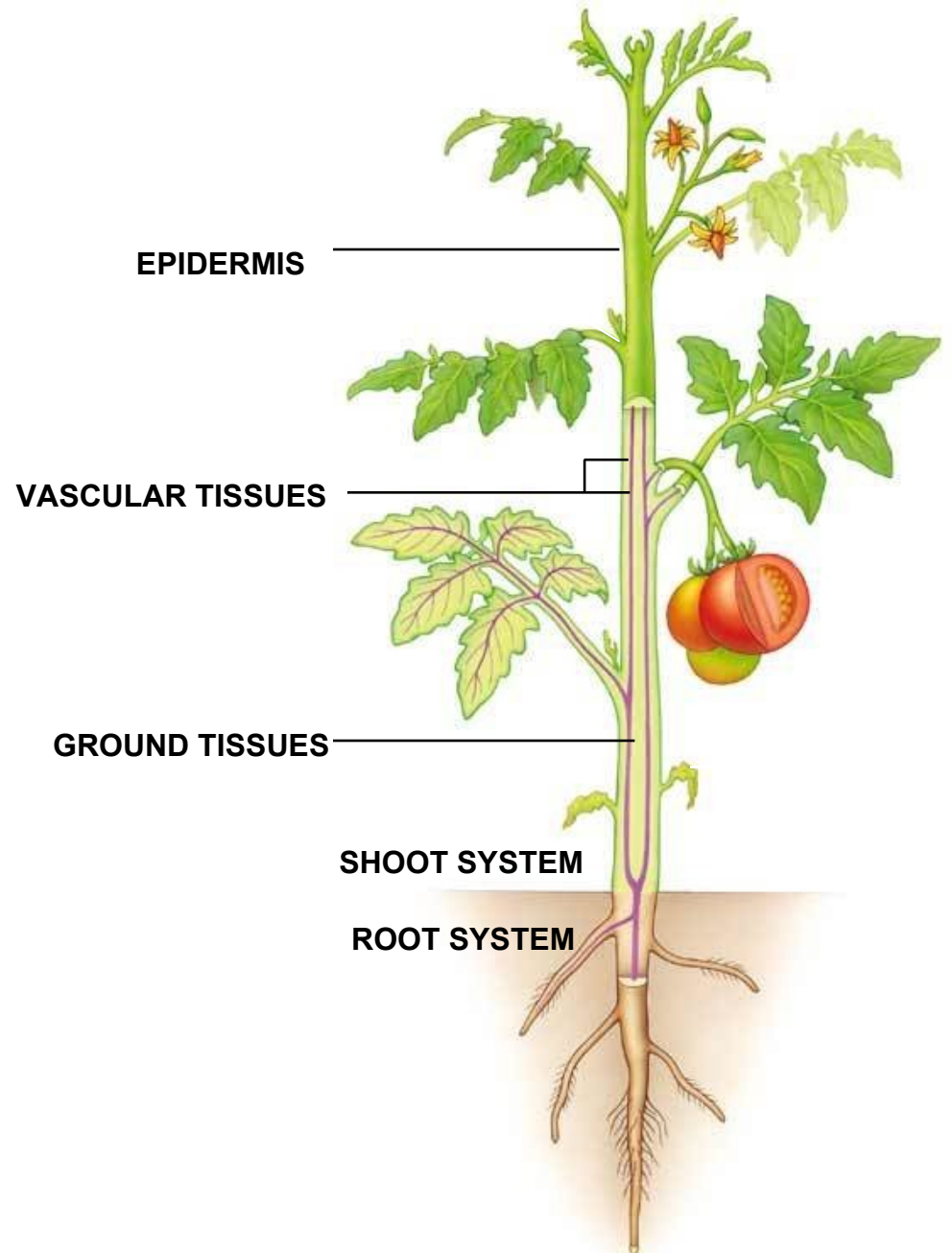


SHOOT SYSTEM

ROOT SYSTEM

Plant Tissue Systems

- Ground tissue system
- Vascular tissue system
- Dermal tissue system



Meristems – Where Tissues Originate

- Regions where cell divisions produce plant growth
- Apical meristems
 - Lengthen stems and roots
 - Responsible for *primary* growth
- Lateral meristems
 - Increase width of stems
 - Responsible for *secondary* growth

Apical Meristems

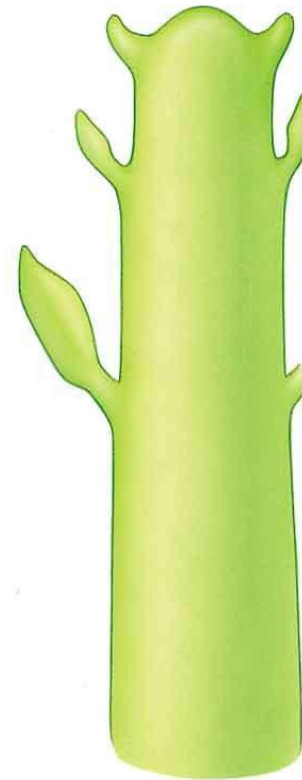
Lengthen shoots and roots:
SAM and RAM

Cells that form at apical
meristems:

protoderm → epidermis

ground meristem → ground
tissues

procambium → primary
vascular tissues



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Lateral Meristems

Increases girth of older roots and stems

Cylindrical arrays of cells

