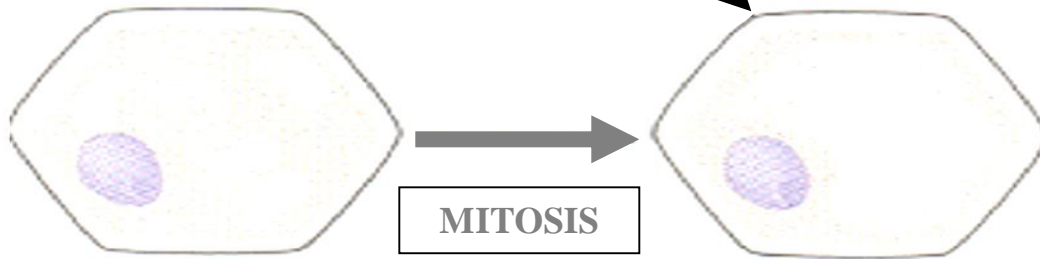


STEM MERISTEM

DERIVATIVE CELL

PARENCHYMA CELL



CELL INITIAL

PARENCHYMA CELL

PARENCHYMA BASIC PLANT CELL



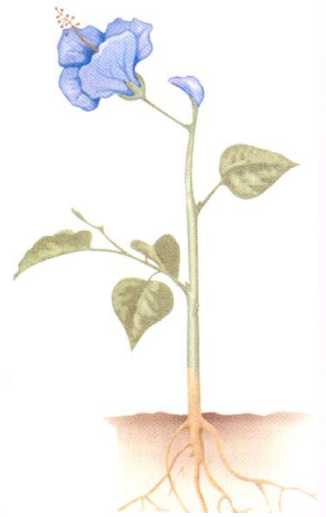
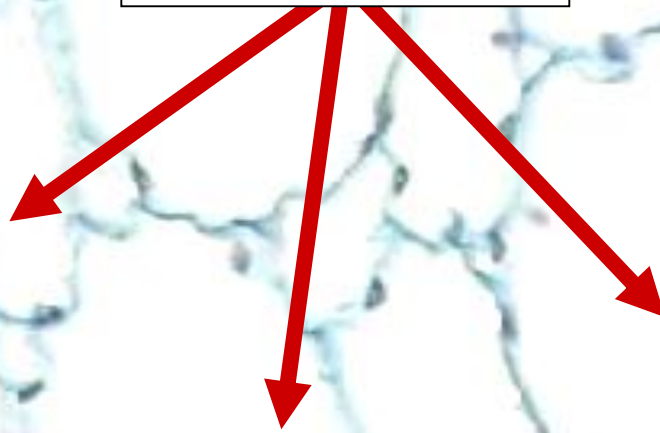
PARENCHYMA CELL CHARACTERS

C.S.

STEM

L

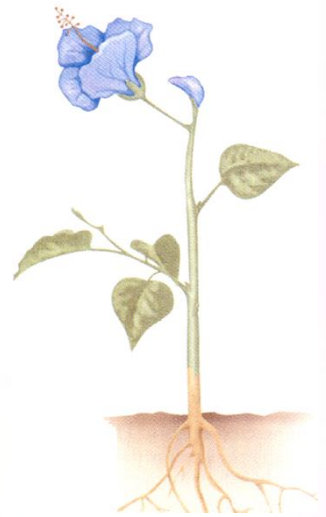
**PARENCHYMA
CELLS**



C.S.

STEM

**PARENCHYMA
LIVING
FUNCTIONAL
CELL**



C.S.

STEM

T

**PARENCHYMA
~1 CELL WALL
ONLY**



C.S.

STEM

L

**PARENCHYMA
~1 CELL WALL
THIN**



C.S.

STEM

**PARENCHYMA
~1 CELL WALL
LOW PECTIN
CONTENT**



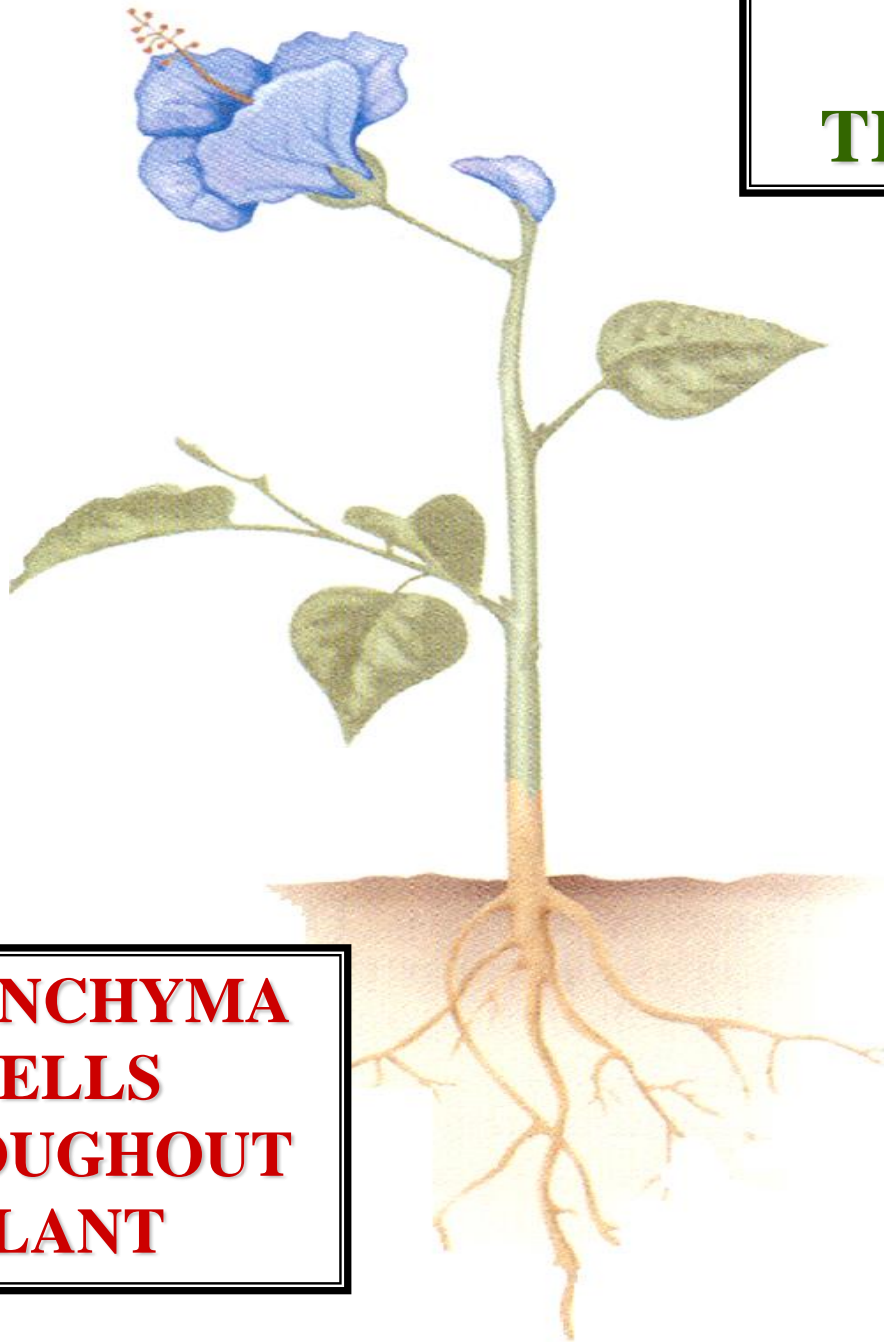


PARENCHYMA CELL DISTRIBUTION

TYPICAL TRACHEOPHYTE

L

PARENCHYMA
CELLS
THROUGHOUT
PLANT

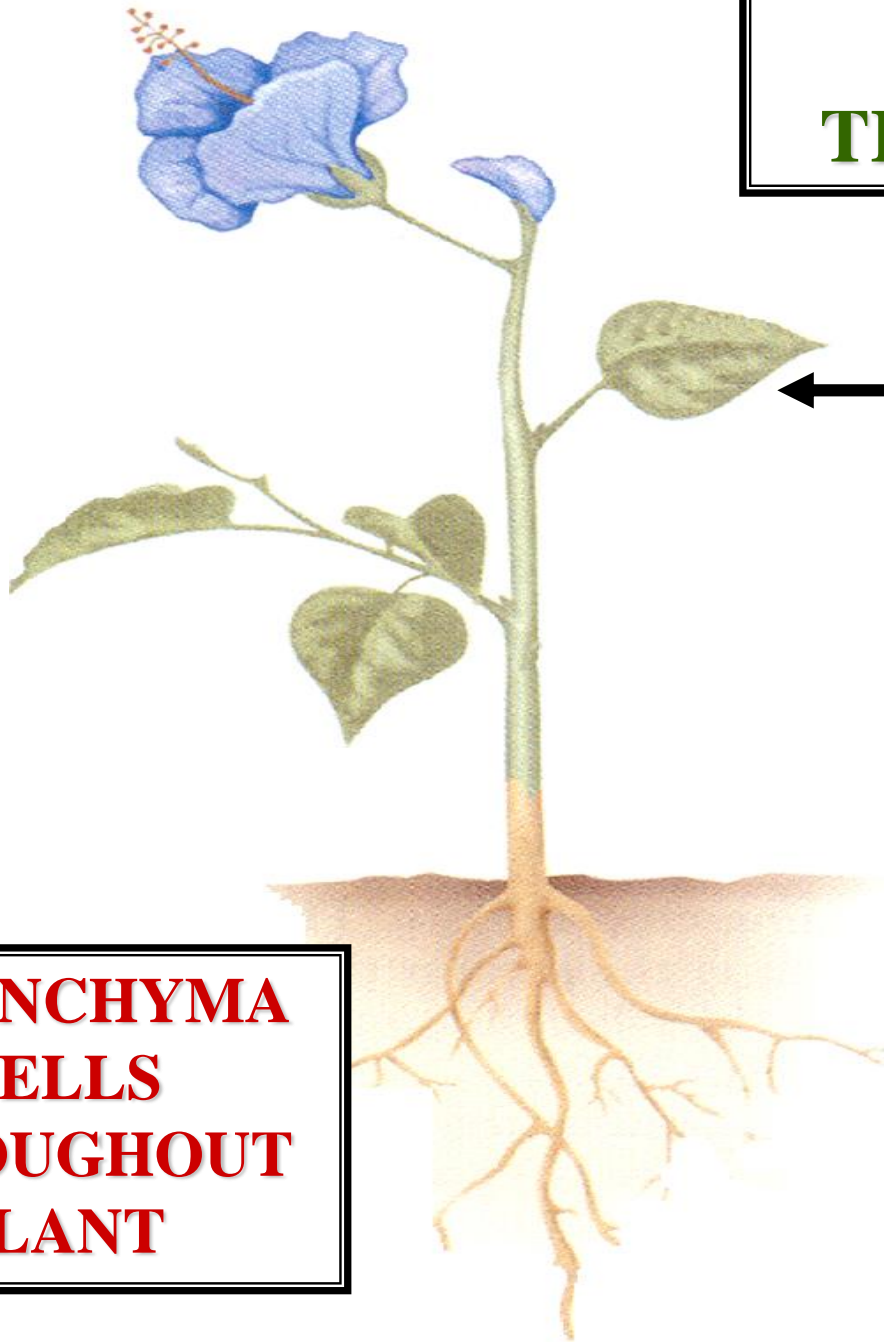


TYPICAL TRACHEOPHYTE

S

←
LEAF

**PARENCHYMA
CELLS
THROUGHOUT
PLANT**



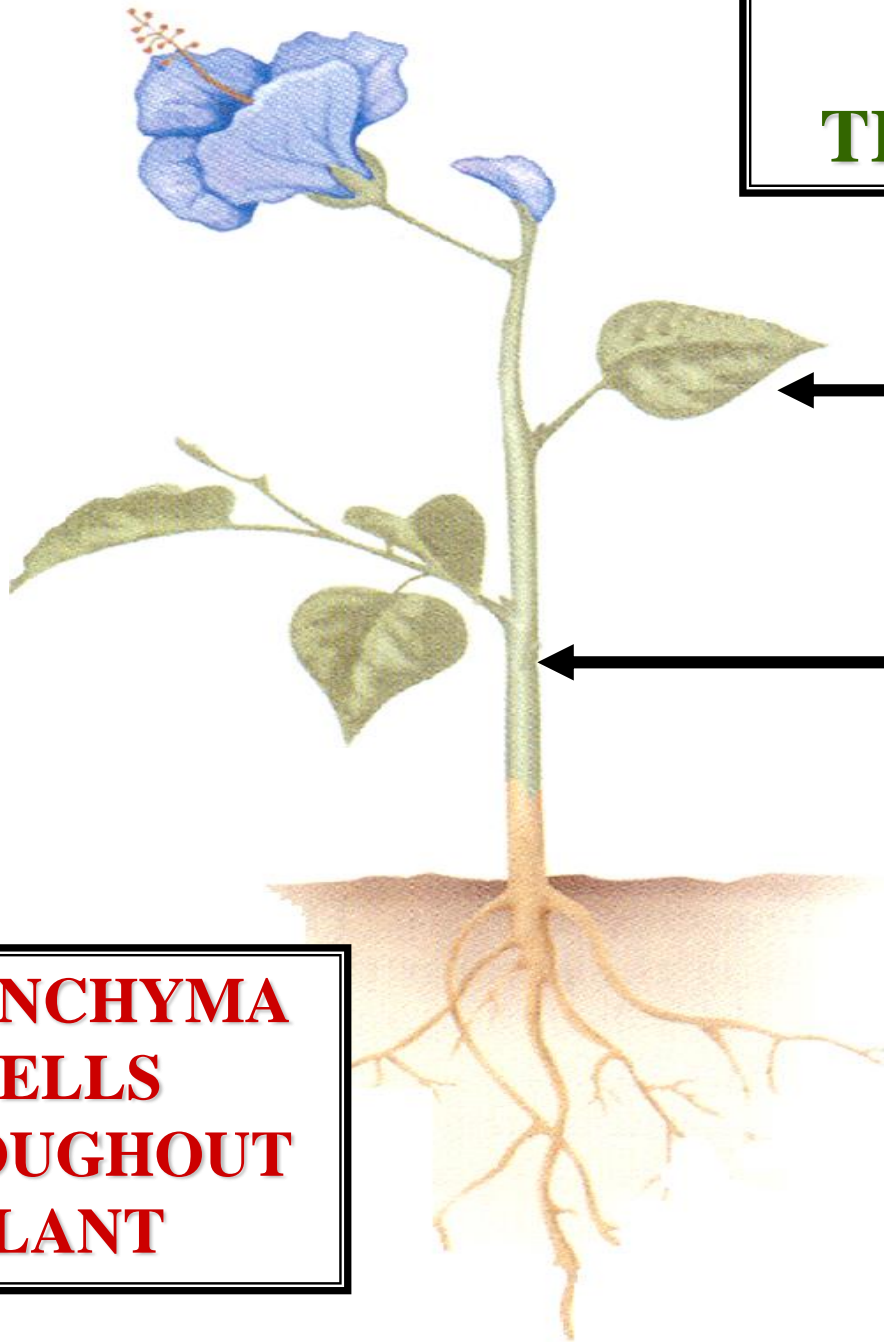
TYPICAL TRACHEOPHYTE

R

←
LEAF

←
STEM

**PARENCHYMA
CELLS
THROUGHOUT
PLANT**



TYPICAL TRACHEOPHYTE

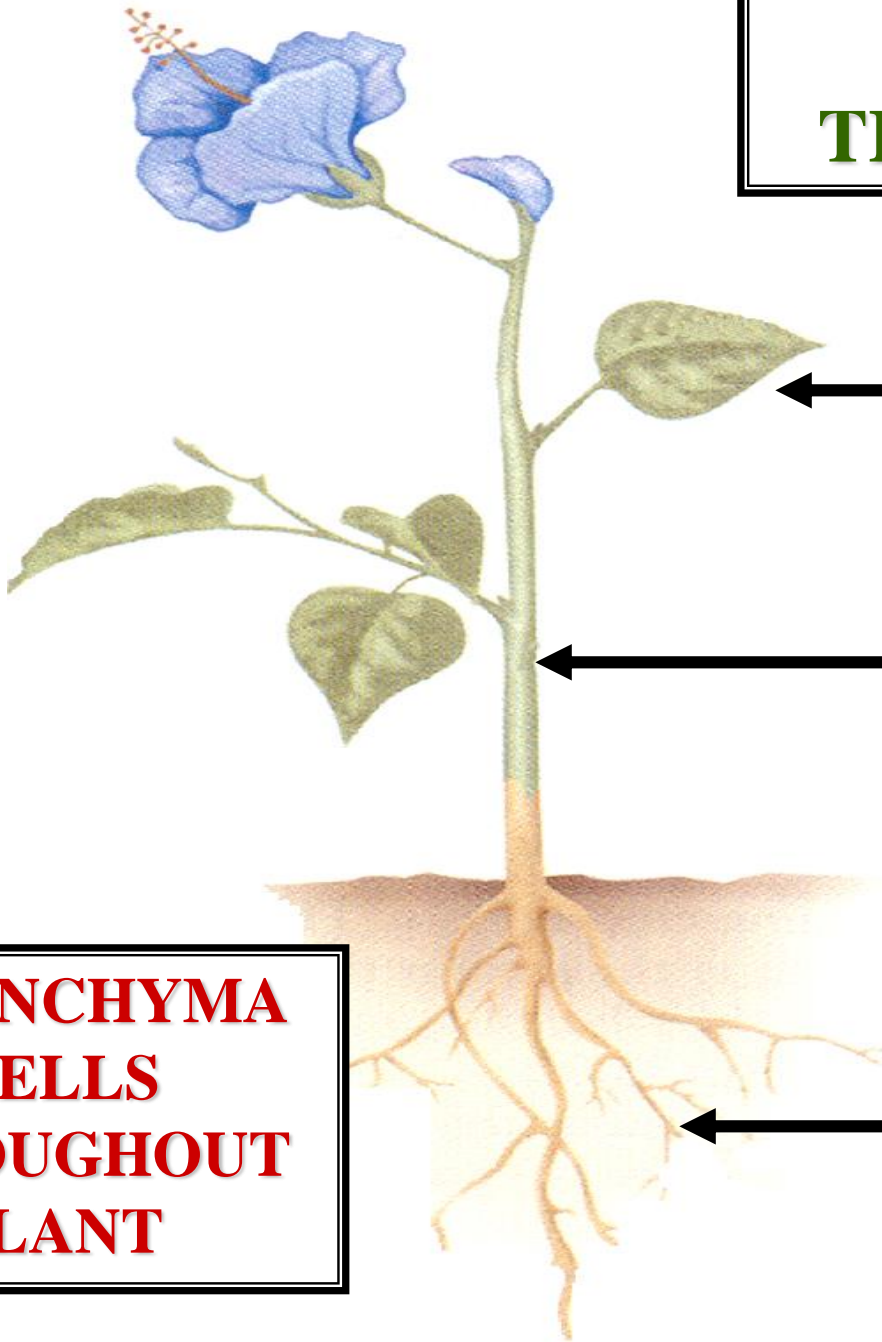
^

LEAF

STEM

**PARENCHYMA
CELLS
THROUGHOUT
PLANT**

ROOT



PARENCHYMA CELL FUNCTION

PARENCHYMA CELLS TOTIPOTENT

TOTIPOTENT

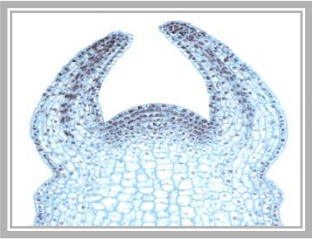


TOTIPOTENT

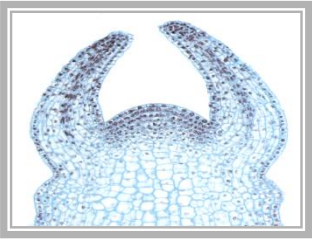
**DIFFERENTIATE INTO
ALL OTHER CELL TYPES**

TOTIPOTENT

STEM MERISTEM



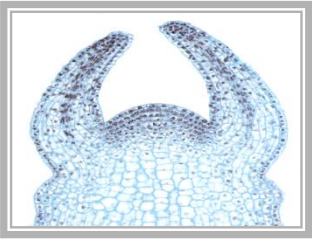
STEM MERISTEM



CELL INITIAL

PARENCHYMA
BASIC
PLANT CELL

STEM MERISTEM

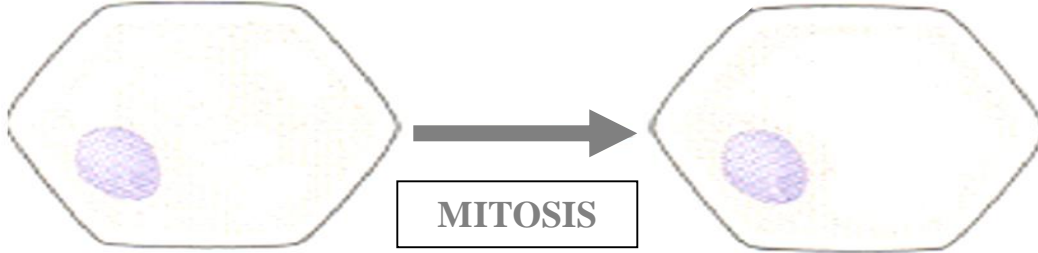
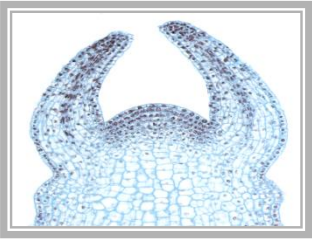


CELL INITIAL

PARENCHYMA CELL

PARENCHYMA
BASIC
PLANT CELL

STEM MERISTEM



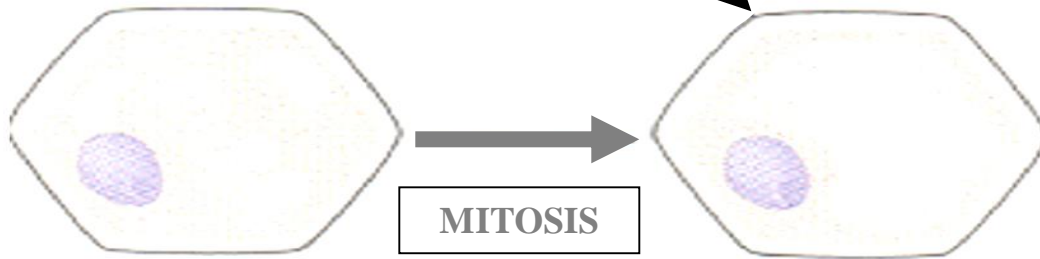
CELL INITIAL

PARENCHYMA CELL

PARENCHYMA
BASIC
PLANT CELL

**STEM
MERISTEM**

DERIVATIVE CELL



CELL INITIAL

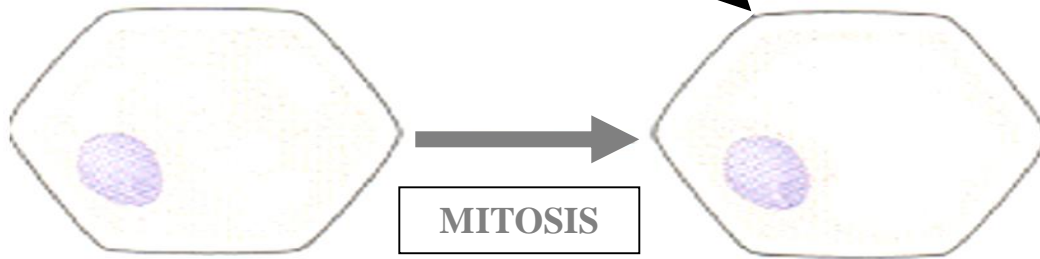
PARENCHYMA CELL

**PARENCHYMA
BASIC
PLANT CELL**

STEM MERISTEM

DERIVATIVE CELL

PARENCHYMA CELL



MITOSIS

CELL INITIAL

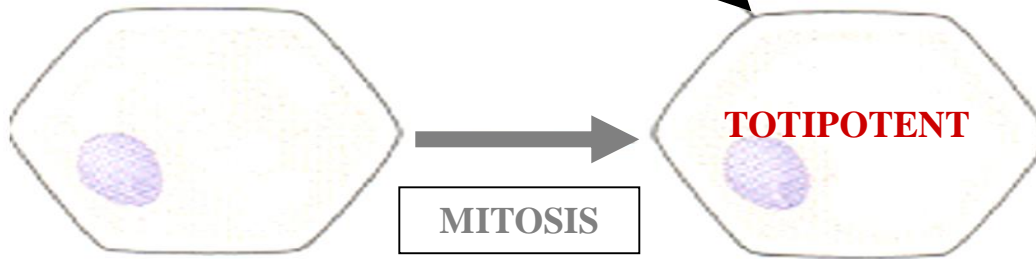
PARENCHYMA CELL

PARENCHYMA BASIC PLANT CELL

STEM MERISTEM

DERIVATIVE CELL

PARENCHYMA CELL



MERISTEM DERIVATIVE
CAN POTENTIALLY
DIFFERENTIATE
INTO ANY PLANT CELL TYPE

CELL INITIAL

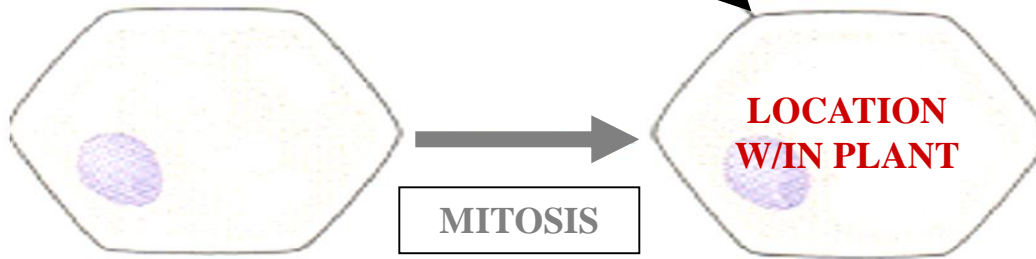
PARENCHYMA CELL

PARENCHYMA
BASIC
PLANT CELL

STEM MERISTEM

DERIVATIVE CELL

PARENCHYMA CELL



CELL INITIAL

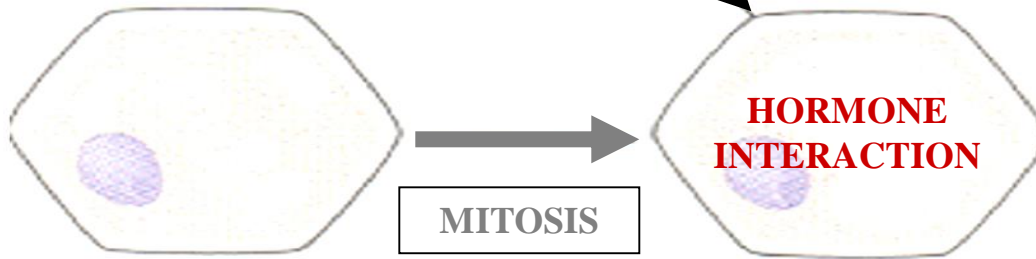
PARENCHYMA CELL

PARENCHYMA
BASIC
PLANT CELL

STEM MERISTEM

DERIVATIVE CELL

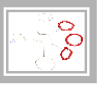
PARENCHYMA CELL



CELL INITIAL

PARENCHYMA CELL

PARENCHYMA BASIC PLANT CELL



STEM MERISTEM

DERIVATIVE CELL

PARENCHYMA CELL

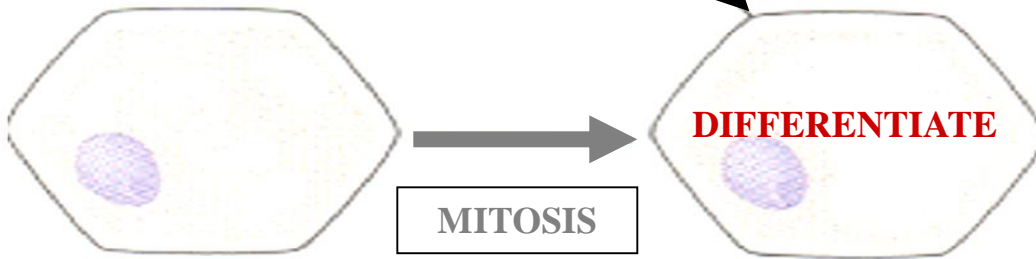
DIFFERENTIATE

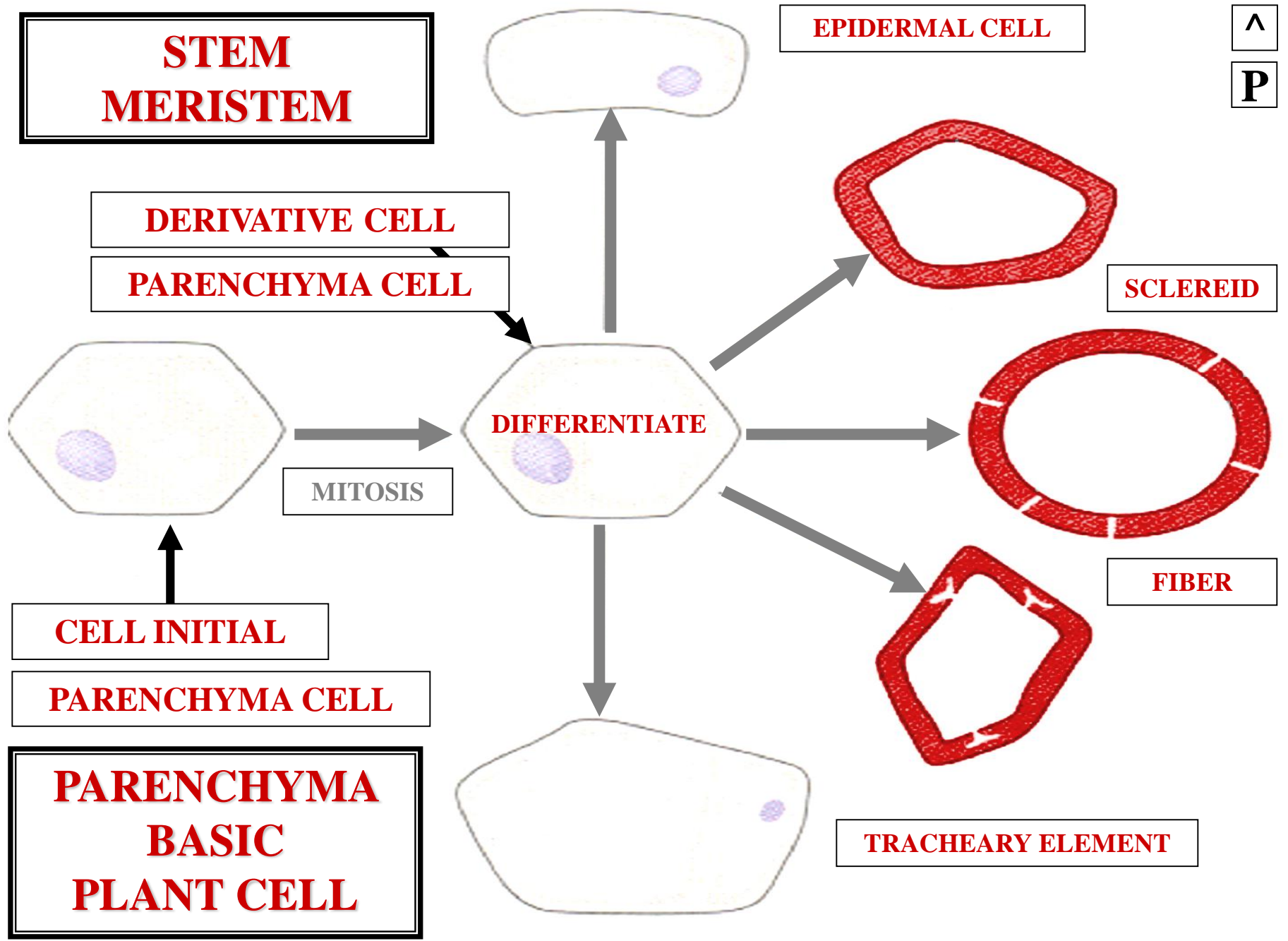
MITOSIS

CELL INITIAL

PARENCHYMA CELL

PARENCHYMA
BASIC
PLANT CELL







PARENCHYMA CELLS PHOTOSYNTHESIS

MAPLE LEAF



**PHOTOSYNTHESIS
TISSUE**

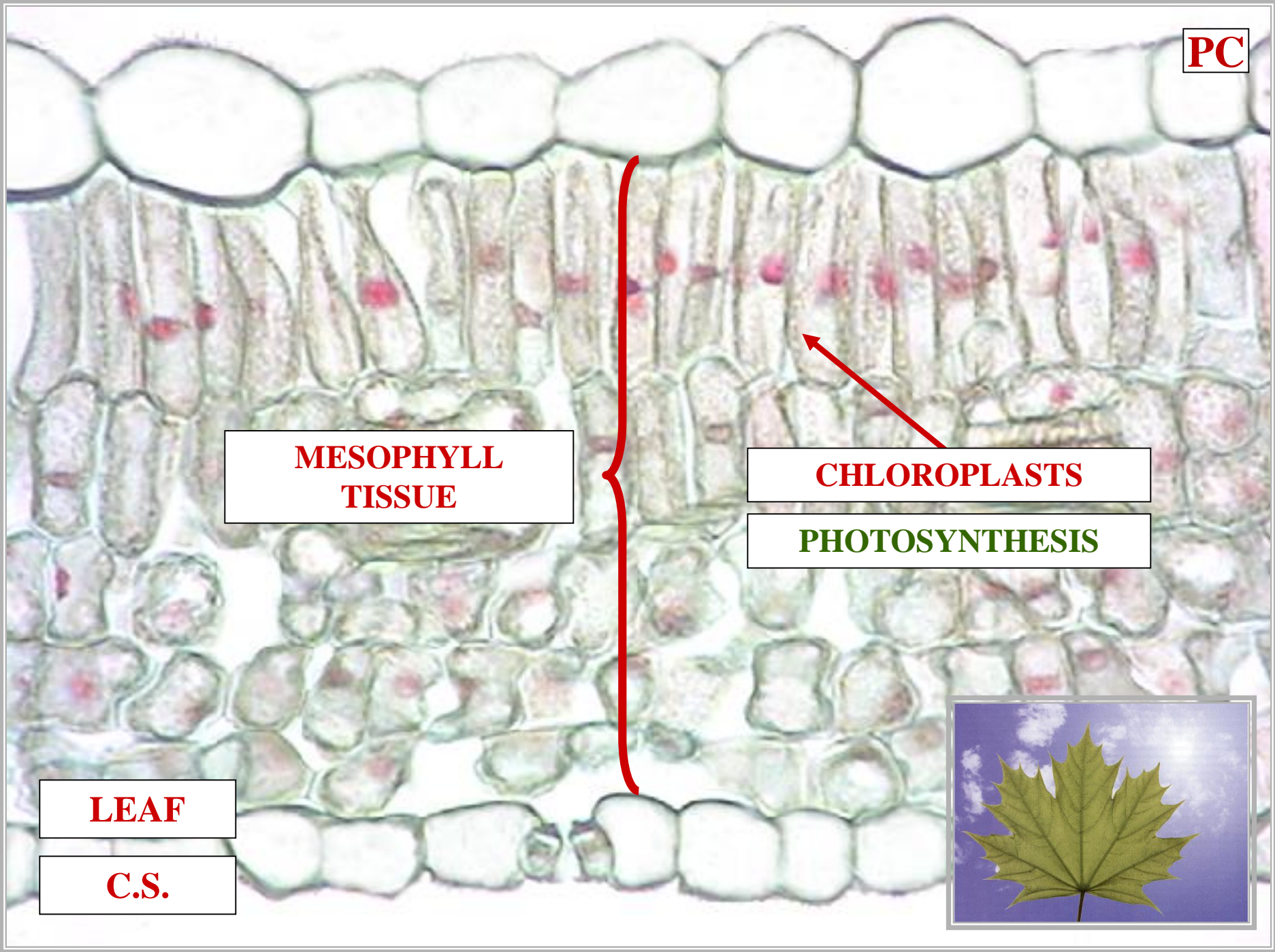
CHLOROPLASTS

PHOTOSYNTHESIS

LEAF

C.S.





**MESOPHYLL
TISSUE**

CHLOROPLASTS

PHOTOSYNTHESIS

LEAF

C.S.



^

P

**MESOPHYLL
PARENCHYMA
CELLS**

CHLOROPLASTS

PHOTOSYNTHESIS

LEAF

C.S.



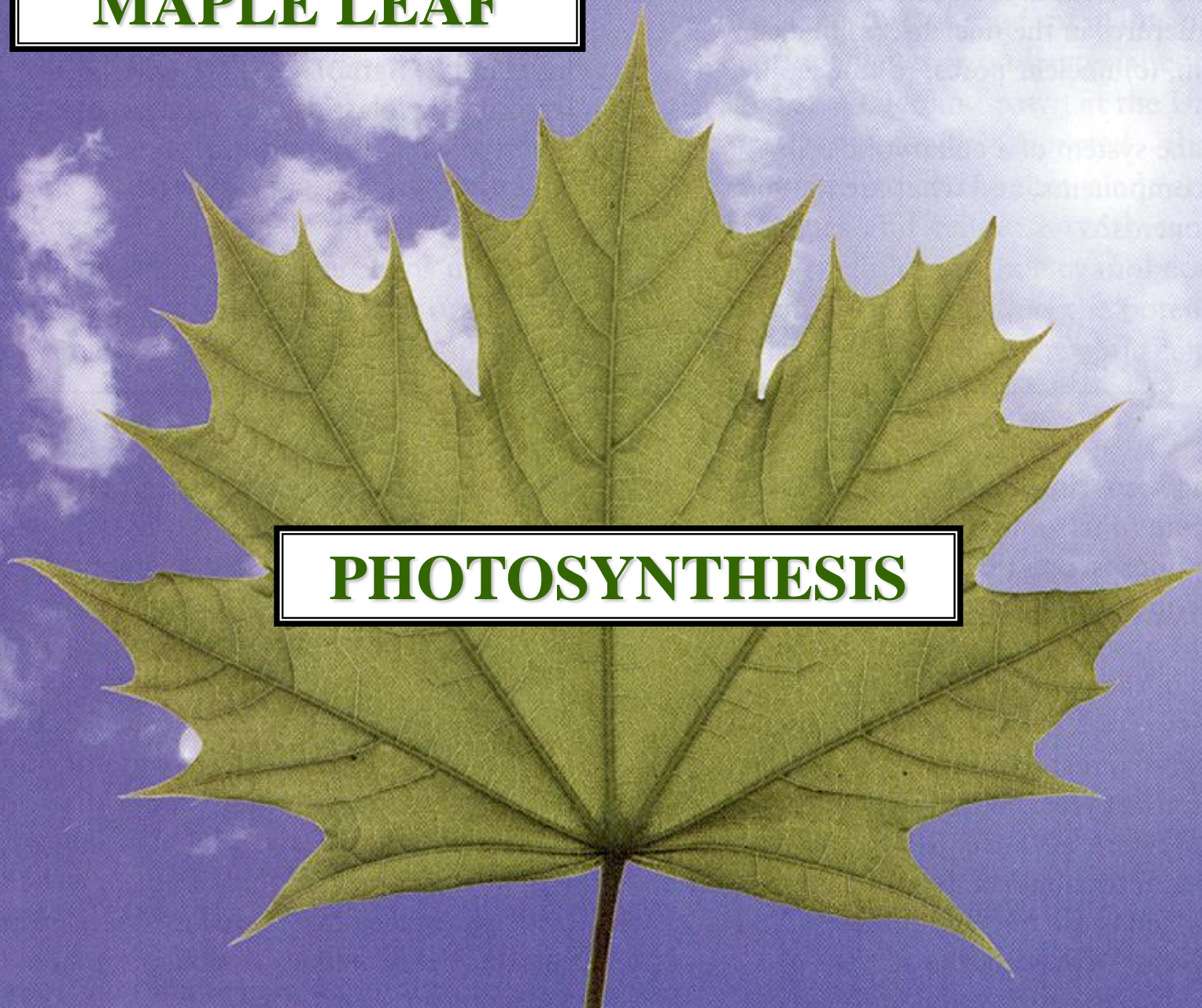


PARENCHYMA CELLS STORAGE

MAPLE LEAF

?

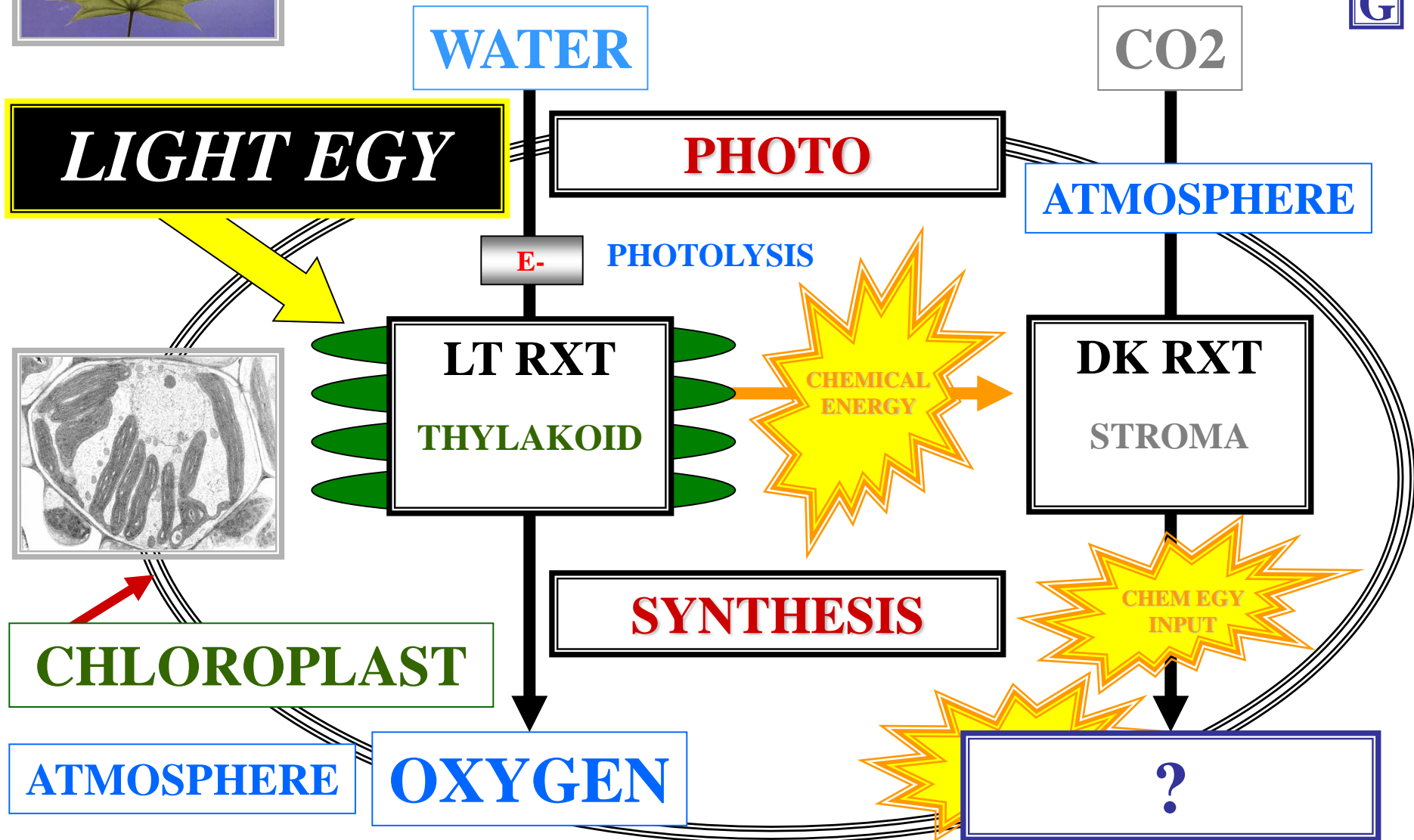
PHOTOSYNTHESIS





PHOTOSYNTHESIS

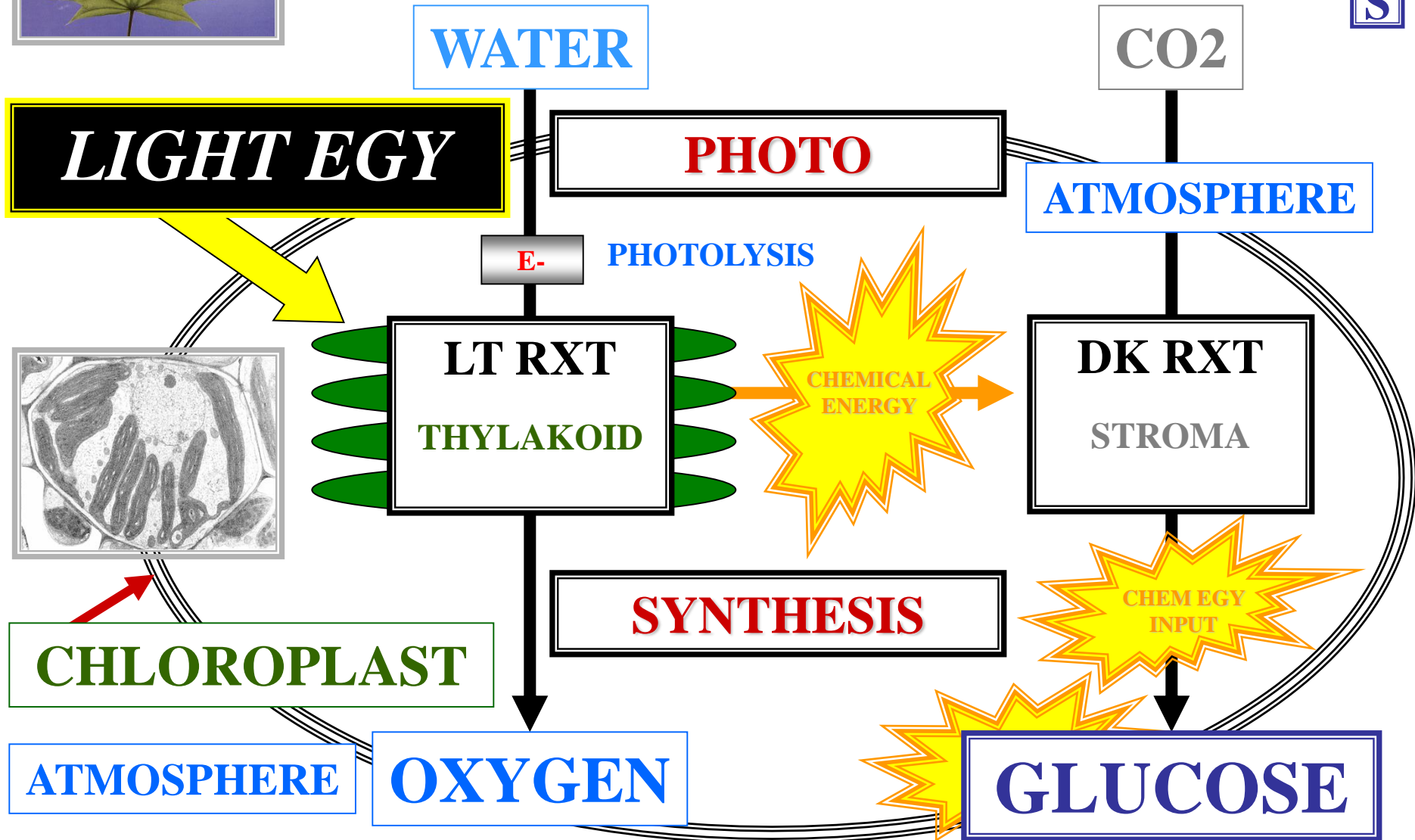
G



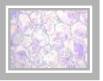


PHOTOSYNTHESIS

S



PHOTOSYNTHESIS



WATER

CO₂

LIGHT ENERGY

PHOTO

ATMOSPHERE

E-

PHOTOLYSIS

LT RXT

THYLAKOID

CHEMICAL
ENERGY

DK RXT

STROMA

SYNTHESIS

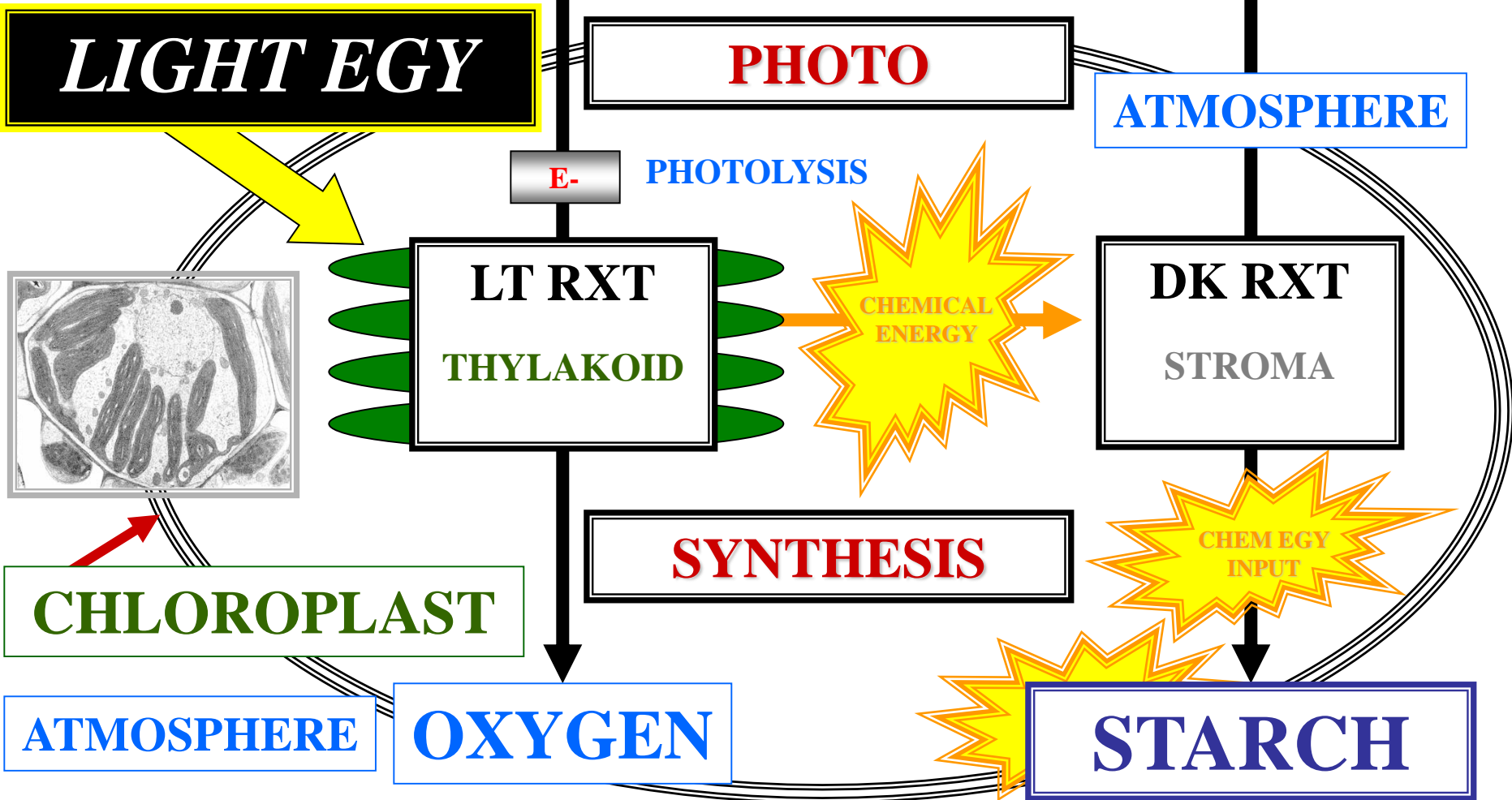
CHEMICAL
INPUT

CHLOROPLAST

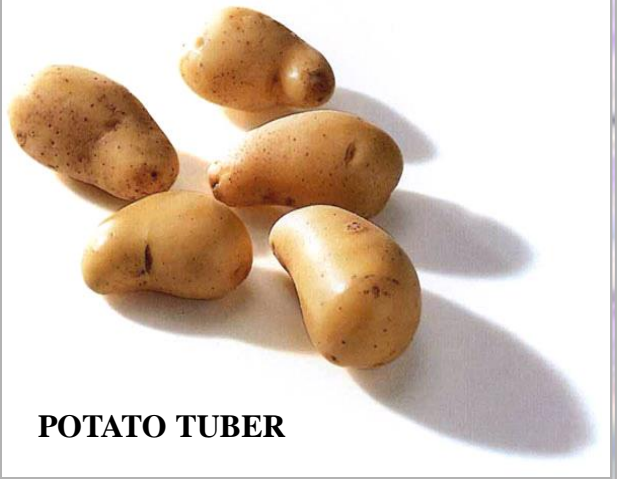
ATMOSPHERE

OXYGEN

STARCH



**PARENCHYMA
CELLS**

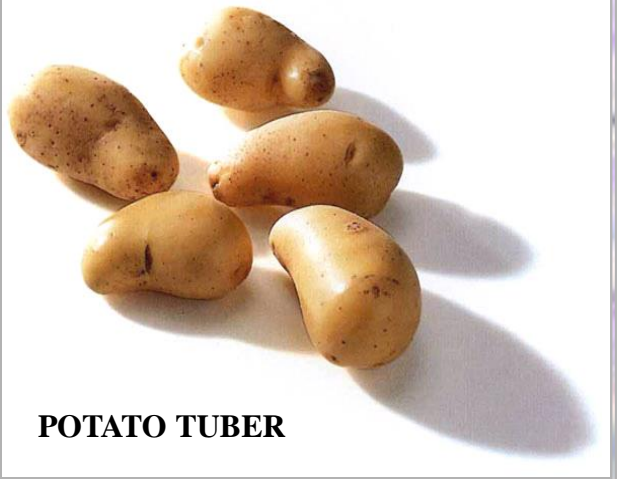


POTATO TUBER



C.S.

STRACH GRAINS



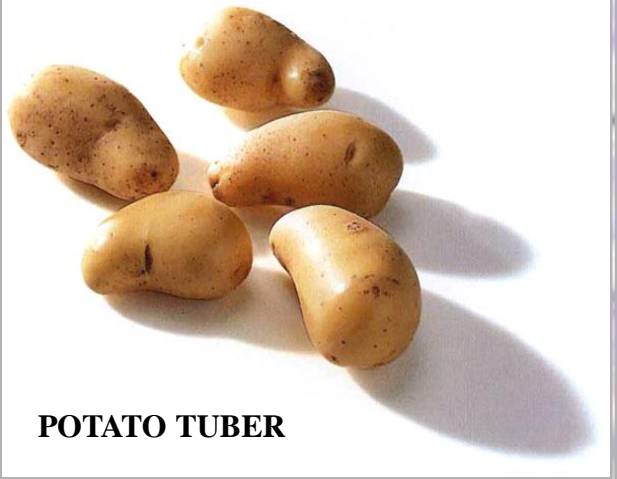
POTATO TUBER



C.S.

SS

LEUCOPLASTS



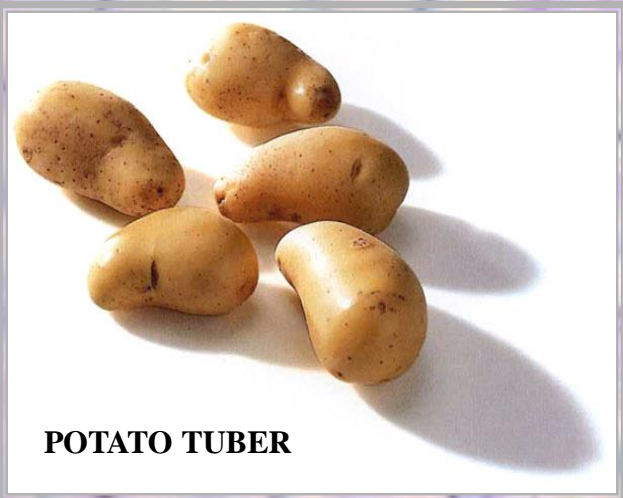
POTATO TUBER



C.S.



**PARENCHYMA
CELLS
STORE STARCH**



POTATO TUBER



C.S.

PARENCHYMA TISSUE

PARENCHYMA TISSUE



PARENCHYMA TISSUE

**PARENCHYMA CELL
AGGREGATE**

PARENCHYMA TISSUE

PARENCHYMA TISSUE TYPES

PARENCHYMA TISSUE TYPES

CORTEX

**PARENCHYMA TISSUE
TYPES**

PARENCHYMA TISSUE TYPES

CORTEX
PITH

**PARENCHYMA TISSUE
TYPES**

PARENCHYMA TISSUE TYPES

C

CORTEX

PITH

MESOPHYLL

PARENCHYMA TISSUE TYPES

**CORTEX
PARENCHYMA
TISSUE**

PARENCHYMA TISSUE CORTEX



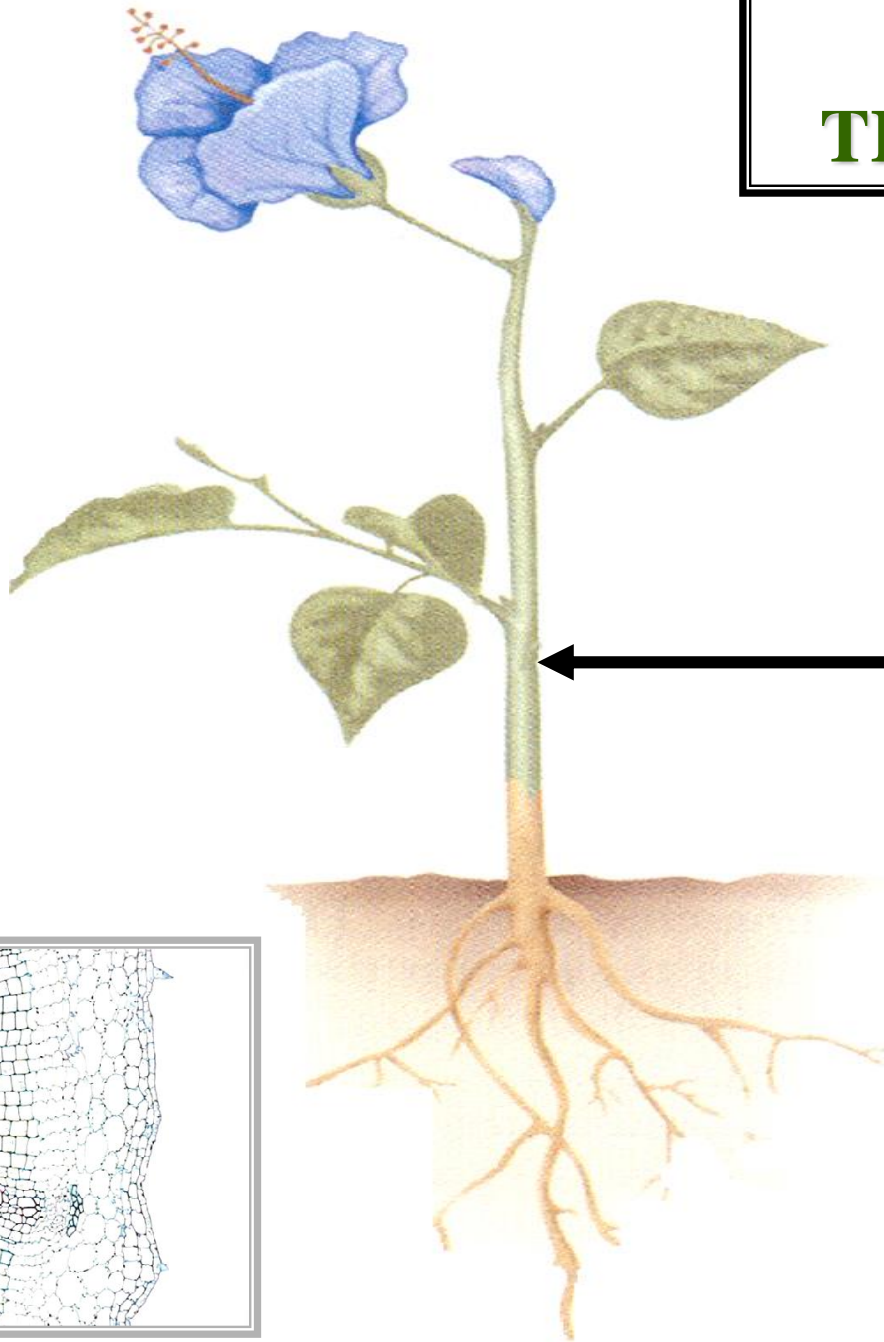
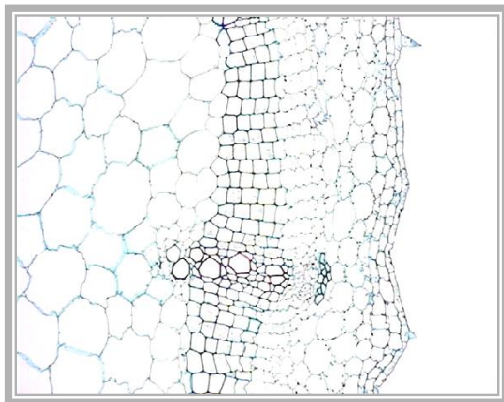
**TISSUE BETWEEN EPIDERMIS
AND VASCULAR TISSUE**

**PARENCHYMA TISSUE
CORTEX**

TYPICAL TRACHEOPHYTE



STEM



C

VASCULAR TISSUE

EPIDERMIS

STEM

C.S.



^

P

**CORTEX
PARENCHYMA
TISSUE**

STEM

C.S.



**PITH
PARENCHYMA
TISSUE**

PARENCHYMA TISSUE PITH



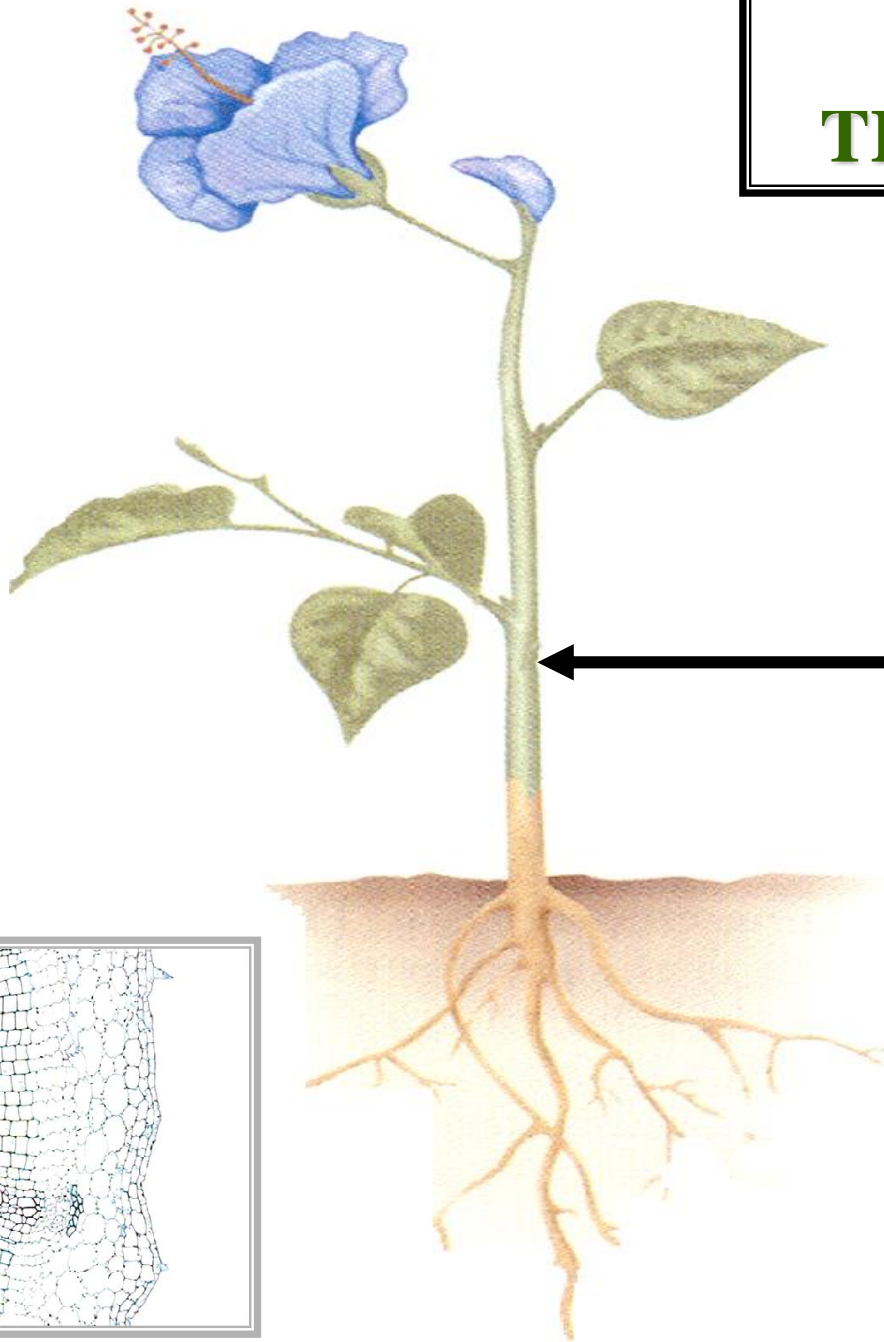
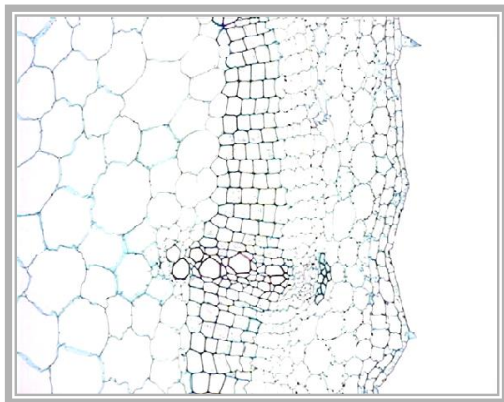
**TISSUE INWARD OF
VASCULAR TISSUE**

**PARENCHYMA TISSUE
PITH**

TYPICAL TRACHEOPHYTE



STEM



VASCULAR TISSUE

**CORTEX
PARENCHYMA
TISSUE**

STEM

C.S.



**PITH
PARENCHYMA
TISSUE**

**CORTEX
PARENCHYMA
TISSUE**

STEM

C.S.



MESOPHYLL PARENCHYMA TISSUE

PARENCHYMA TISSUE MESOPHYLL

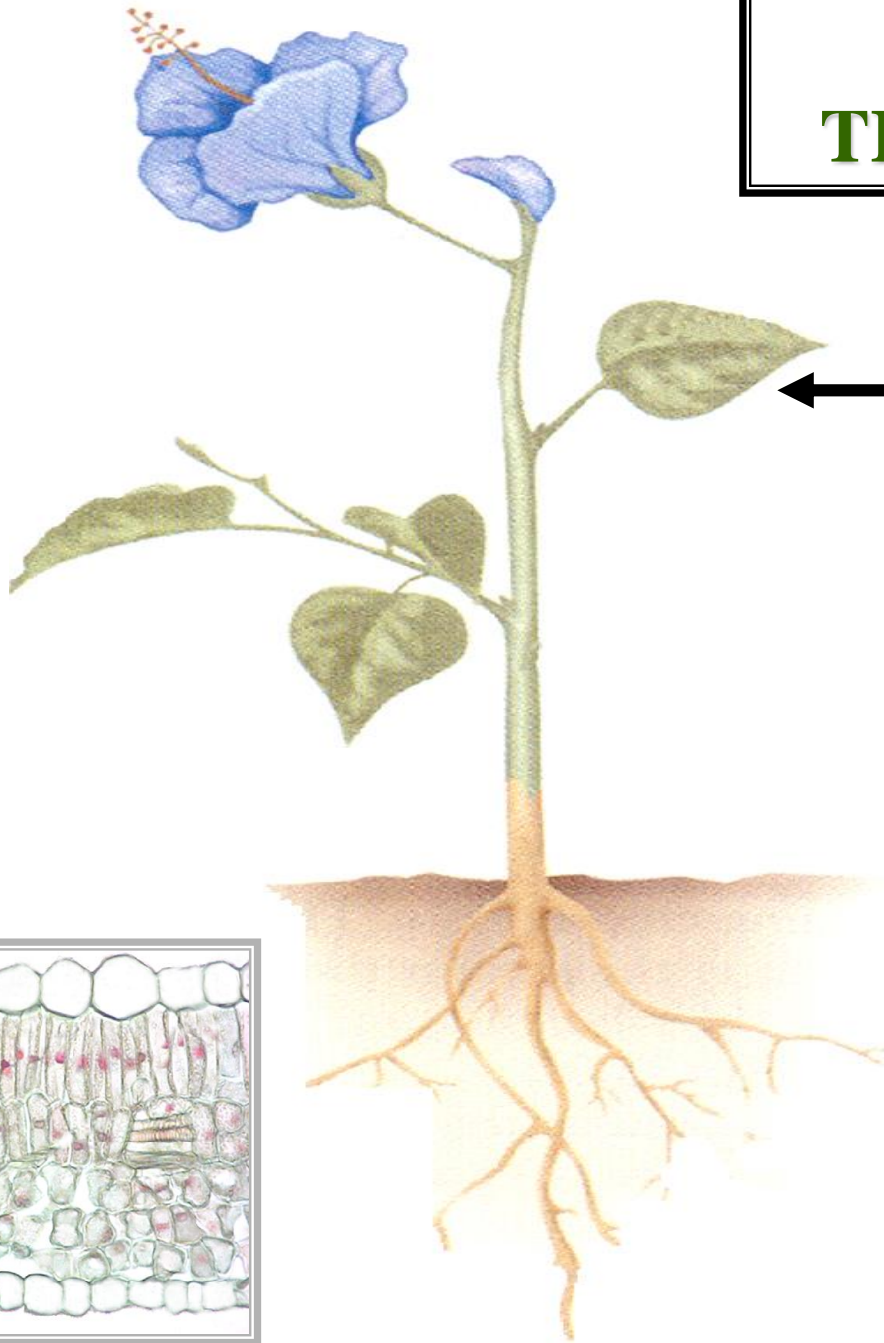
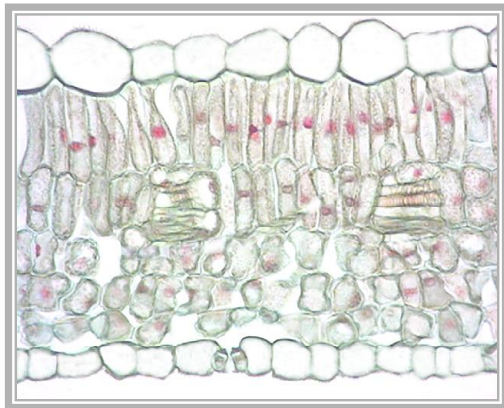


**LEAF
PHOTOSYNTHETIC
TISSUE**

**PARENCHYMA TISSUE
MESOPHYLL**

TYPICAL TRACHEOPHYTE

LEAF



PT

+

MESOPHYLL

CHLOROPLASTS

PHOTOSYNTHESIS

LEAF

C.S.





**MESOPHYLL
PHOTOSYNTHETIC
PARENCHYMA
TISSUE**

CHLOROPLASTS

PHOTOSYNTHESIS

LEAF

C.S.



TRACHEOPHYTE GROUND TISSUES

+

P

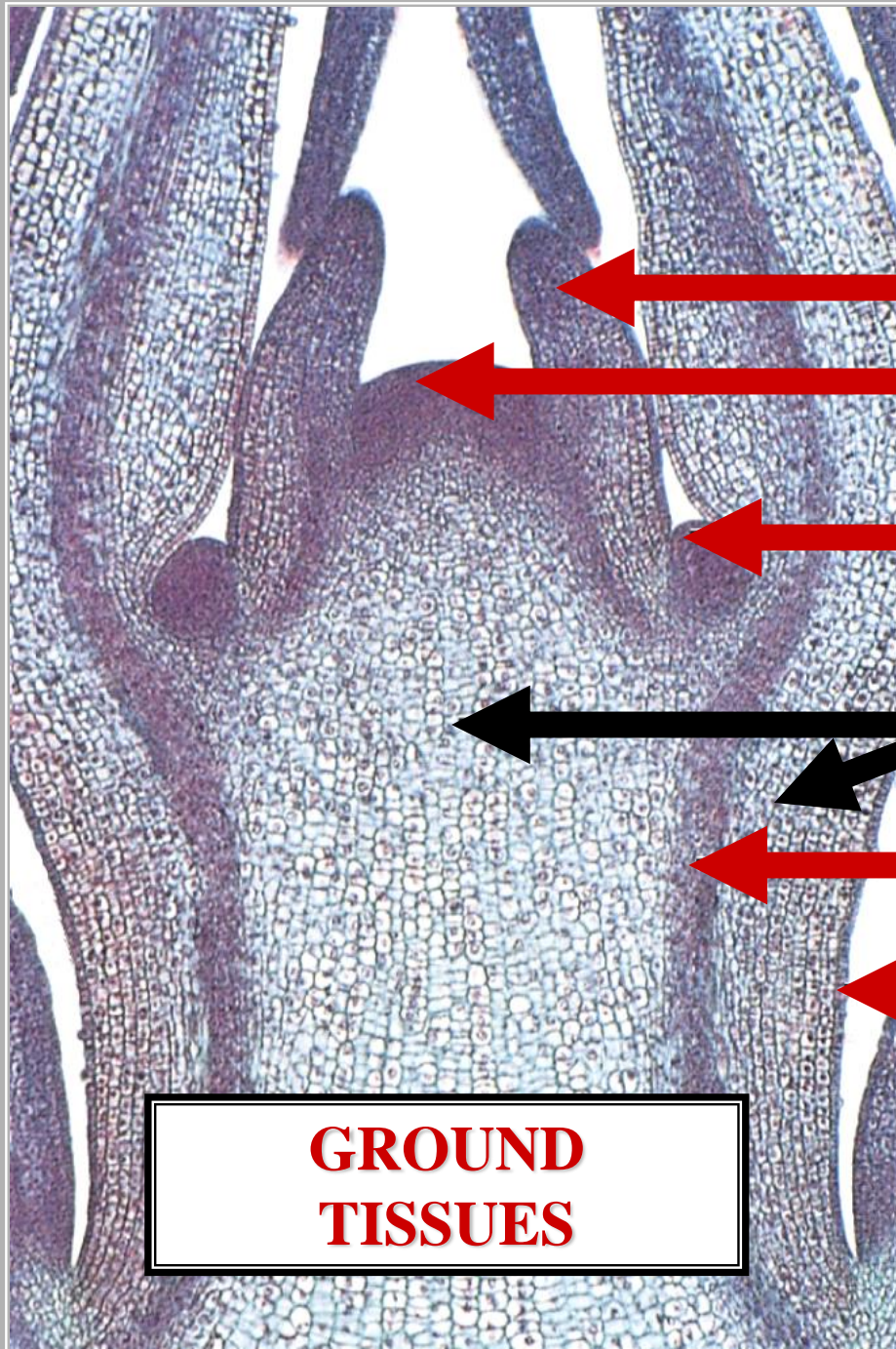
APICAL
MERISTEM

GROUND TISSUE

GROUND
TISSUES

STEM

L.S.



TRACHEOPHYTE GROUND TISSUES

^

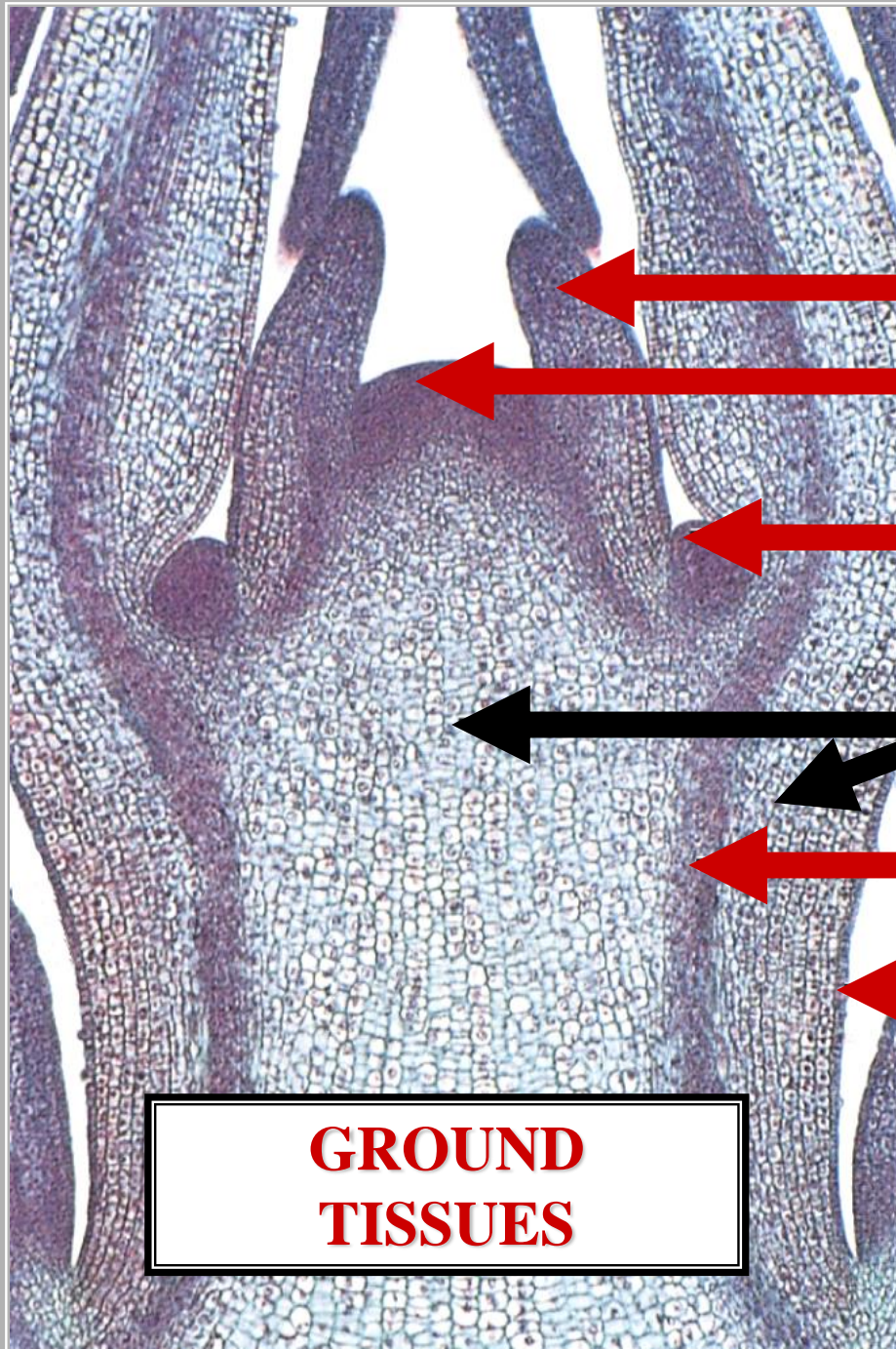
APICAL
MERISTEM

PARENCHYMA TISSUE

GROUND
TISSUES

STEM

L.S.



COLLENCHYMA TISSUE

COLLENCHYMA CELLS

COLLENCHYMA CELL

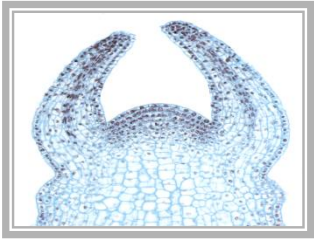
COLLENCHYMA CELL



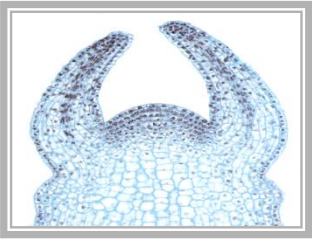
**PARENCHYMA
DERIVED**

**COLLENCHYMA
CELL**

STEM MERISTEM



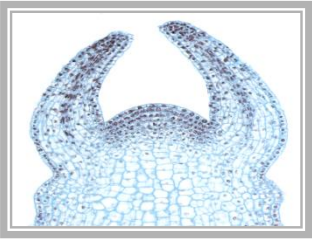
STEM MERISTEM



CELL INITIAL

PARENCHYMA
BASIC
PLANT CELL

STEM MERISTEM

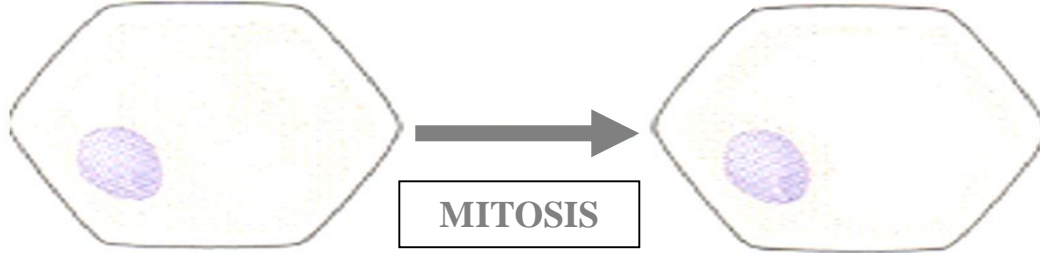
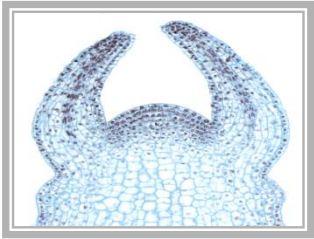


CELL INITIAL

PARENCHYMA CELL

**PARENCHYMA
BASIC
PLANT CELL**

STEM MERISTEM



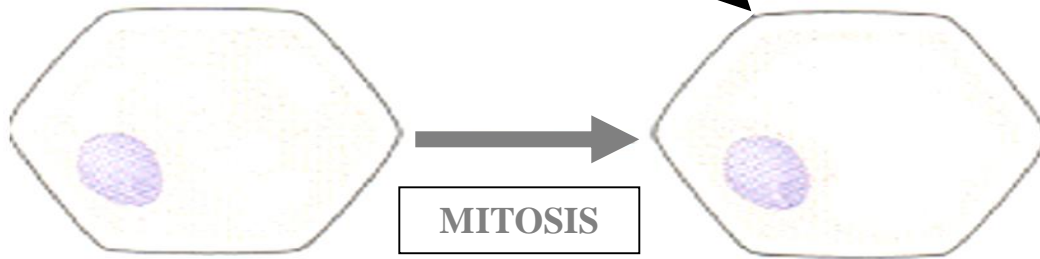
CELL INITIAL

PARENCHYMA CELL

PARENCHYMA
BASIC
PLANT CELL

**STEM
MERISTEM**

DERIVATIVE CELL



MITOSIS

CELL INITIAL

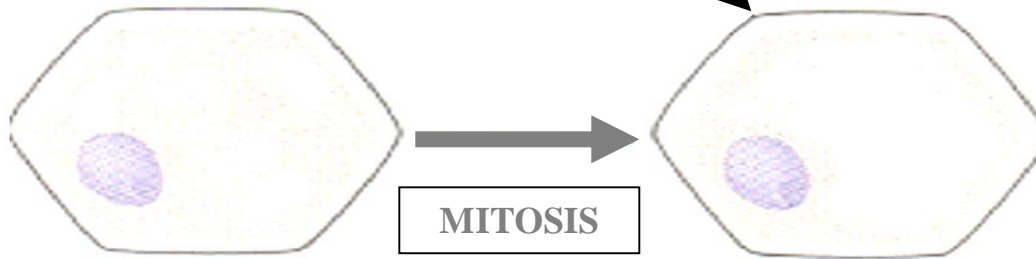
PARENCHYMA CELL

**PARENCHYMA
BASIC
PLANT CELL**

STEM MERISTEM

DERIVATIVE CELL

PARENCHYMA CELL



MITOSIS

CELL INITIAL

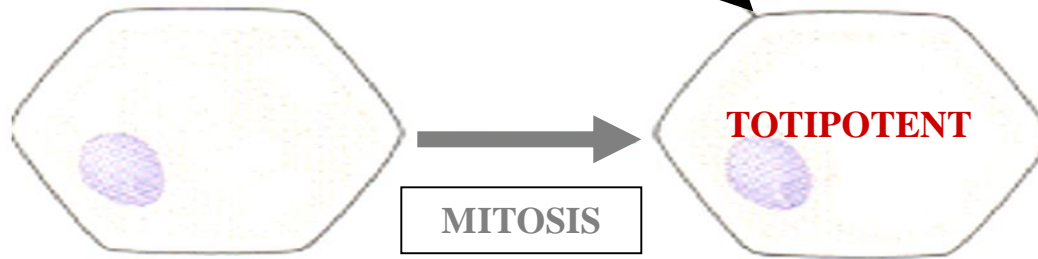
PARENCHYMA CELL

PARENCHYMA BASIC PLANT CELL

STEM MERISTEM

DERIVATIVE CELL

PARENCHYMA CELL



MERISTEM DERIVATIVE
CAN POTENTIALLY
DIFFERENTIATE
INTO ANY PLANT CELL TYPE

CELL INITIAL

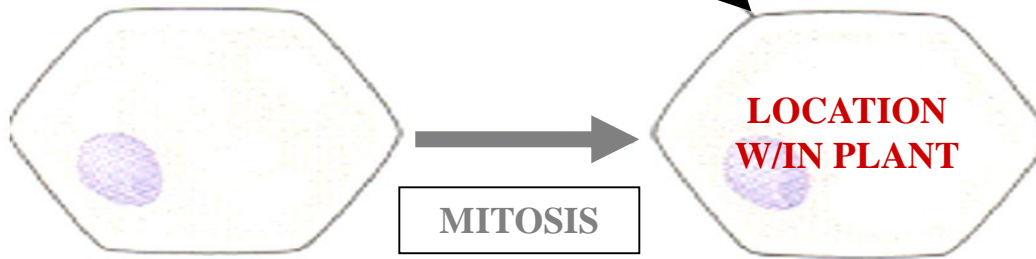
PARENCHYMA CELL

PARENCHYMA
BASIC
PLANT CELL

STEM MERISTEM

DERIVATIVE CELL

PARENCHYMA CELL



MITOSIS

LOCATION
W/IN PLANT

MERISTEM DERIVATIVE
CAN POTENTIALLY
DIFFERENTIATE
INTO ANY PLANT CELL TYPE

CELL INITIAL

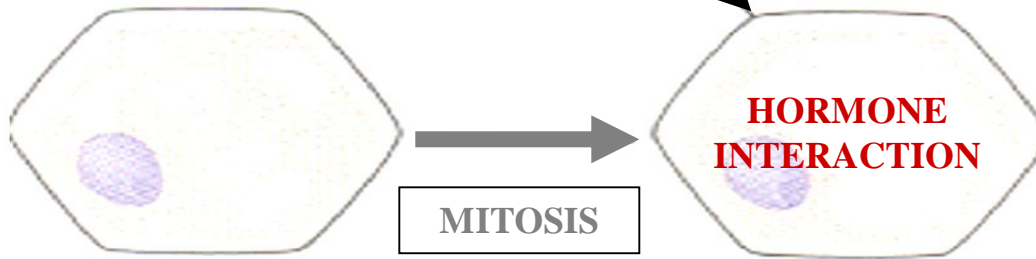
PARENCHYMA CELL

PARENCHYMA
BASIC
PLANT CELL

STEM MERISTEM

DERIVATIVE CELL

PARENCHYMA CELL



MITOSIS

MERISTEM DERIVATIVE
CAN POTENTIALLY
DIFFERENTIATE
INTO ANY PLANT CELL TYPE

CELL INITIAL

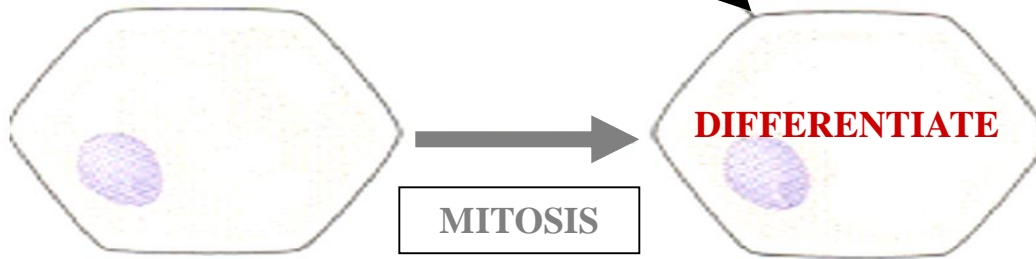
PARENCHYMA CELL

PARENCHYMA
BASIC
PLANT CELL

STEM MERISTEM

DERIVATIVE CELL

PARENCHYMA CELL



MITOSIS

DIFFERENTIATE

MERISTEM DERIVATIVE
CAN POTENTIALLY
DIFFERENTIATE
INTO ANY PLANT CELL TYPE

CELL INITIAL

PARENCHYMA CELL

PARENCHYMA
BASIC
PLANT CELL

**STEM
MERISTEM**

COLLENCHYMA CELL

DERIVATIVE CELL

PARENCHYMA CELL

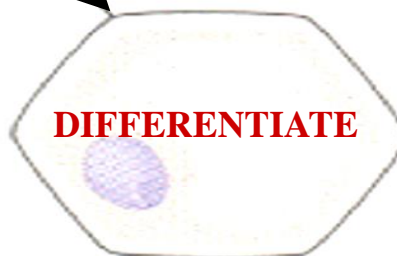
DIFFERENTIATE

MITOSIS

CELL INITIAL

PARENCHYMA CELL

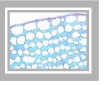
**PARENCHYMA
BASIC
PLANT CELL**





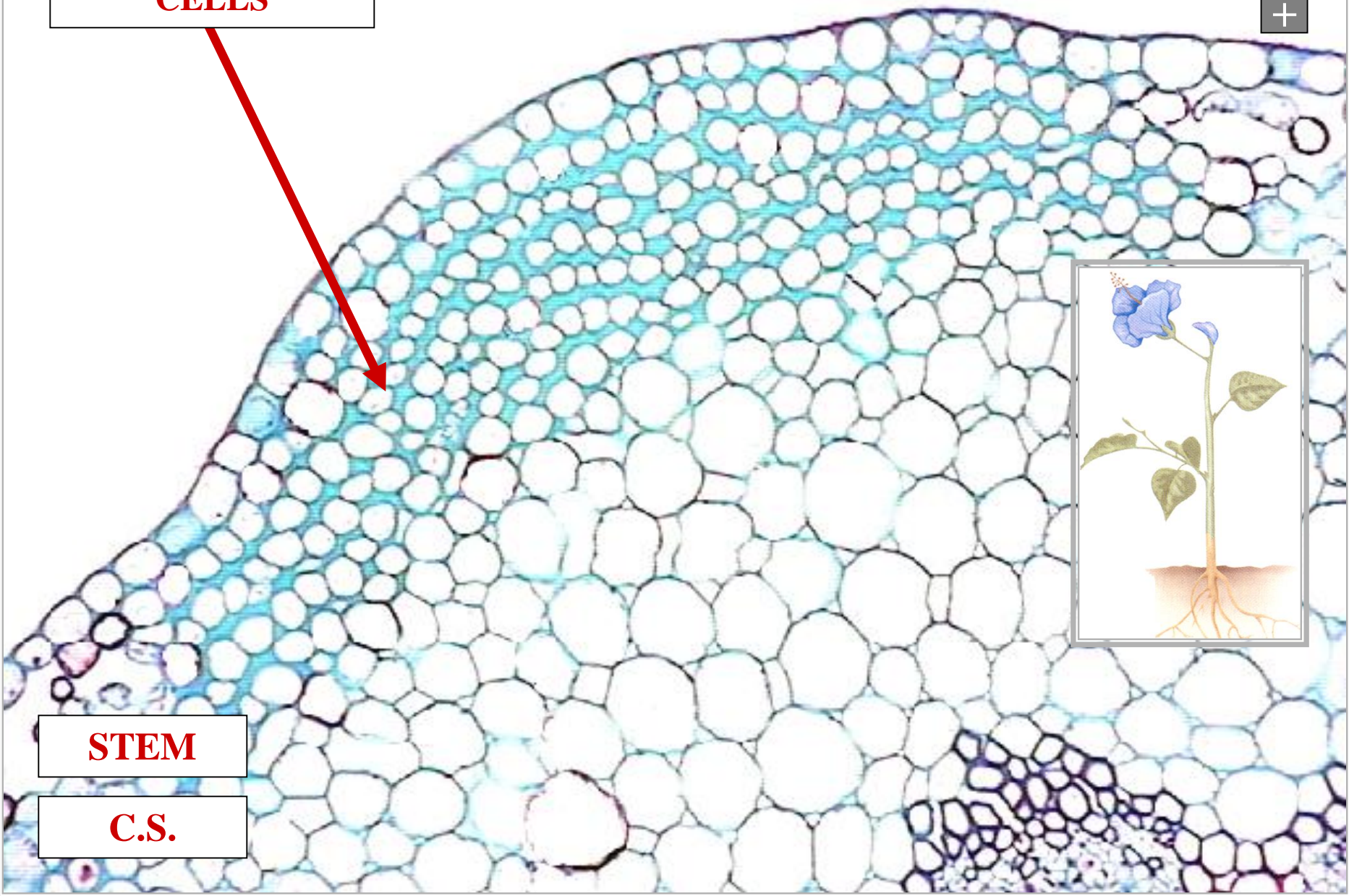
COLLENCHYMA CELL CHARACTERS

**COLLENCHYMA
CELLS**



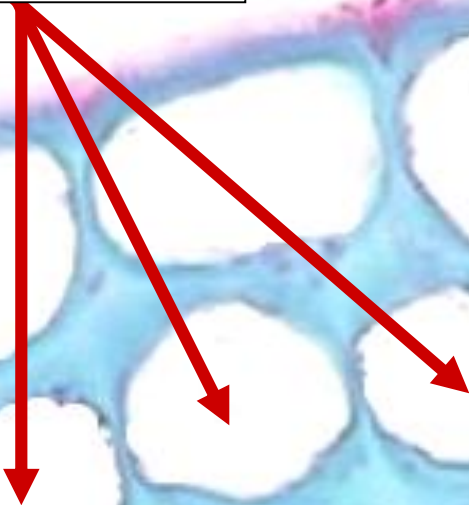
STEM

C.S.



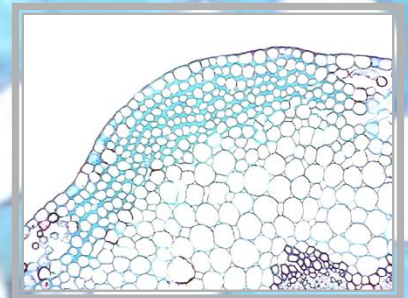
L

**COLLENCHYMA
CELLS**

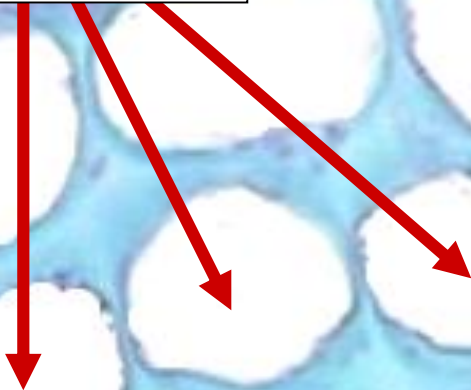


STEM

C.S.

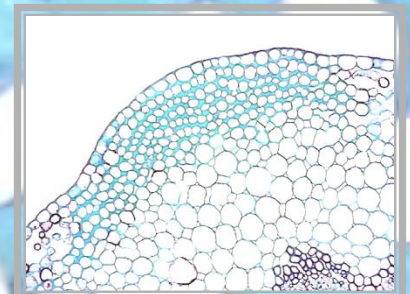
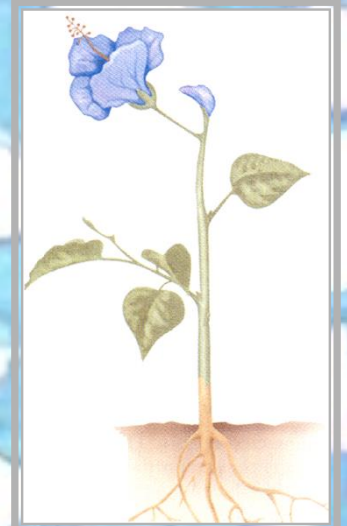


**COLLENCHYMA
LIVING
FUNCTIONAL
CELL**

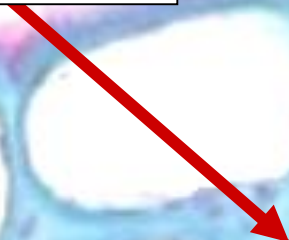


STEM

C.S.

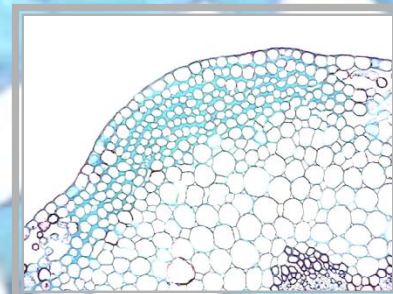
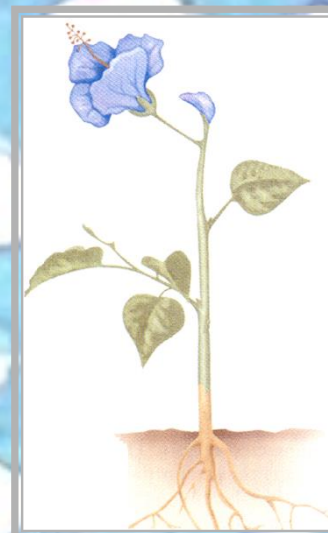


COLLENCHYMA
~1 CELL WALL
ONLY



STEM

C.S.

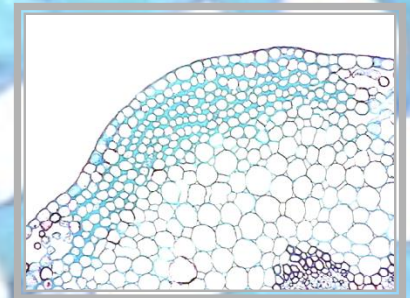
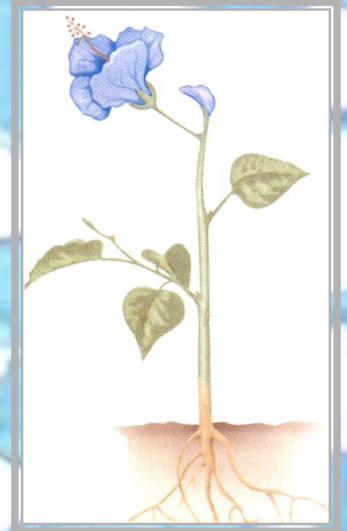


COLLENCHYMA
~1 CELL WALL
THICK

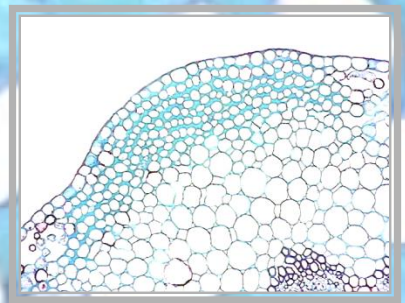
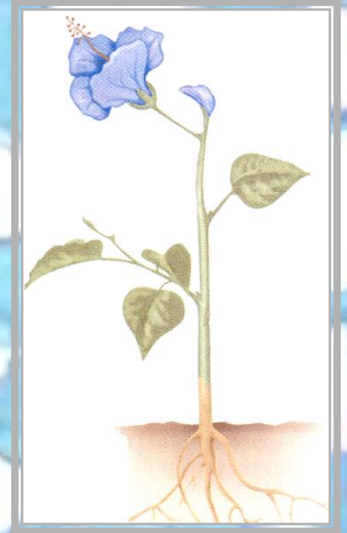


STEM

C.S.



COLLENCHYMA
~1 CELL WALL
HIGH PECTIN
CONTENT



STEM

C.S.

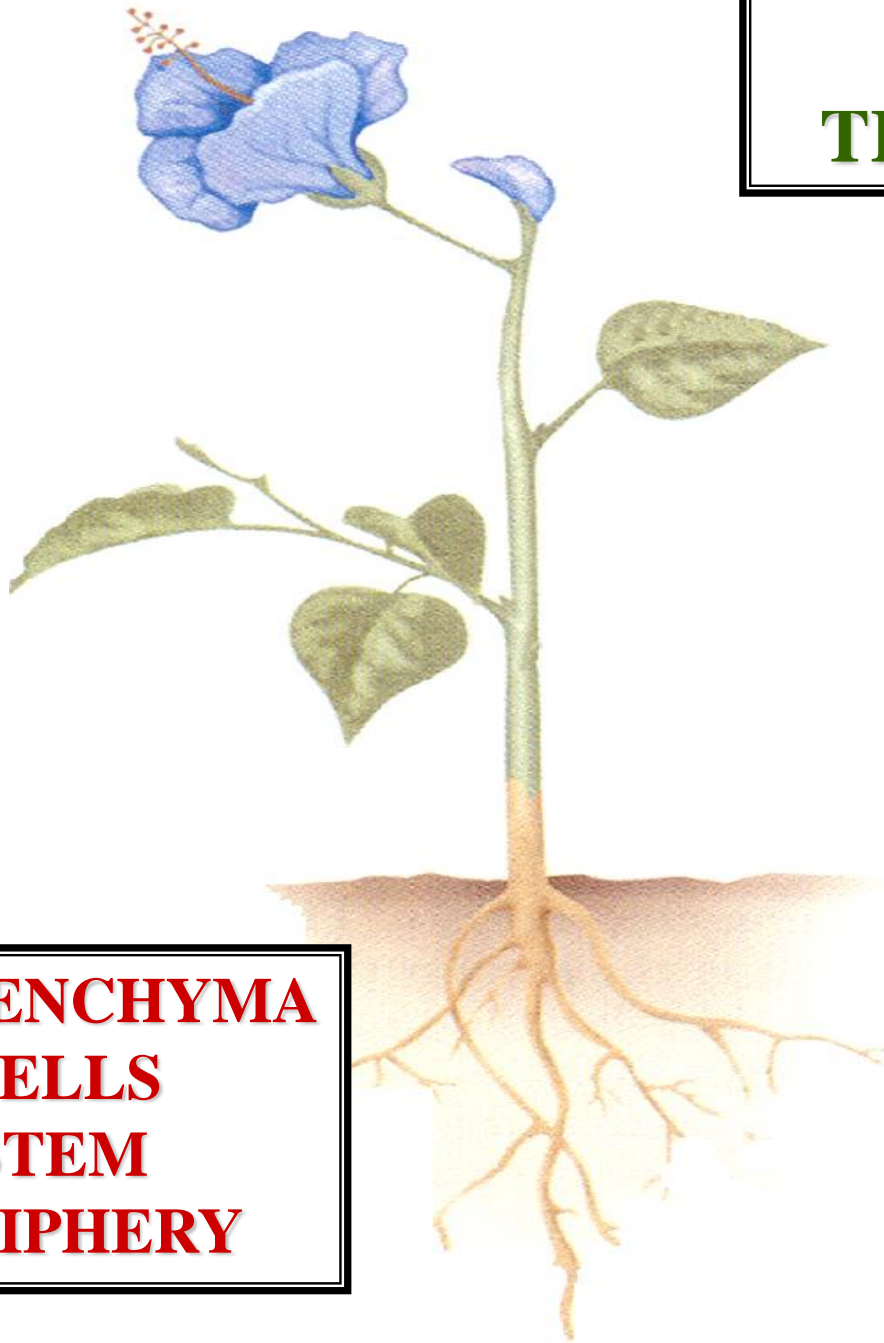


COLLENCHYMA CELL DISTRIBUTION

TYPICAL TRACHEOPHYTE

S

COLLENCHYMA
CELLS
STEM
PERIPHERY

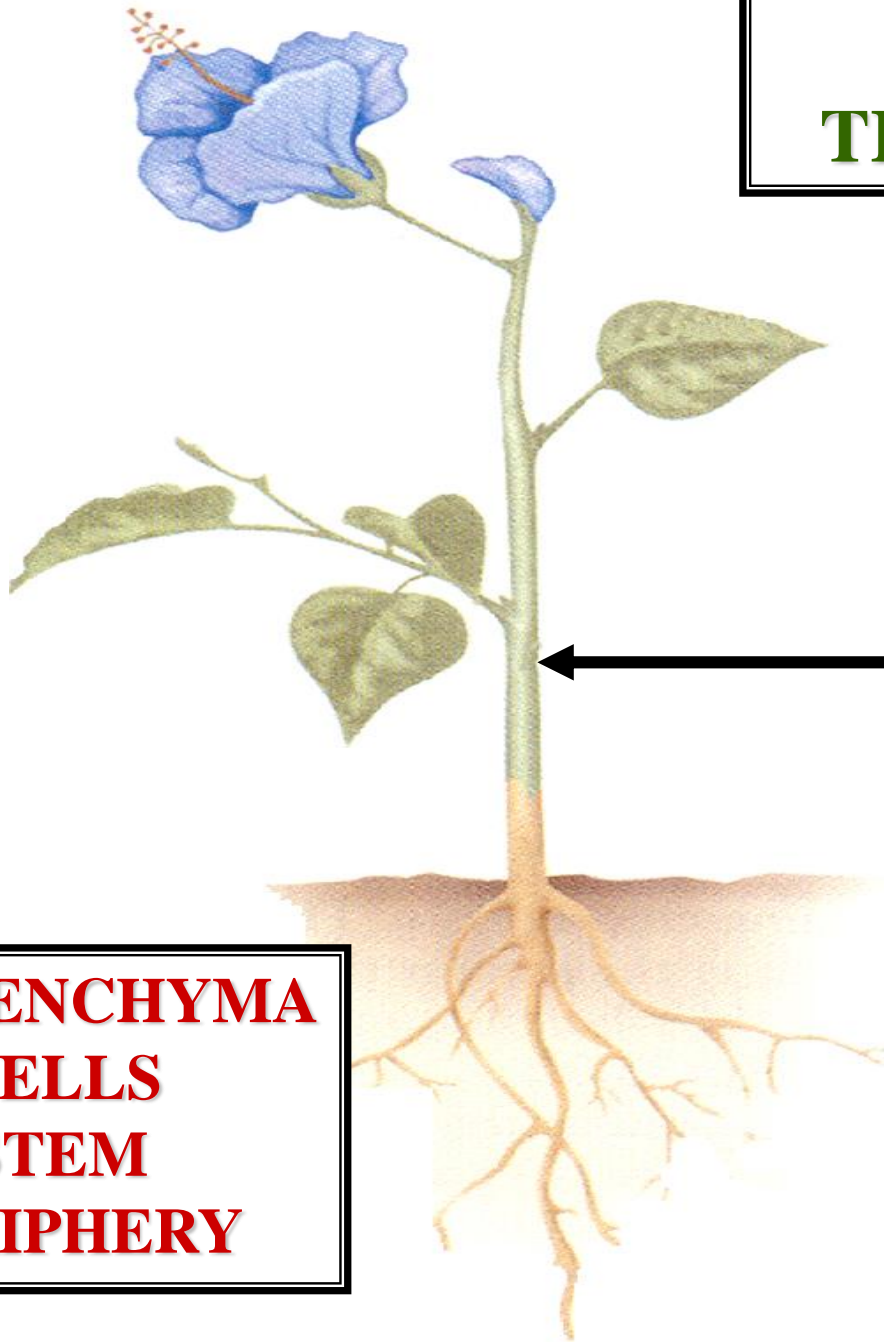


TYPICAL TRACHEOPHYTE



STEM

**COLLENCHYMA
CELLS
STEM
PERIPHERY**



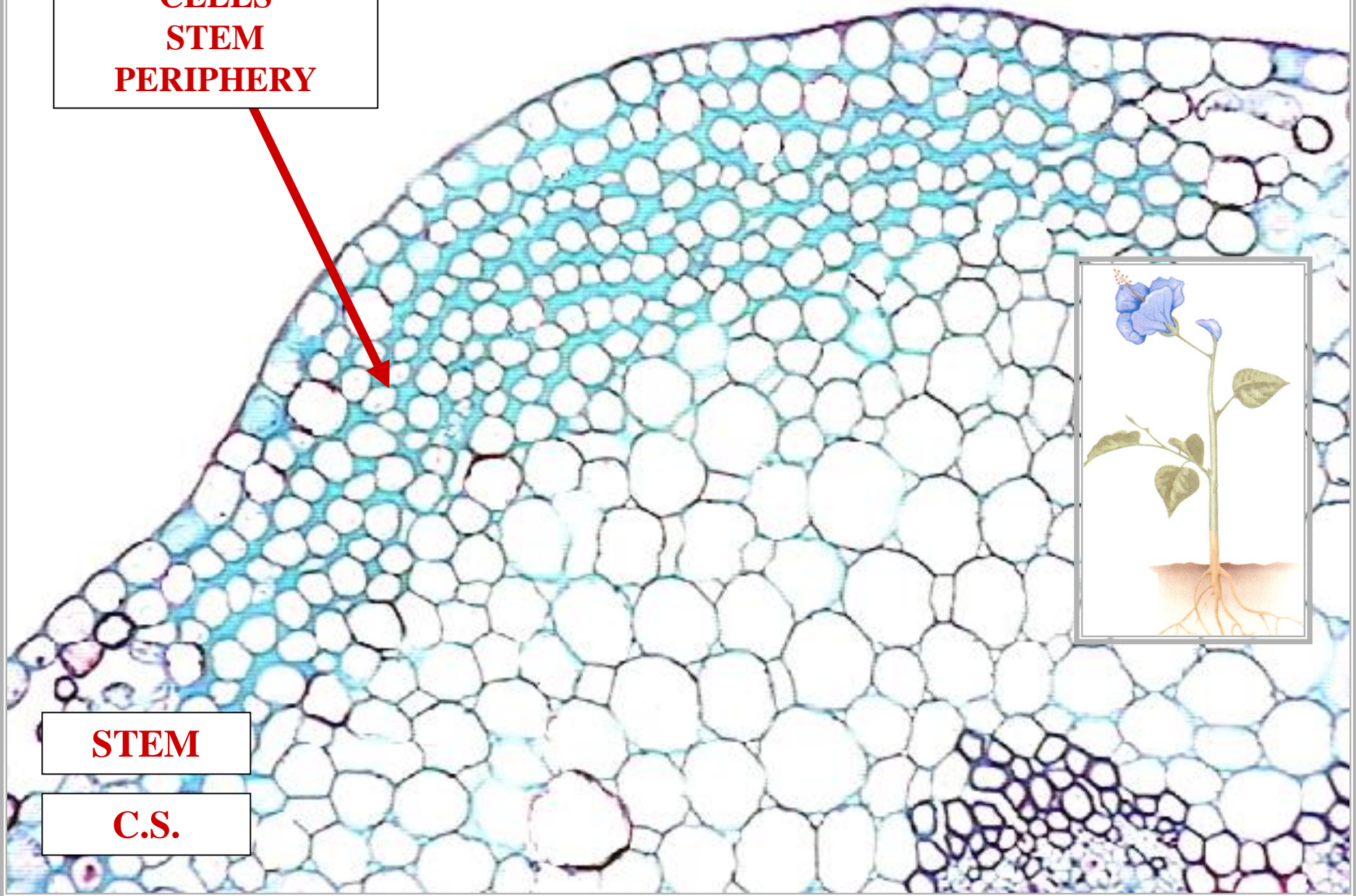


**COLLENCHYMA
CELLS
STEM
PERIPHERY**



STEM

C.S.





COLLENCHYMA CELL FUNCTION

**COLLENCHYMA
CELLS
STEM
PERIPHERY**



STEM

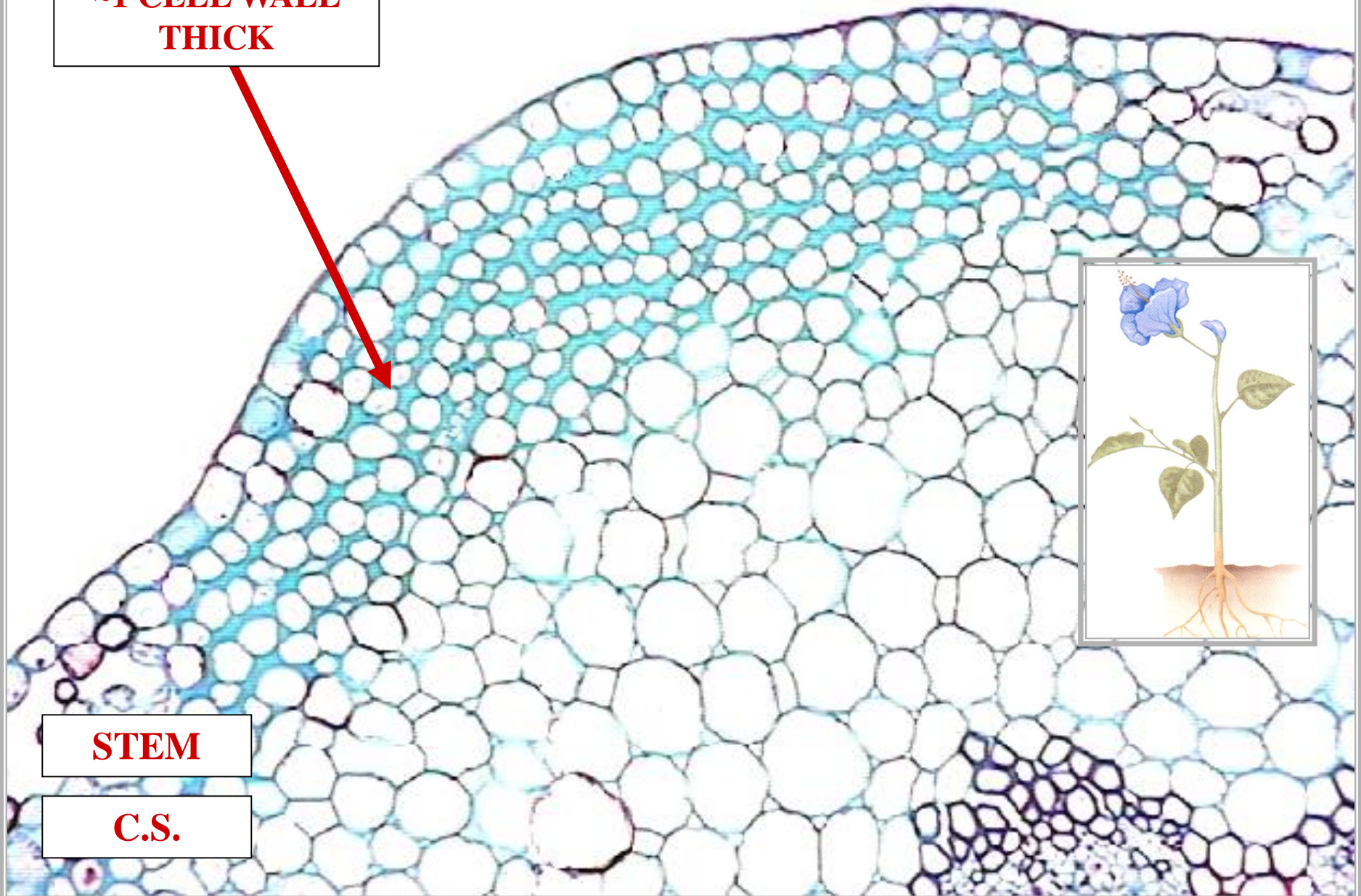
C.S.

COLLENCHYMA
~1 CELL WALL
THICK



STEM

C.S.



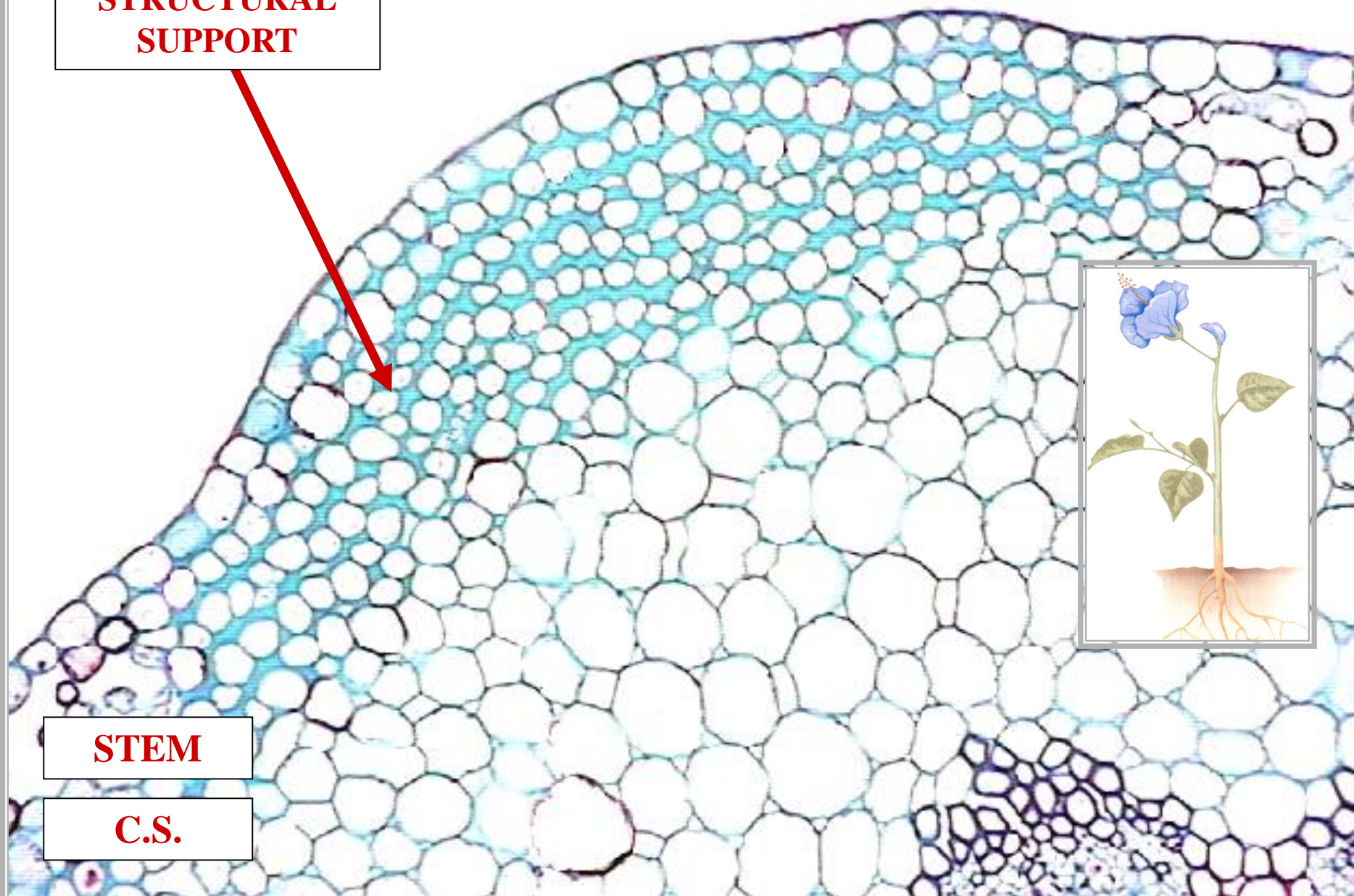


**STEM
STRUCTURAL
SUPPORT**



STEM

C.S.



COLLENCHYMA TISSUE

COLLENCHYMA TISSUE



COLLENCHYMA TISSUE

COLLENCHYMA CELL AGGREGATE

COLLENCHYMA TISSUE

COLLENCHYMA TISSUE TYPES

COLLENCHYMA TISSUE TYPES

LAMELLAR COLLENCHYMA

**COLLENCHYMA TISSUE
TYPES**