Key to Fruit Types Lab

The Structure of Some Common Fruits
This exercise is designed to help you become familiar with the structure of several common fruit types, such as the legume, the caryopsis, the berry, the drupe, and the pome.

A. **Legume: Bean or Pea**
Examine the bean or pea pod on your table. Answer the following questions as you observe the legume fruit.

What part of the carpel does it represent?
Ovary
What happened to the other parts of the carpel?
Degenerated and "fell off", although dried style with stigma may still be attached.
At which end of the pod were the stamens, petals, and sepals attached? Is there any evidence of any of these parts?
The receptacle end. Often there will be, particularly dried sepals, depending on how the pods were harvested for marketing
Split the pod lengthwise along both edges. Do all the seeds adhere to one side, or do they alternate from one side to the other?

B. **Caryopsis** (or Grain): **Corn**
Examine dry and soaked grains of corn. What part of the carpel do these represent?
Ovary
Look for a tiny bump on the upper end of the corn grain marking the location where the silk was attached. What is the silk of corn? .
Style, with stigma at the tip
Try to remove the pericarp from a dry grain. Do the same with a grain that has been thoroughly soaked in water. When this skin like structure has been removed, what structures are left? .
Part of seed coat, perhaps, plus endosperm and embryo

C. **Berry: Tomato or Grape**
Examine fresh tomato fruits or other berry, noting the stalk or pedicel and the green sepals at the basal end. Where do you find the remains the style?_____Top of fruit____.
Does the berry develop from a superior or an inferior ovary?
Superior
Where were the petals and stamens attached?
Below the ovary
Is any other floral part united with the ovary in the formation of this fruit? Is the tomato an accessory fruit? Why or why not?
No, only the ovary tissue forms the fruit. The receptacle, which usually comprises accessory tissue is below the sepals.
Examine a cross-section of a tomato. How many locules (chambers) are visible? .
Usually four or five.
How many ovaries formed the fruit?
Five, but in commercial fruits, the number is variable.

D **The Drupe: Peach** (Cherries, plums, or even soaked prunes)
Examine a fresh or preserved peach. Does this fruit come from a superior or an inferior ovary? .
Superior
What evidence do you have to support your answer?
Andy remnant sepals and receptacle are below the ovary
Examine a peach that has been cut lengthwise and one that has been cut crosswise. How many carpels are involved in the formation of the peach?
one
What part of the ovary wall is the rough, fuzzy skin? .
Exocarp
What part of the fruit forms the edible portion of the fruit? .
Mesocarp
What part forms the **stone or pit?**
Endocarp
How many seeds does a drupe contain?
One .

E. **The Pome: Apple** (Crab apple, pear, or quince)

Examine the fruit of the apple. Find the fruit stalk or pedicel, and see whether you find near its upper end any scars that might mark the former location of the other flower parts.

Examine the other end of the fruit. What are the small, pointed structures which you find there?

Sepals

How many of these structures are there? .

5

Do you find any evidence of stamens?

Often yes

Does the pome develop from an epigynous or hypgynous flower? .

Epigynous

Examine the cross-section of an apple, noting the star-shaped core. What are the papery or cartilaginous structures found in this region? . How many of them are there? .

Endocarp, 5 - 10

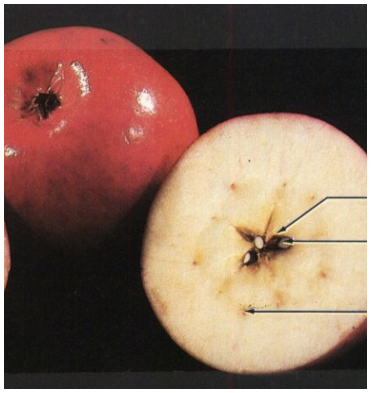
Is the pome an accessory fruit? Why or why not?

Yes, because the receptacle, which encases the ovary, forms part of the fruit. **Multiple Fruit**

Identification of Miscellaneous Fruits

Berry

Hesperidium

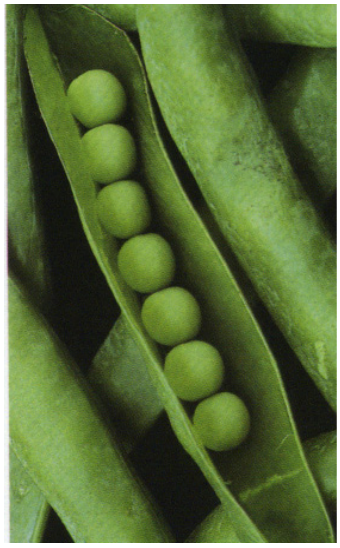


Pome

Drupe

Aggregate of Achenes (Also Accessory)

Aggregate of Drupes



Legume

Loment (or Legume, too)

Multiple

Capsule

Capsule

Follicle

Samara (samaroid schizocarp precisely)

Silique and Silicle fruits