

Flower and Fruit



leaves



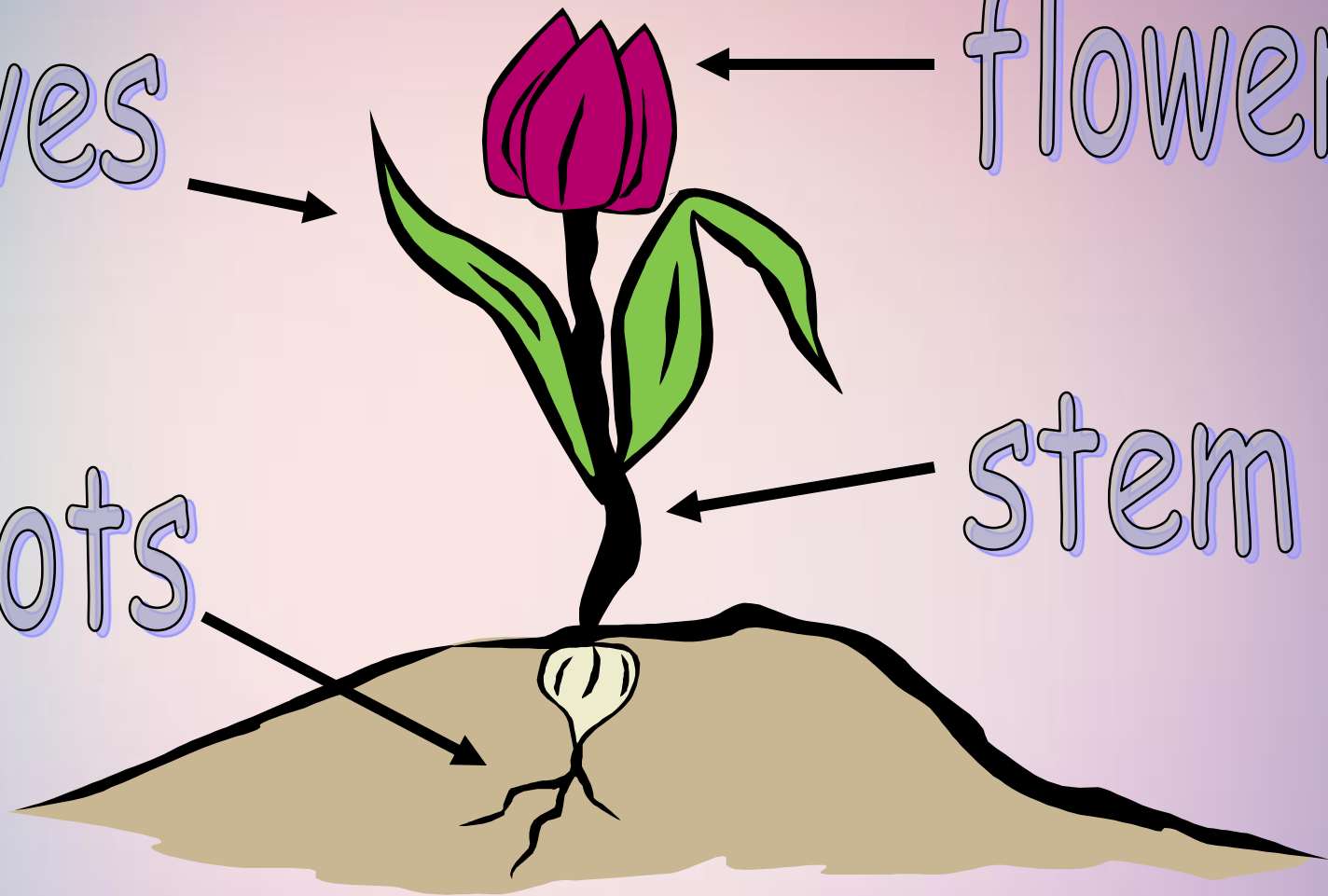
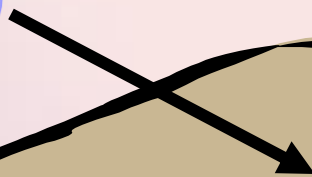
flower



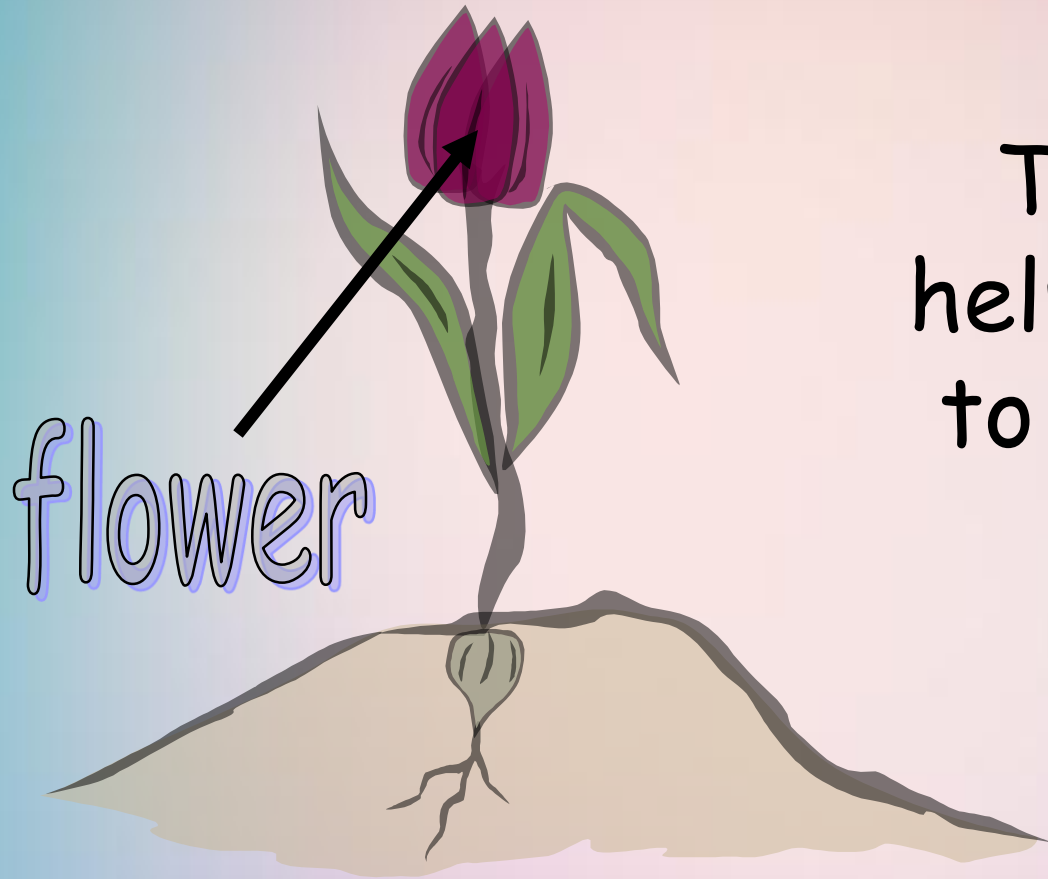
stem



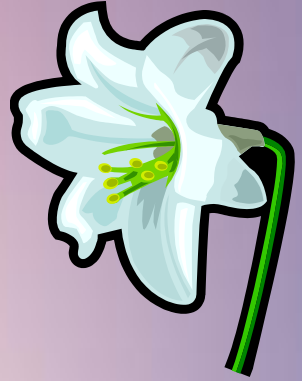
roots



What is the function of the flower?

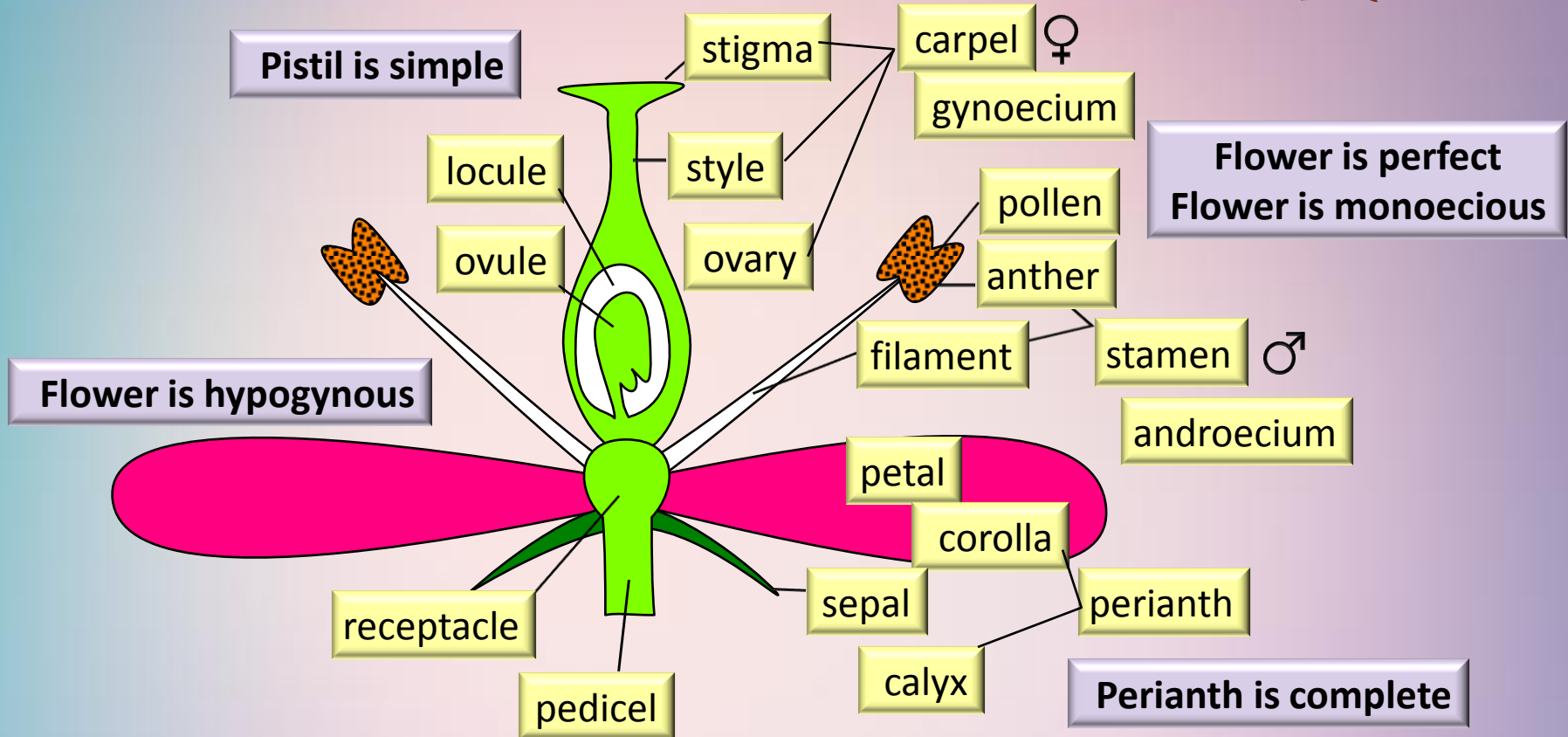


flower

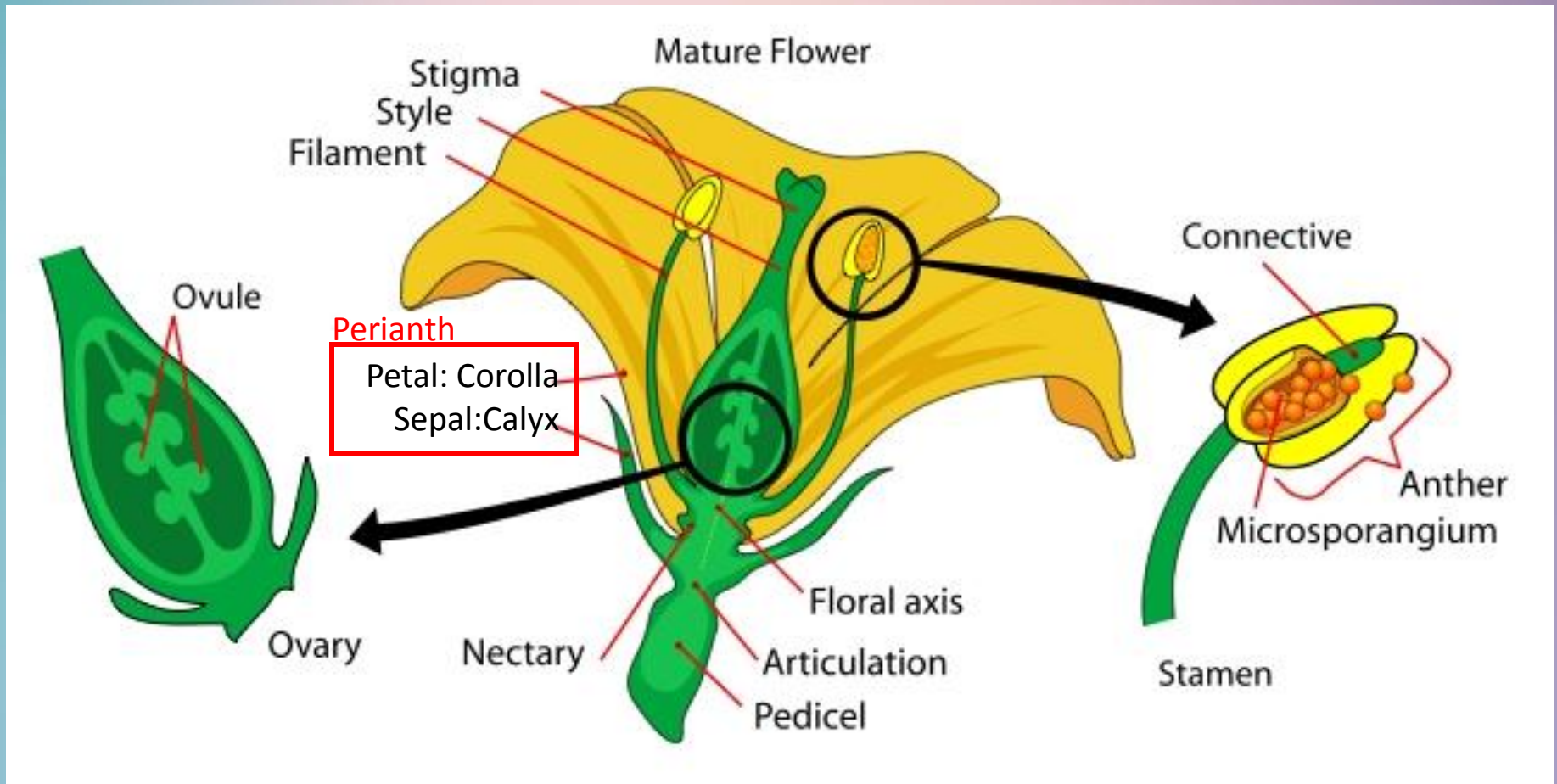


The flower
helps the plant
to reproduce.

Basic Flower Structure



The Reproductive Structure of Flowering Plants:



Classification of Fruits



Simple fruits may be fleshy or dry.

Aggregate fruitlets separate on one flower and each develops into a fruitlet; accessory fruitlets enclosed in a structure not derived from an ovary.

Multiple per se, fruitlets from multiple flowers fused into a single structure, along a fleshy stem or calyx (pericarp basket), or as a dry multiple compound of samaras, capsules, achenes, etc.

Syconium - seeds enclosed in a fleshy "cup" (receptacle).

Drupe - for one seed part, enclosed in "stone" (the hardened endocarp, or inner ovary wall, drupelet) may be applied to fruitlets of aggregate or multiple fruits.

Berry - per se, has a thin skin (outer "skin" of the ovary).

Pome - from an inferior ovary, has a fleshy hypanthium.

Hesperidium - has a leathery rind containing white oil glands; receptacle used when the pome is "peeled" (orange).

Follicle - fruit (pod) derived from one carpel.

Legume - splits along two seams.

Silique - capsule of the mustard family (Brassicaceae); 2 fused carpels; seeds that split away from a shell-covered part.

Nut - sometimes created by a "basket" derived from the receptacle or an involucre (receptacle with bracts).

Achene - "seed-in-a-box"; one seed, ventral suture in hard fruit wall.

Samara - winged achene.

Cypsella - achene of the Aster family (Asteraceae), from an inferior ovary, often with a pappus (diapetalous "parachute").

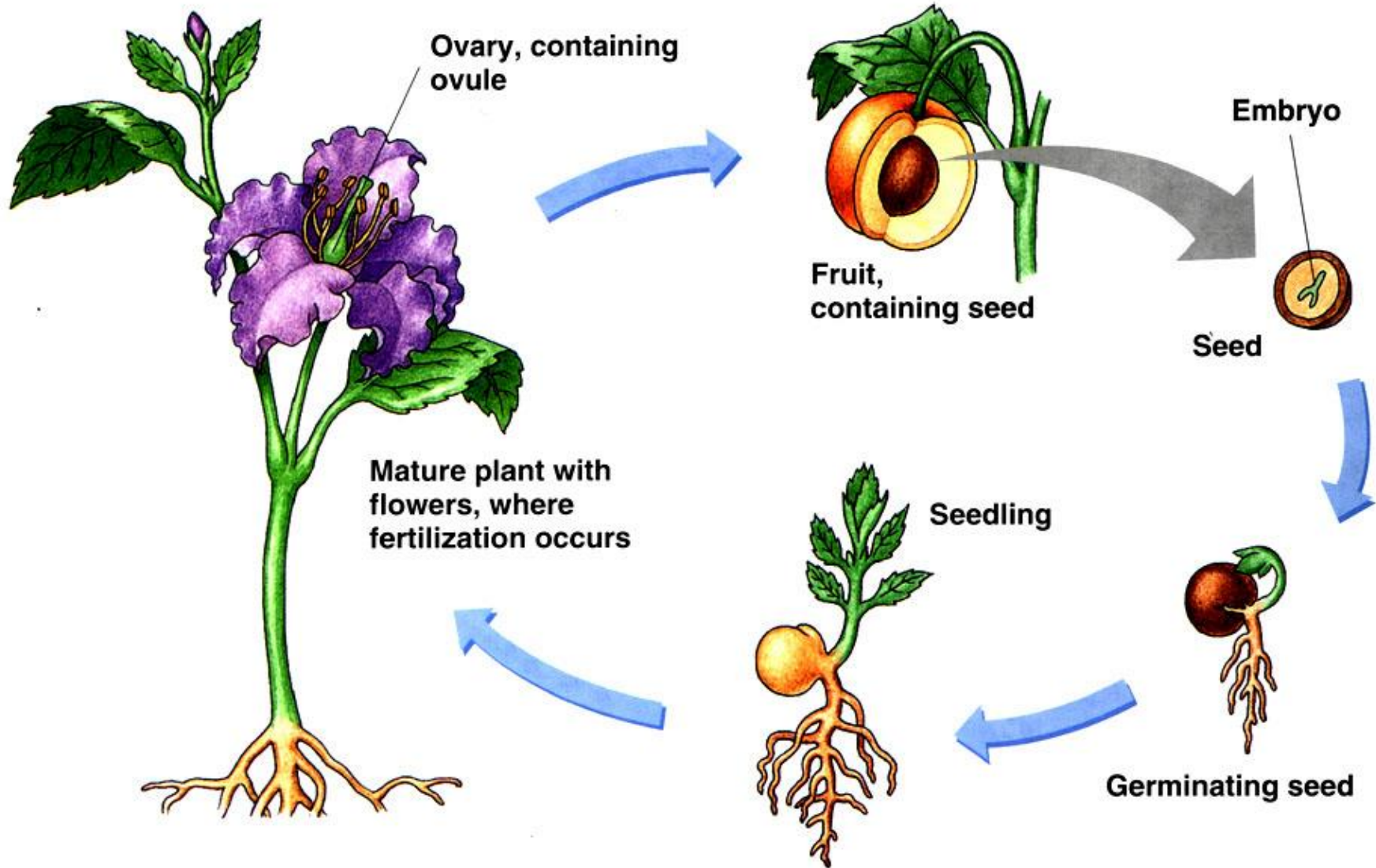
Utricle - "seed-in-a-balloon" the achene wall is inflated.

Caryopsis or grain - fruit of a grass.

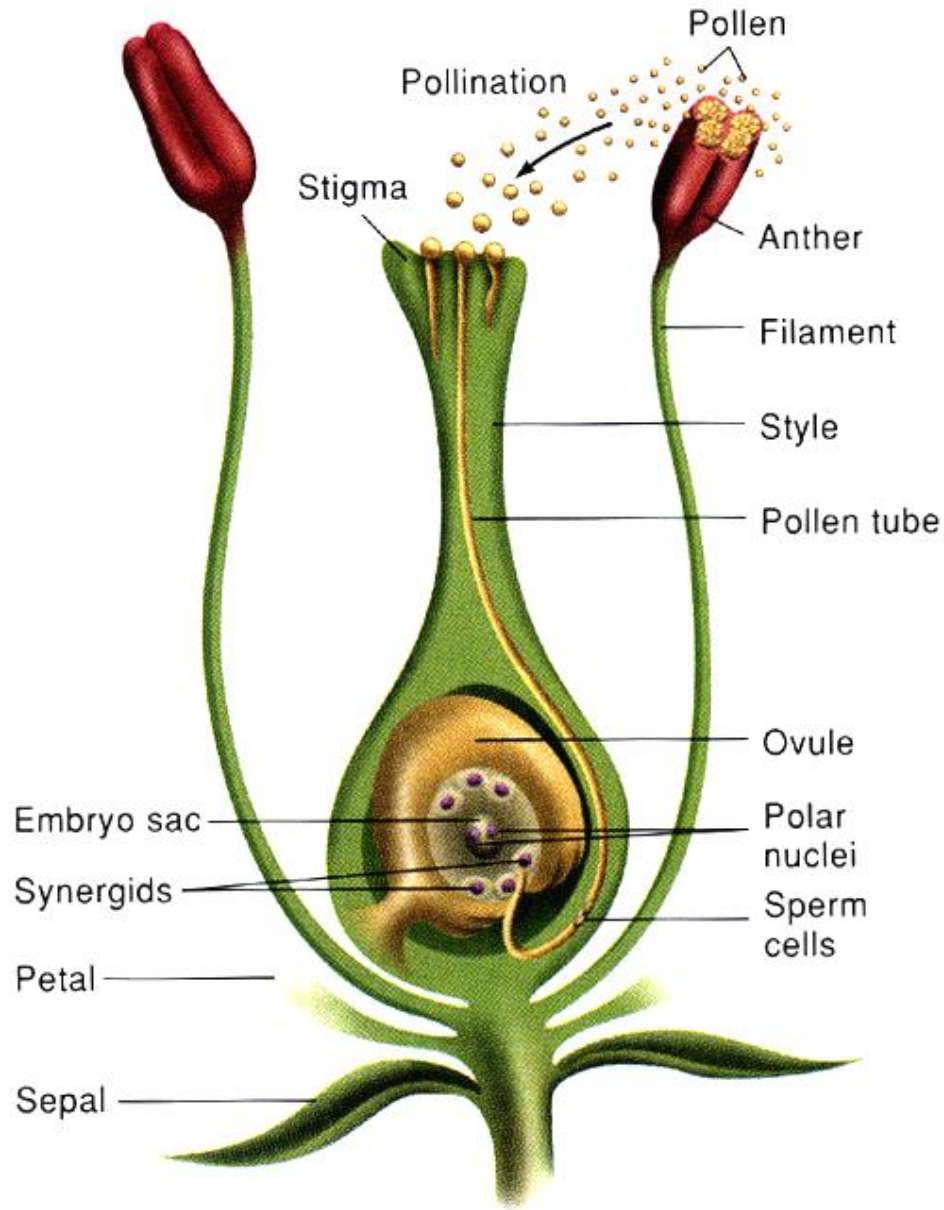
Fruit

fruit can be defined as part of a flowering plant that derives from specific tissues of the flower, one or more ovaries, and in some cases accessory tissues”.

Fruits



A fruit develops from the ovary wall after fertilization of the egg in the ovule



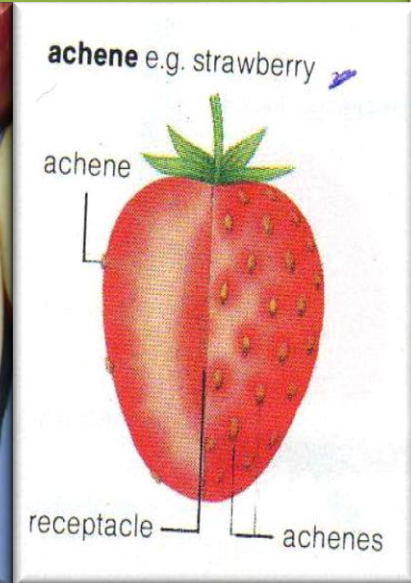
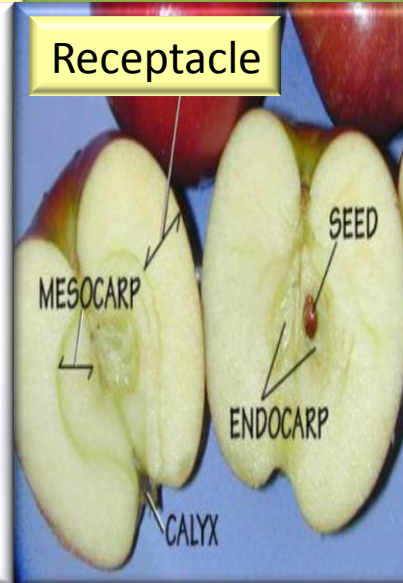
A seed develops from the ovule after fertilization of the egg in the ovule

First

Classification of fruits

A-True

B-False



Second

Classification of Fruits

Simple
(e.g. Senna pods)



Aggregate
(e.g. Star anise)



Composite
(compound, multiple)
(e.g. Figs)



Simple Fruits الثمار البسيطة

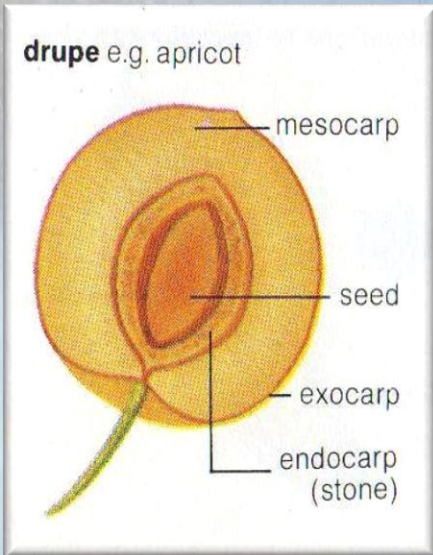
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graph TD; A[Simple Fruits الثمار البسيطة] --> B[1- Succulent (fleshy pericarp)]; B --> C[2- Dry Fruits];
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1- Succulent (fleshy pericarp)

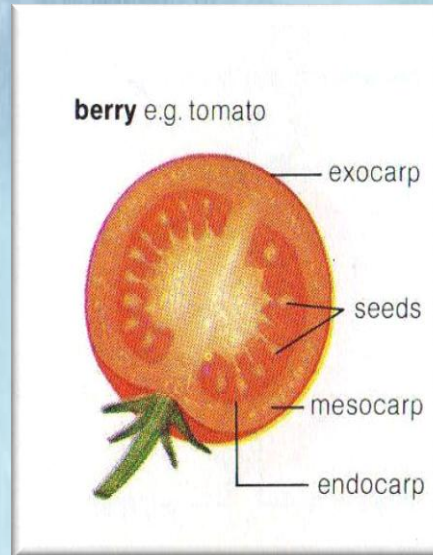
2- Dry Fruits

الثمار الغضة Succulent Fruits

حسلية
Drupe



لبية
Berry



تفاحية كاذبة
Pome



Dry Fruits الثمار الجافة

جافة متفتحة
Dehiscent

جافة غير متفتحة
Indehiscent

منشقة
Schizocarpic

I-Dehiscent Fruits

جرابية
Follicle



قرنية
Legume



خردلة
Siliqua



خريدلة
silicula



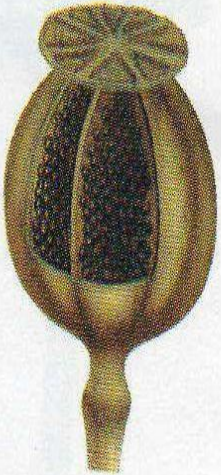
Capsule علبة



Capsule علبه

Porous ثقوب

capsule e.g. poppy



teeth اسنان



Lid غطاء



Valves صمامات

مسكني

حاجزي

مصراعي



II-Indehiscent Fruits

غير متفتحة

فقيرة

Achene

بيرة

Caryopsis

سبسلا

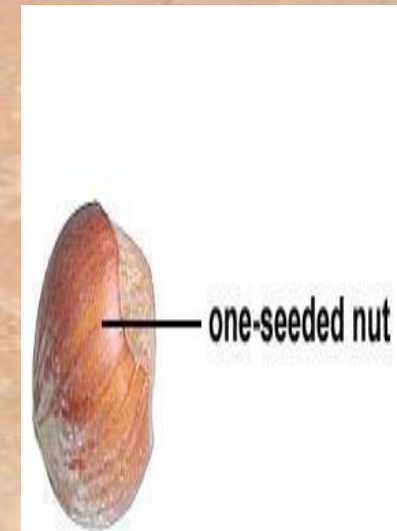
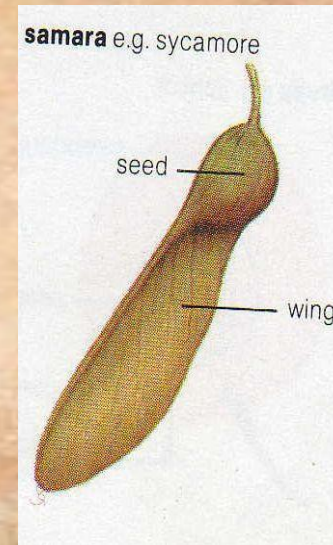
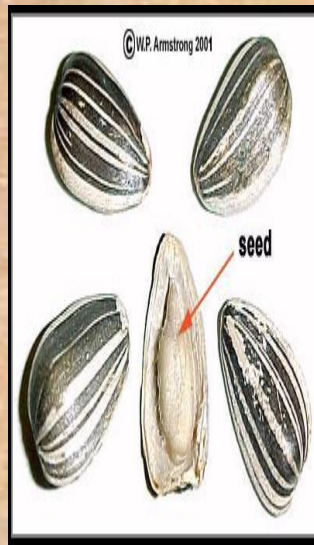
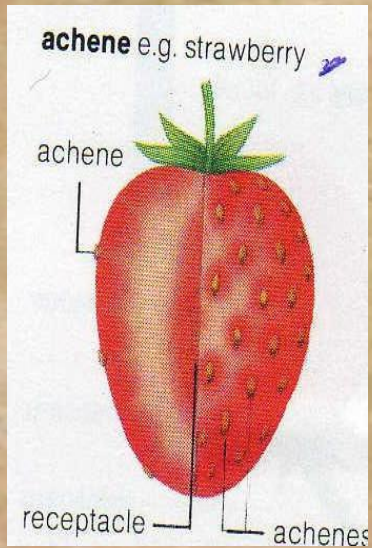
Cypsella

جناحية

Samara

بندقية

Nut



III-Schizocarpic Fruits

منشقة

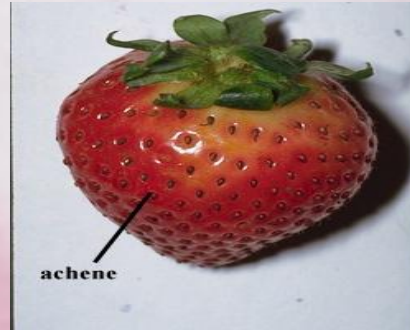


الثمار المتجمعة

Aggregate Fruits

Achenes

strawberry



raspberry



Follicles



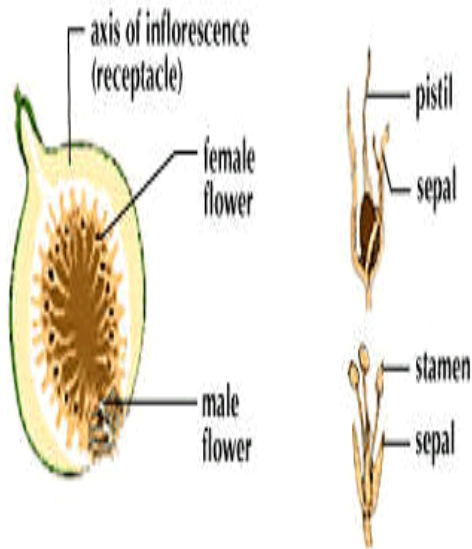
Composite Fruits (Compound, Collective or Multiple)

ثمار مركبة تينية

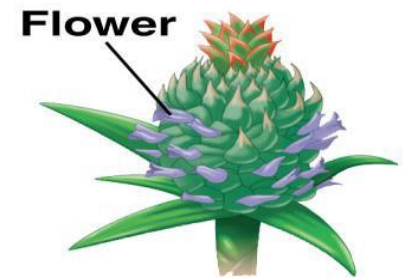
ثمار مركبة توتية

ثمار الأناناس

Multiple (Compound) Fruit
(fig)

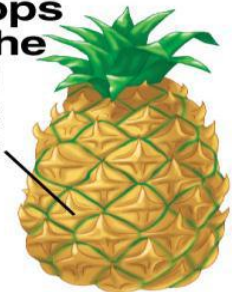


Multiple Fruit (Many Drupelets):
Each seed-bearing drupelet from the ovary of one pistillate flower.
k Mulberry (*Morus nigra*)



Pineapple inflorescence

Each segment develops from the carpel of one flower



Pineapple fruit

(c) Multiple fruit