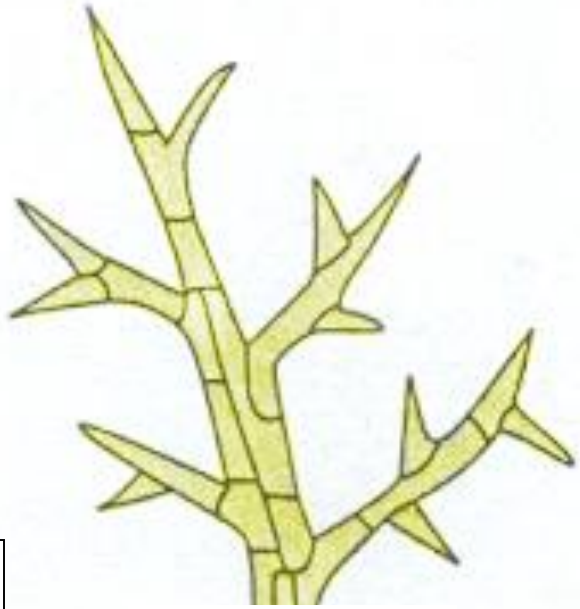
MULTICELLULAR TRICHOMES



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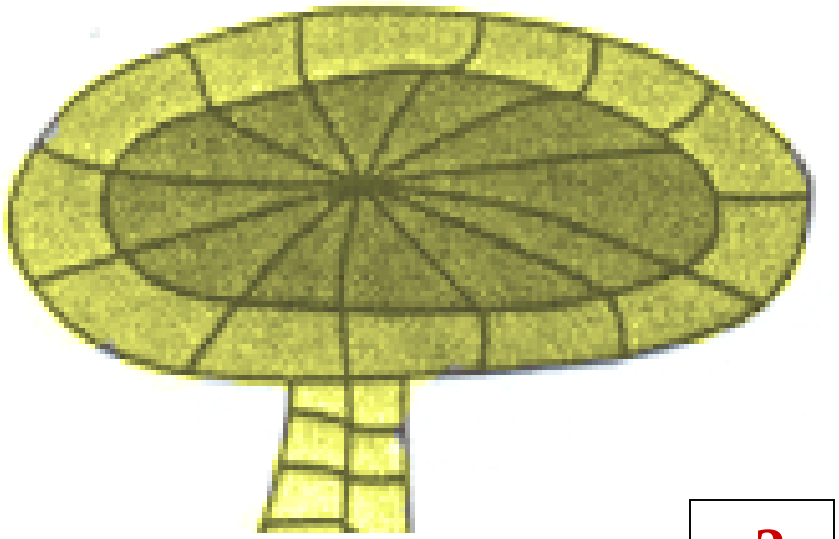
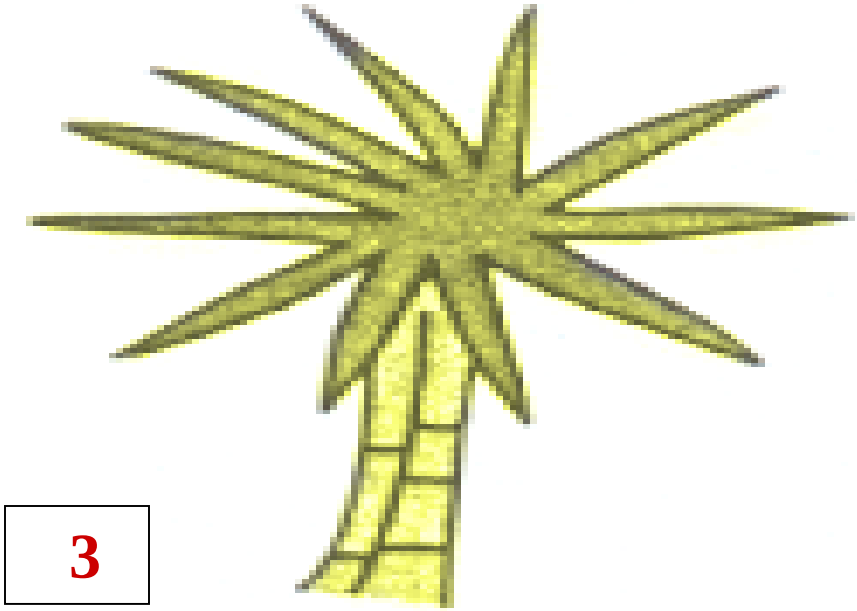
DENDROID



PELTATE

2



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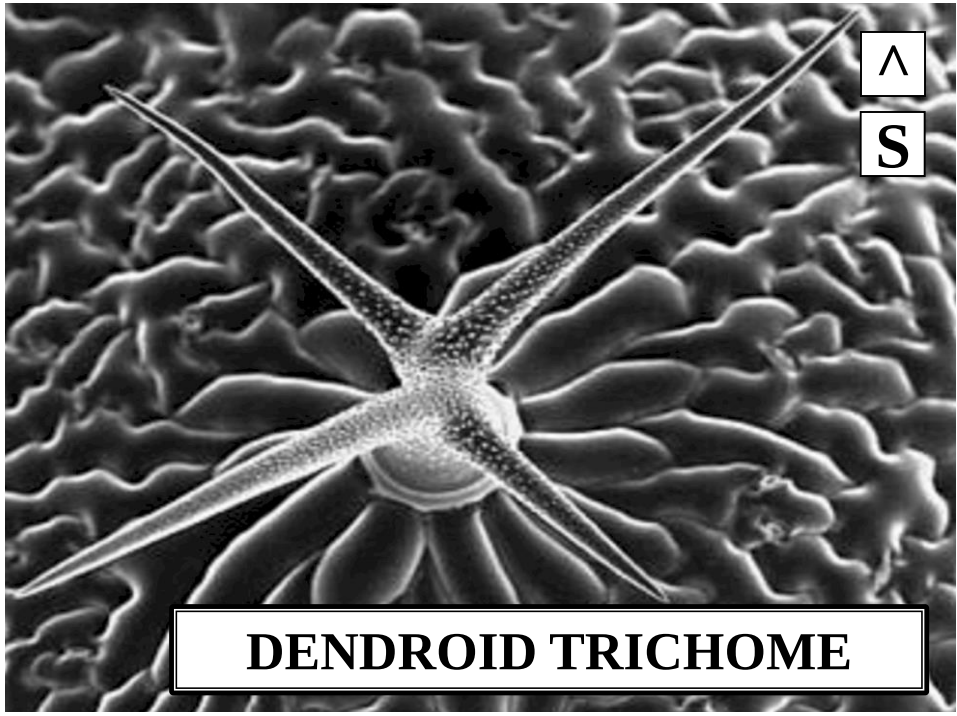
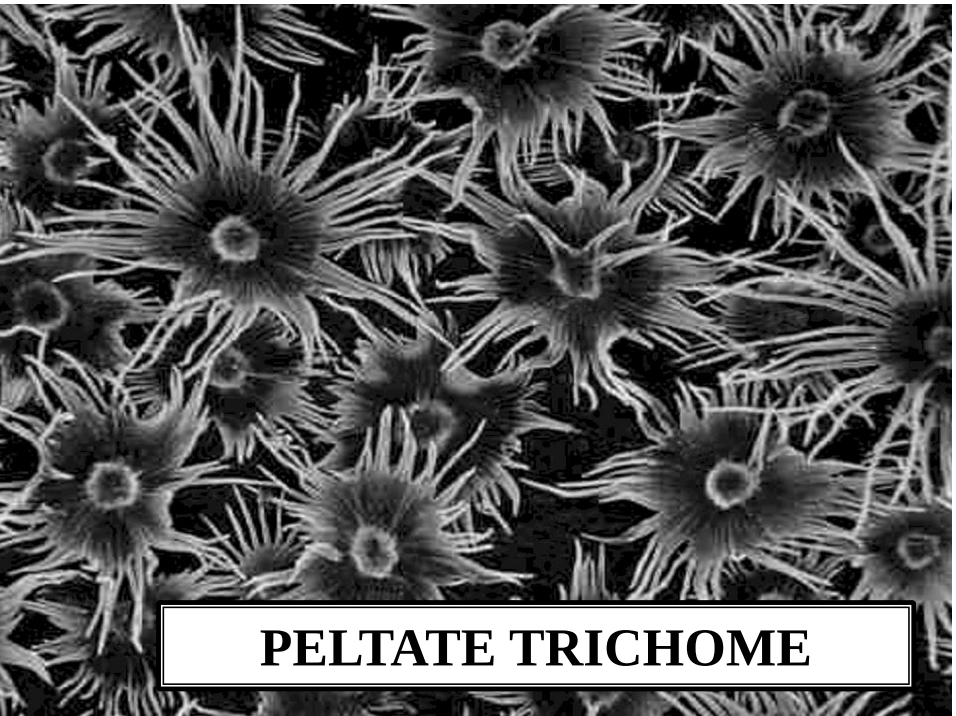
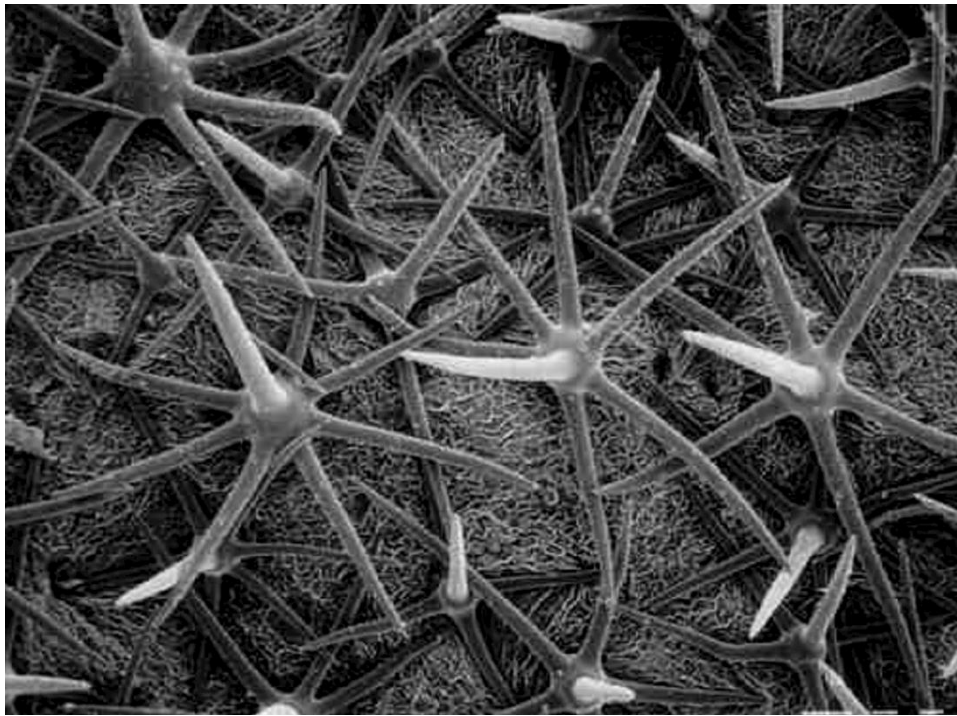
MULTICELLULAR TRICHOMES







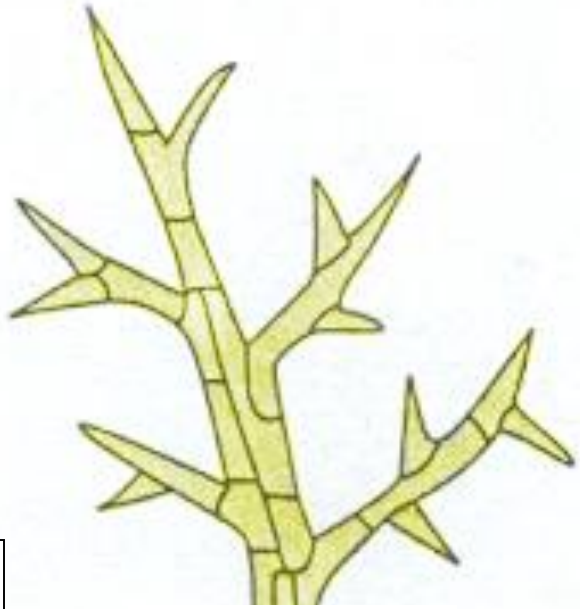
STELLATE

TRICHOME
MULTICELLULAR
STELLATE

STAR-LIKE
MULTICELLULAR TRICHOME

TRICHOME
MULTICELLULAR
STELLATE

MULTICELLULAR TRICHOMES



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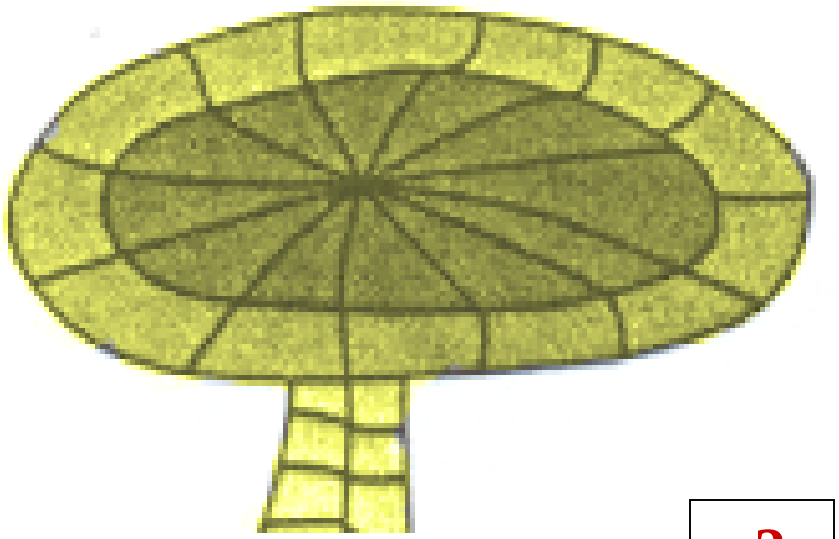
DENDROID



PELTATE

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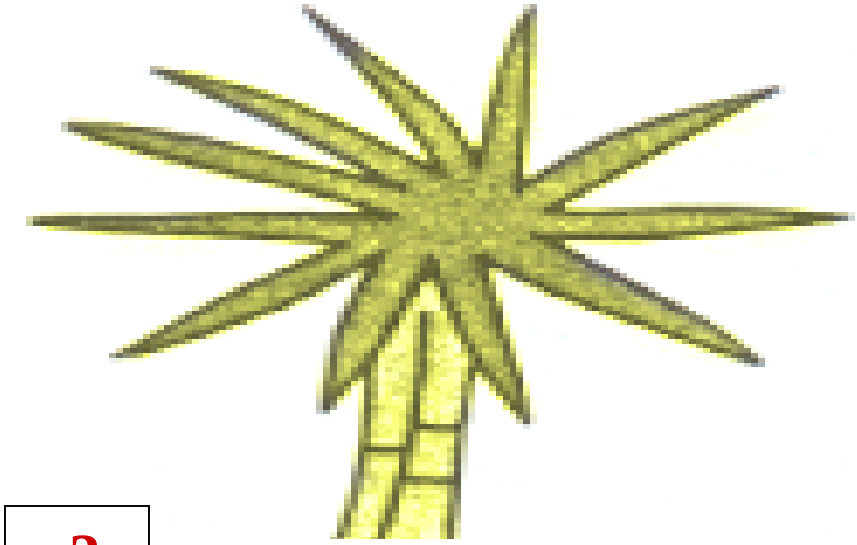

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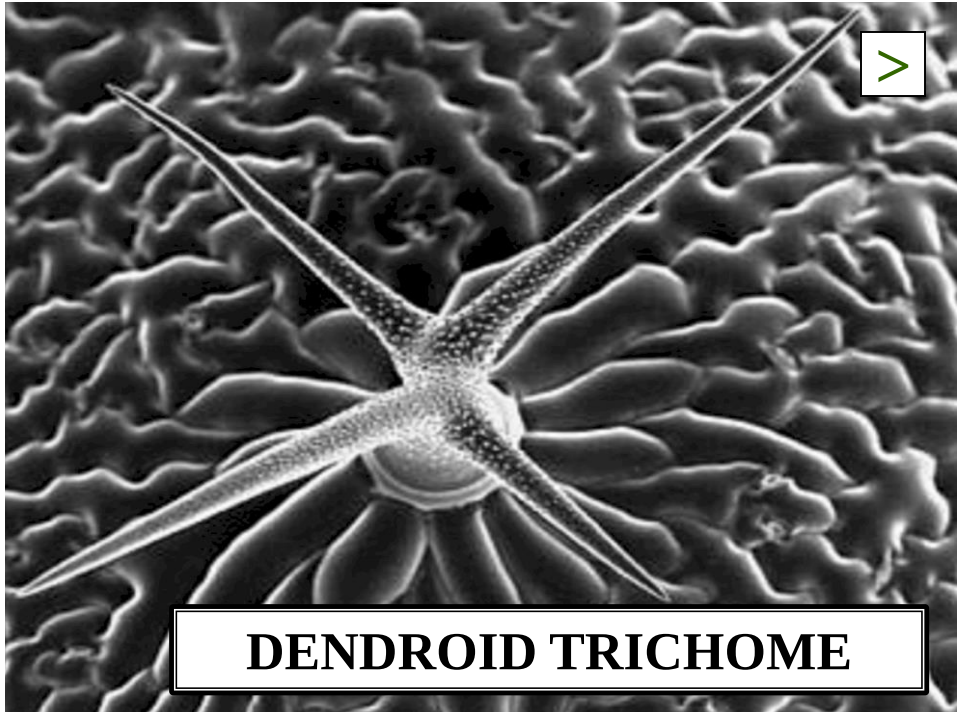
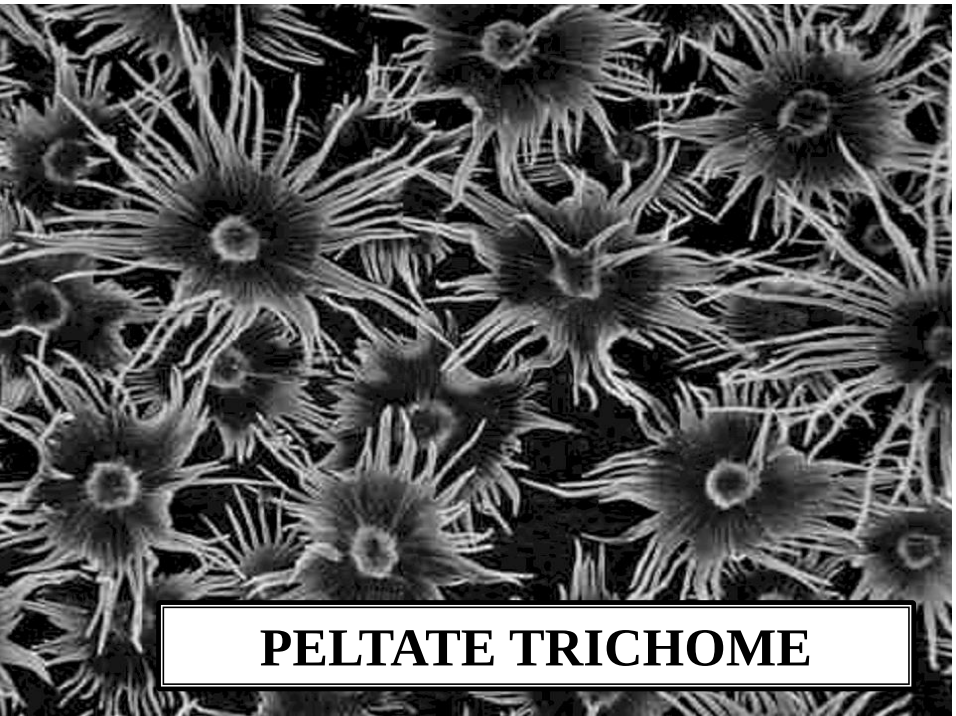
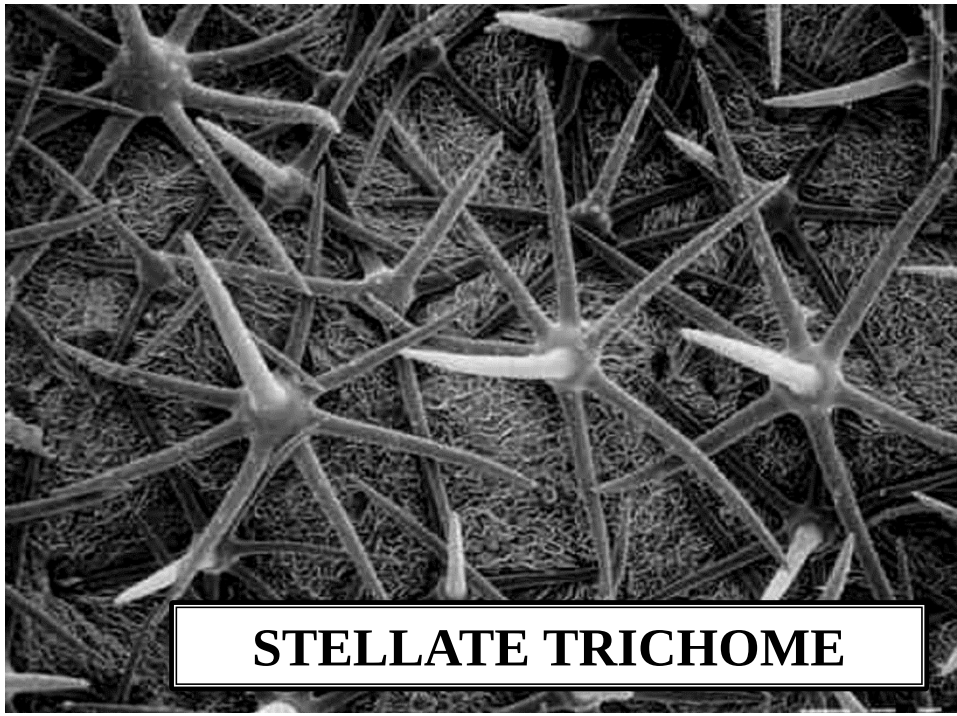
STELLATE

MULTICELLULAR TRICHOMES








TRICHOMES
TAXONOMICALLY
USEFUL WITH
ANGIOSPERMS

TRICHOME VESTITURE

VESTITURE

VESTITURE

TRICHOME DISTRIBUTION PATTERN

VESTITURE

TRICHOME VESTITURE TYPES

TRICHOME VESTITURE TYPES

HIRSUTE

TRICHOME VESTITURE TYPES

TRICHOME VESTITURE TYPES

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TRICHOME VESTITURE TYPES

TRICHOME VESTITURE TYPES

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STRIGOSE

TRICHOME VESTITURE TYPES

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TRICHOME VESTITURE TYPES

HIRSUTE
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STRIGOSE
TOMENTOSE

TRICHOME VESTITURE TYPES

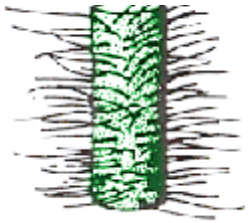
HIRSUTE

VESTITURE TYPES
HIRSUTE

LONG NON-PLIABLE TRICHOMES

VESTITURE TYPES
HIRSUTE

HIRSUTE



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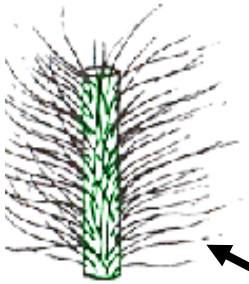

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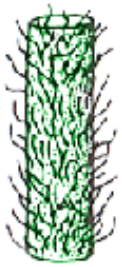
PLANT TRICHOME



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4

ANGIOSPERM VESTITURE TYPES


LONG
NON-PLIABLE
TRICHOMES
HIRSUTE
1


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H

HISPID

VESTITURE TYPES
HISPID

LONG PLIABLE TRICHOMES

VESTITURE TYPES
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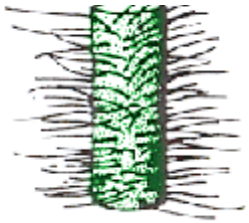
HIRSUTE



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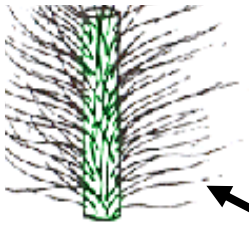
HISPID



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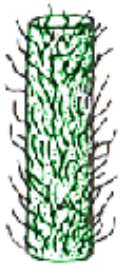
PLANT TRICHOME



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4

ANGIOSPERM VESTITURE TYPES


LONG
NON-PLIABLE
TRICHOMES
HIRSUTE
1


LONG
PLIABLE
TRICHOMES
HISPID
2

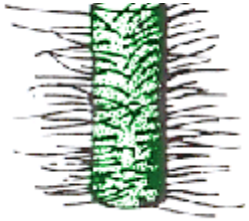
STRIGOSE

VESTITURE TYPES
STRIGOSE

SHORT PLIABLE TRICHOMES

VESTITURE TYPES
STRIGOSE

HIRSUTE



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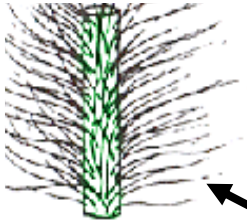
HISPID



2

PLANT TRICHOME

STRIGOSE

3

4

ANGIOSPERM VESTITURE TYPES


LONG
NON-PLIABLE
TRICHOMES
HIRSUTE
1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LONG
PLIABLE
TRICHOMES
HISPID
2


SHORT
PLIABLE
TRICHOMES
STRIGOSE
3

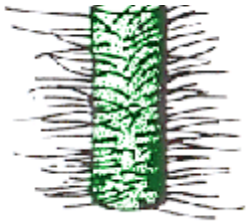
TOMENTOSE

VESTITURE TYPES
TOMENTOSE

SHORT INTERWOVEN TRICHOMES

VESTITURE TYPES
TOMENTOSE

HIRSUTE



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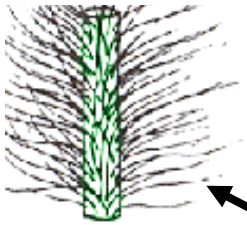

2

PLANT TRICHOME

STRIGOSE

3

TOMENTOSE

4

ANGIOSPERM VESTITURE TYPES


LONG
NON-PLIABLE
TRICHOMES
HIRSUTE
1


>
LONG
PLIABLE
TRICHOMES
HISPID
2


SHORT
PLIABLE
TRICHOMES
STRIGOSE
3


SHORT
INTERWOVEN
TRICHOMES
TOMENTOSE
4


VESTITURE
TAXONOMICALLY
USEFUL WITH
ANGIOSPERMS

TRICHOME FUNCTION

INHIBIT HERBIVORES

INHIBIT HERBIVORES


TOMENTOSE
VESTITURE
^
I

INHIBIT DESICCATION

DESERT HABITAT

I

LEAF TRICHOMES


DESERT HABITAT
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G
INHIBIT DESICCATION

GLAND SECRETION


SUNDEW


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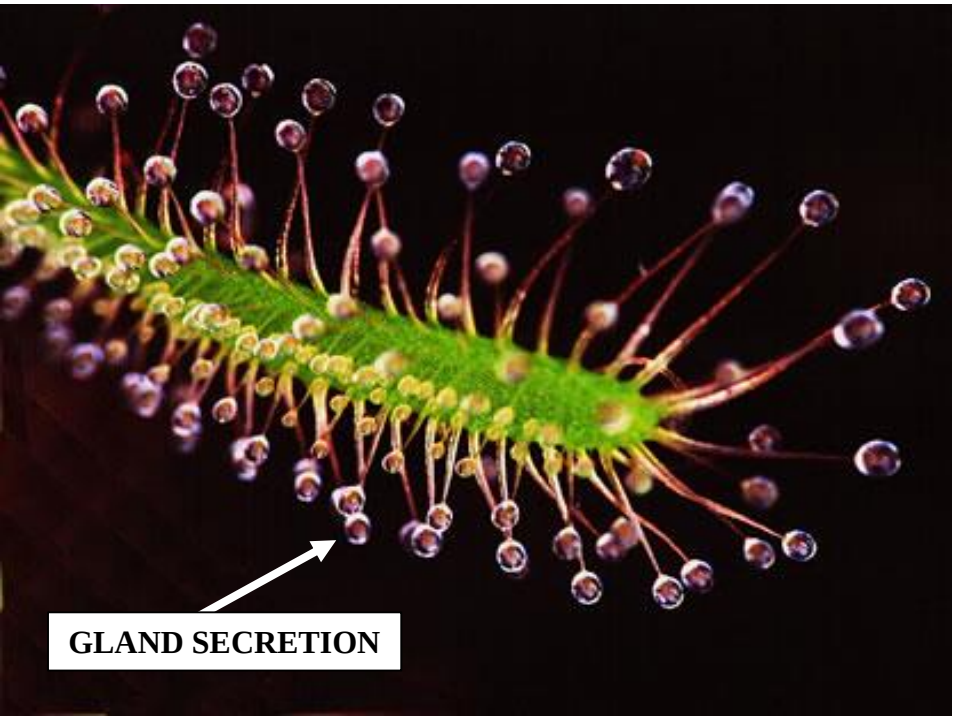
A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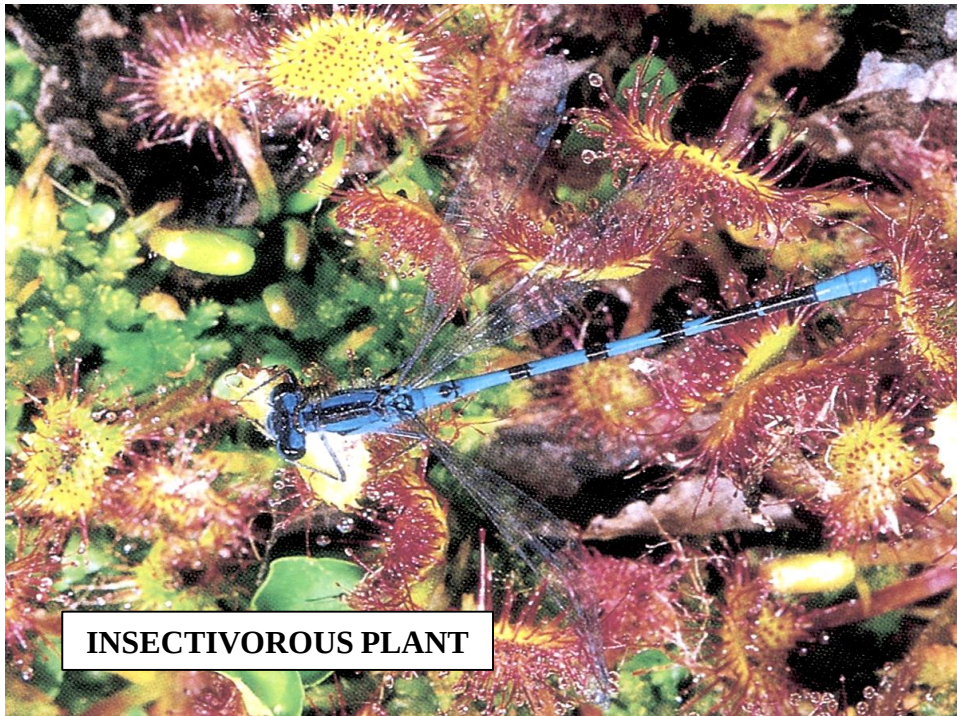
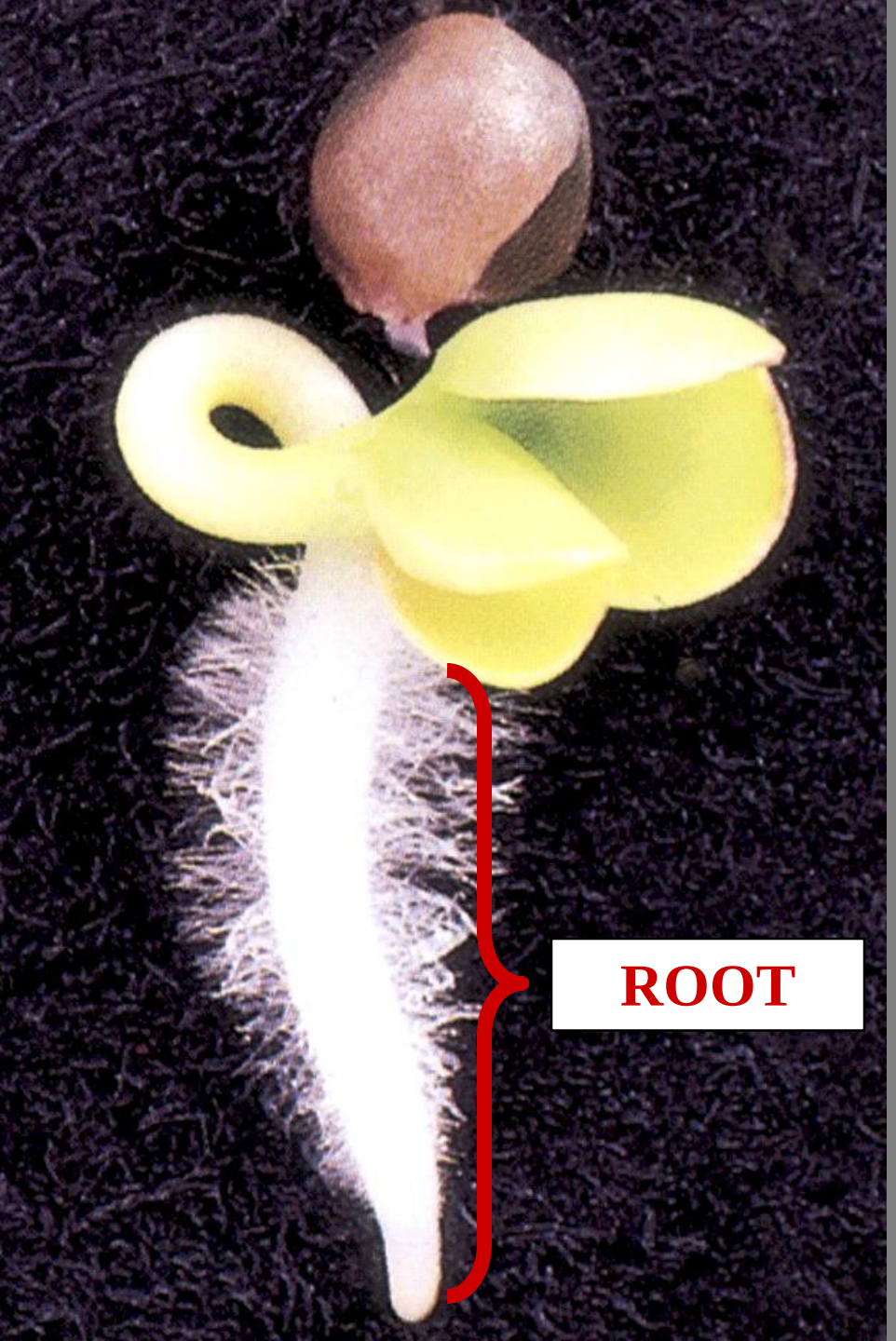

INSECTIVOROUS PLANT

ABSORPTION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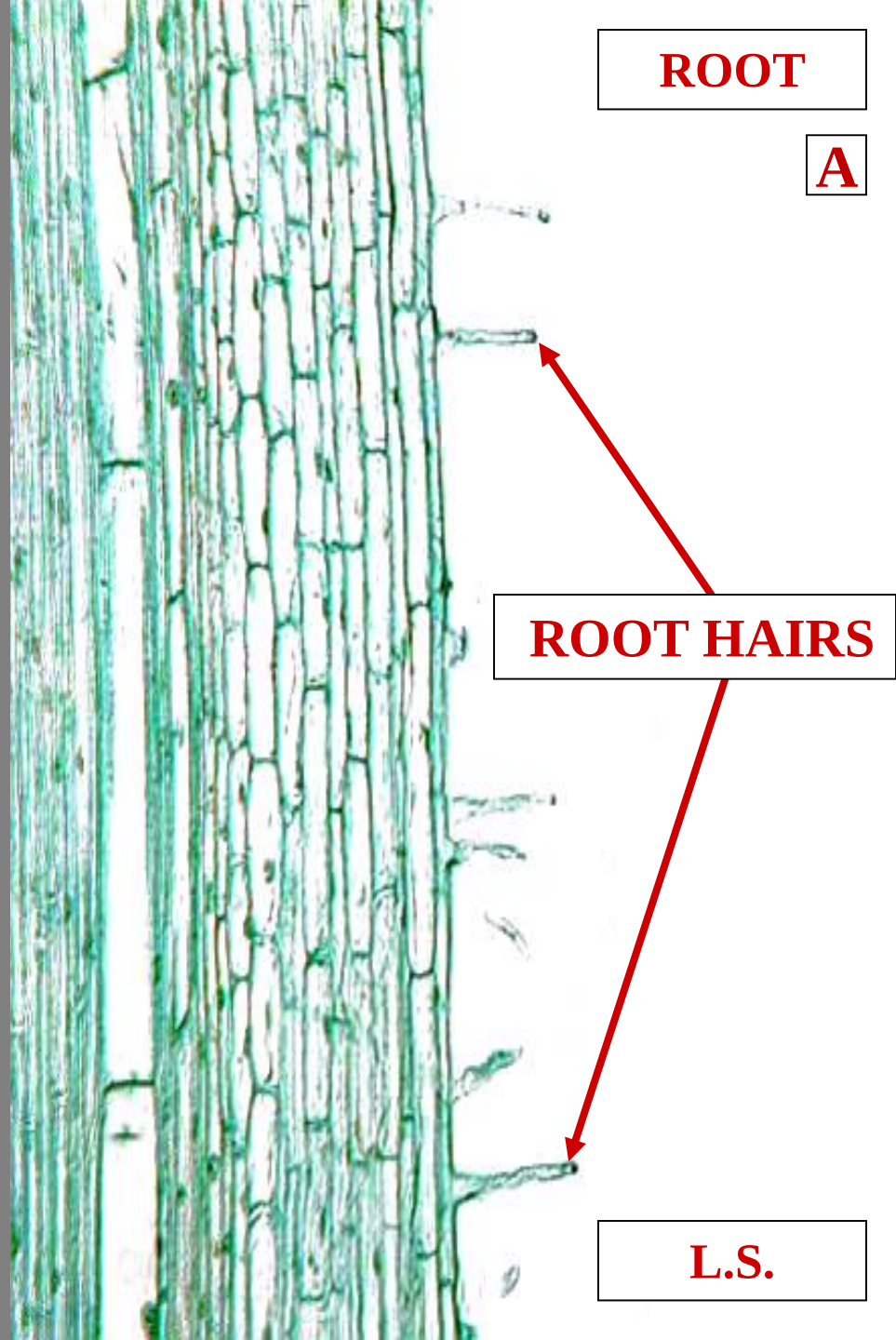
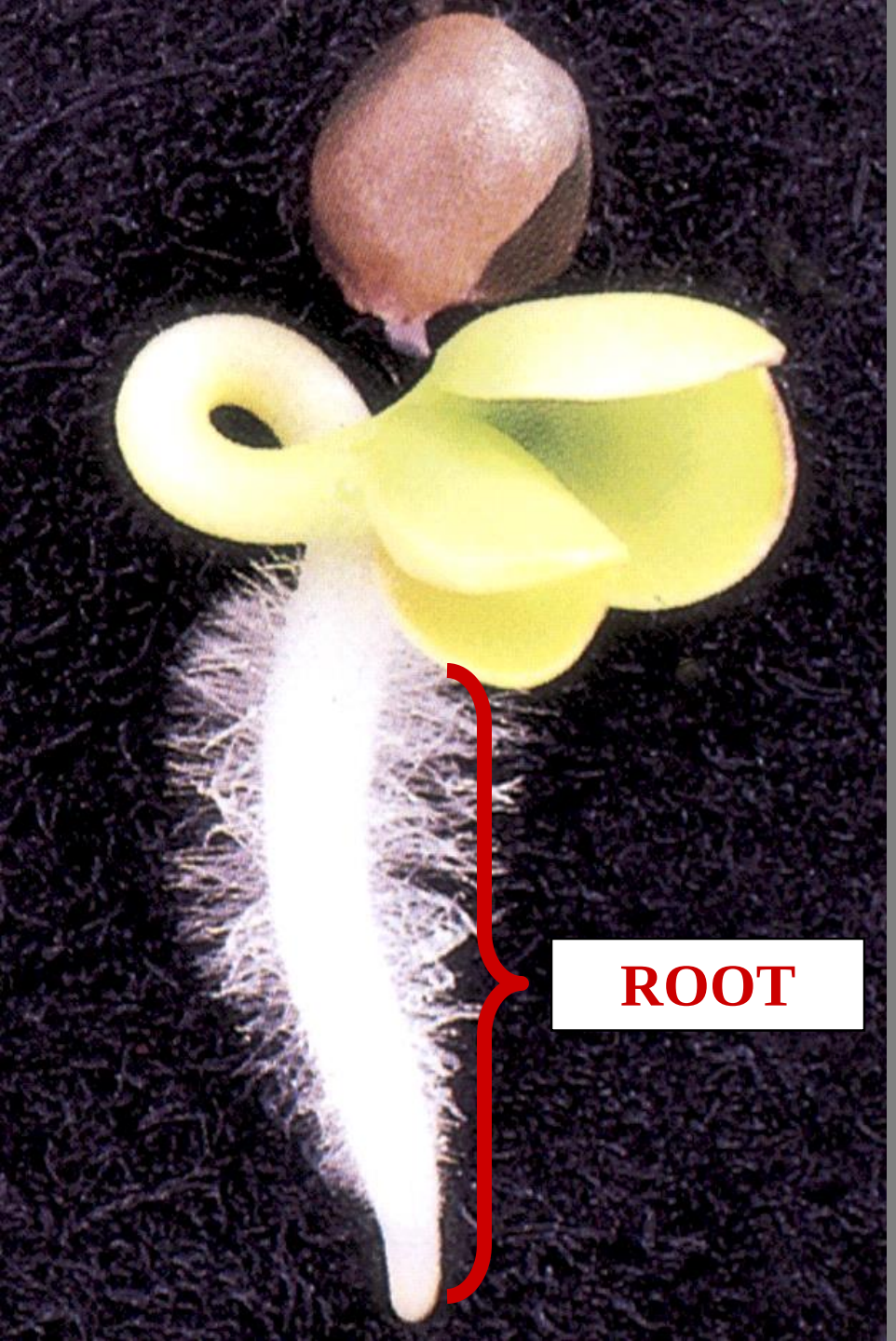

ROOT
A
ROOT HAIRS
L.S.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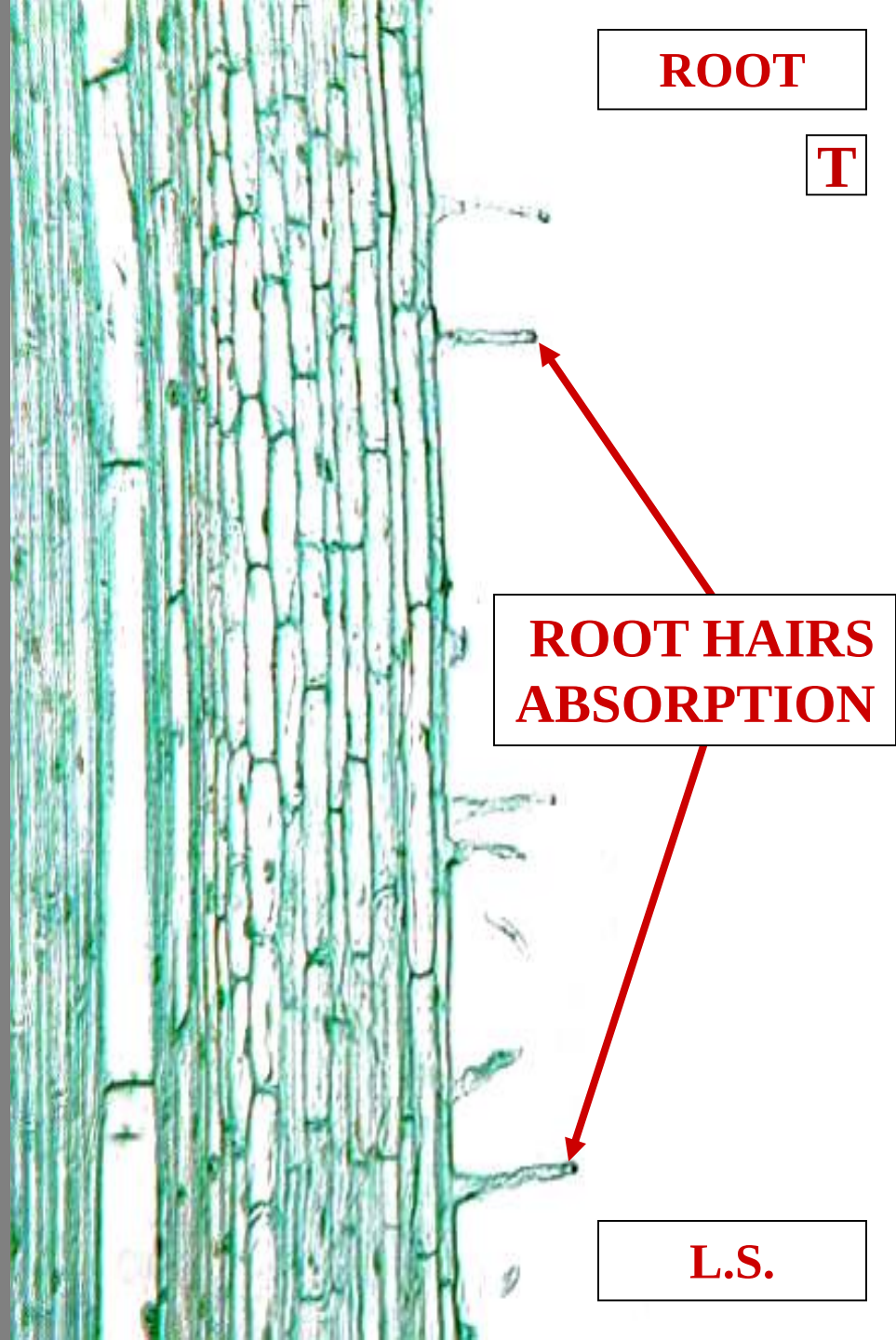
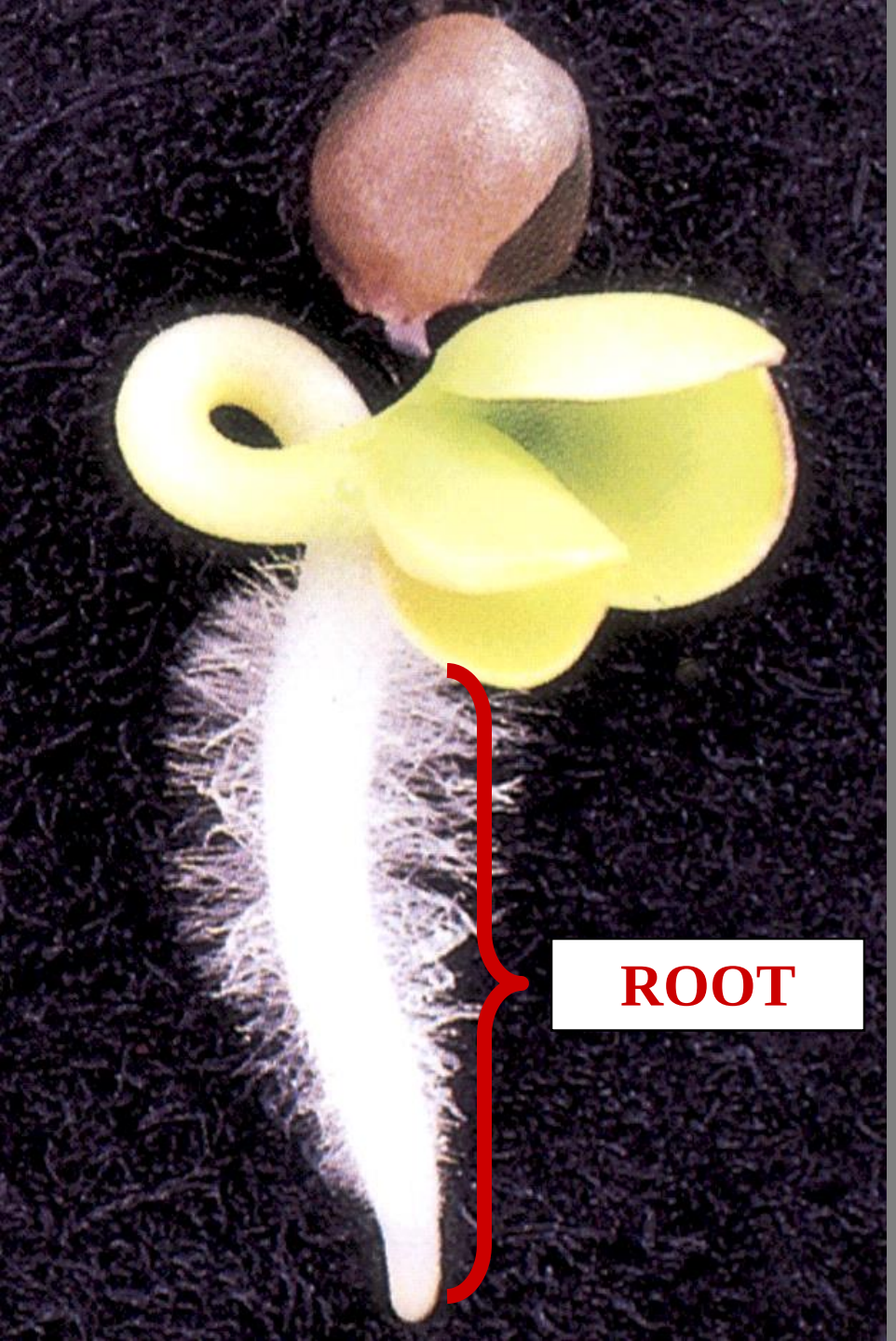

ROOT
T
ROOT HAIRS
ABSORPTION
L.S.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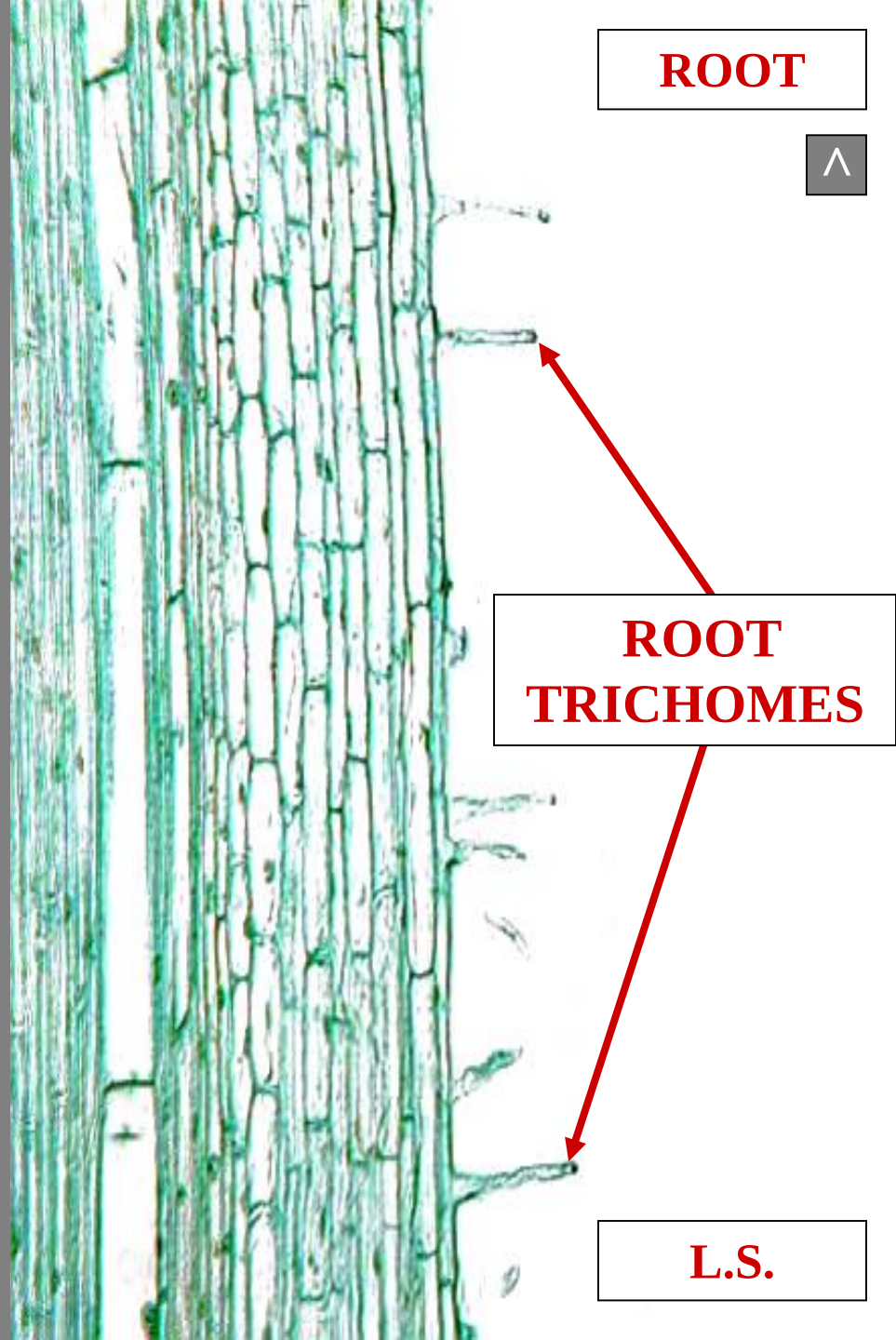
ROOT
ROOT TRICHOMES
L.S.

S
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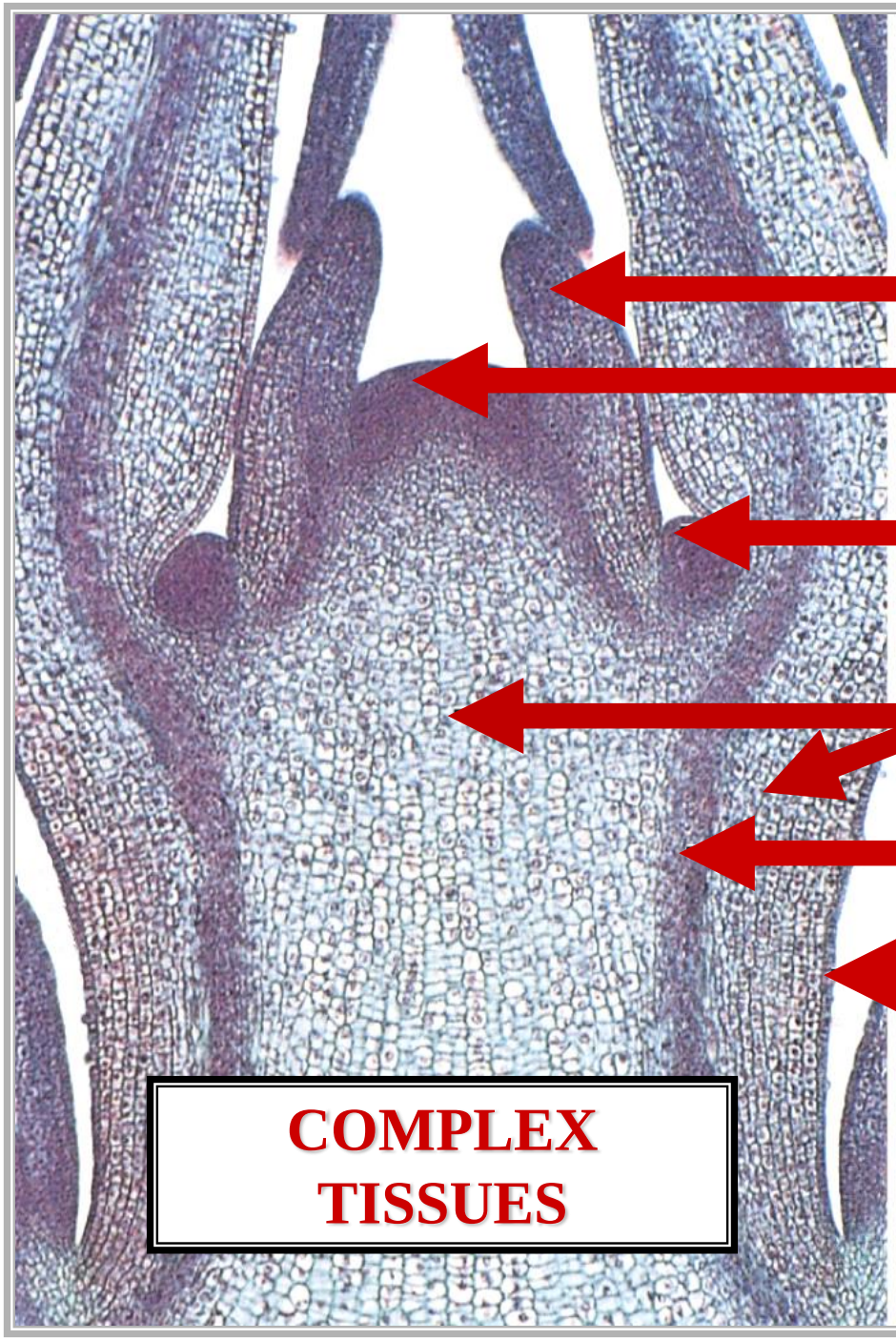
PLANT HISTOLOGY SUMMARY

ANGIOSPERM COMPLEX TISSUES SUMMARY



ANGIOSPERM COMPLEX TISSUES

G

APICAL MERISTEM

COMPLEX TISSUE

COMPLEX TISSUE

COMPLEX TISSUE

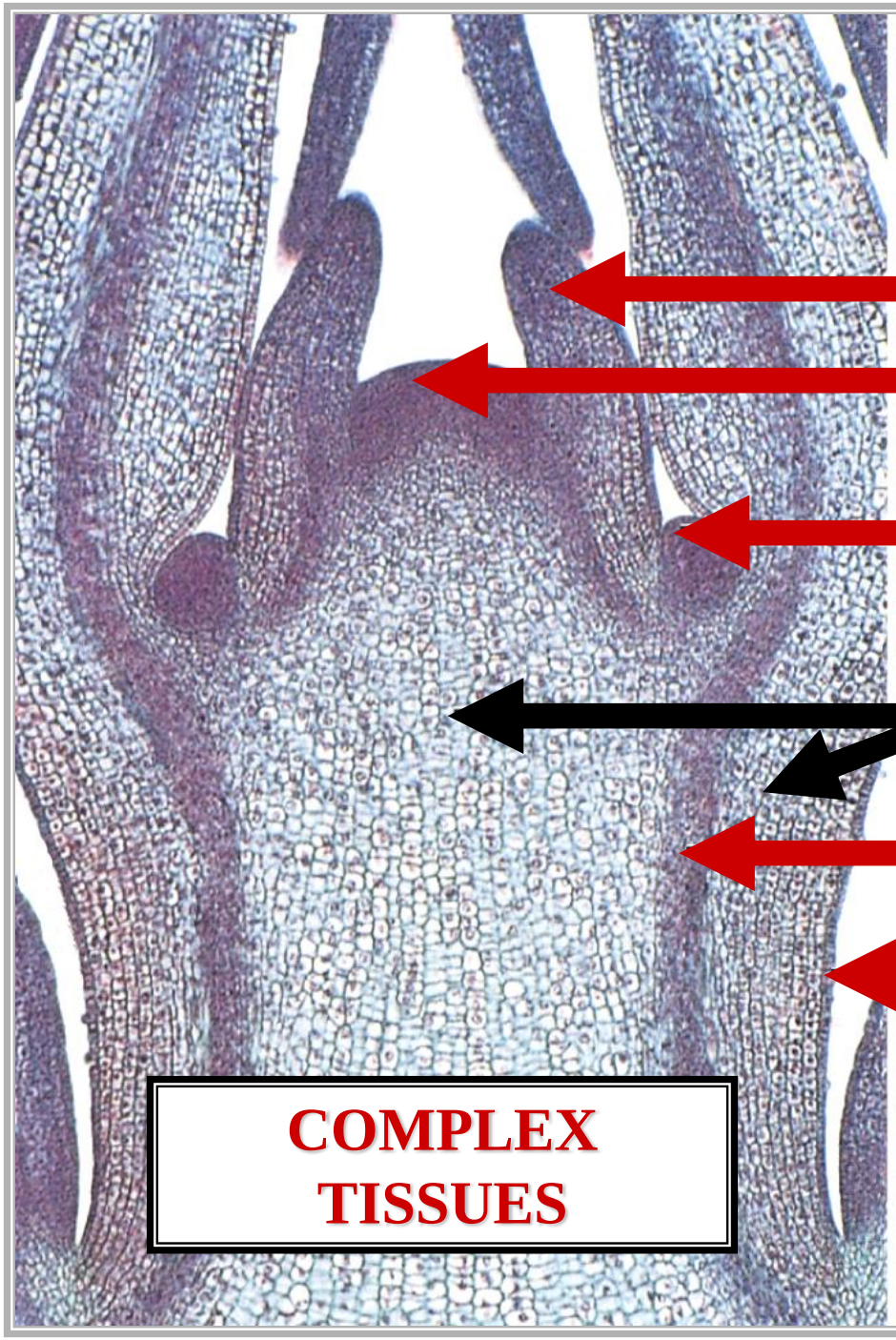
COMPLEX TISSUES

STEM

L.S.

ANGIOSPERM COMPLEX TISSUES

V



APICAL MERISTEM

GROUND TISSUE

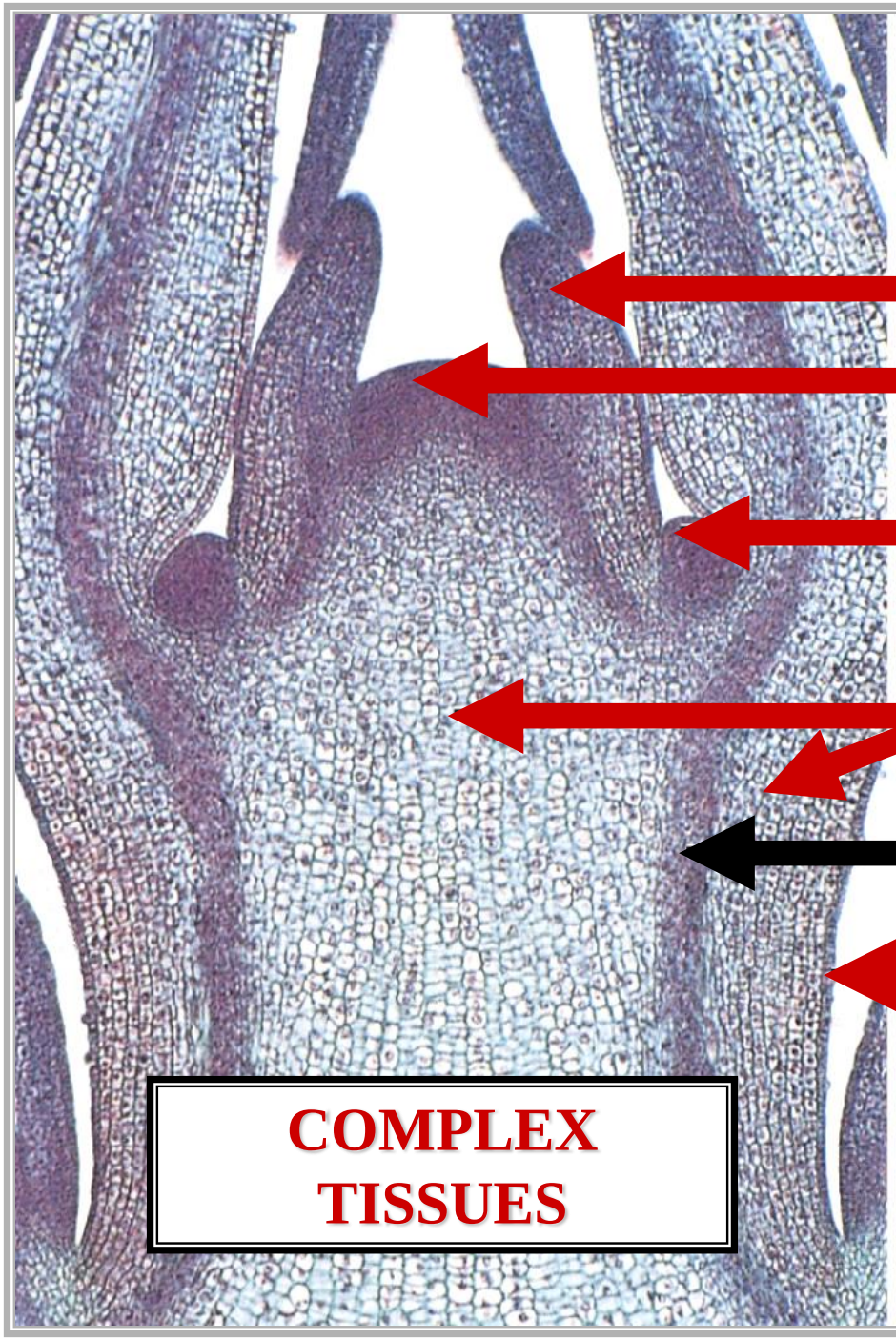
COMPLEX TISSUE

COMPLEX TISSUE

COMPLEX TISSUES

STEM

L.S.



ANGIOSPERM COMPLEX TISSUES

D

APICAL MERISTEM

GROUND TISSUE

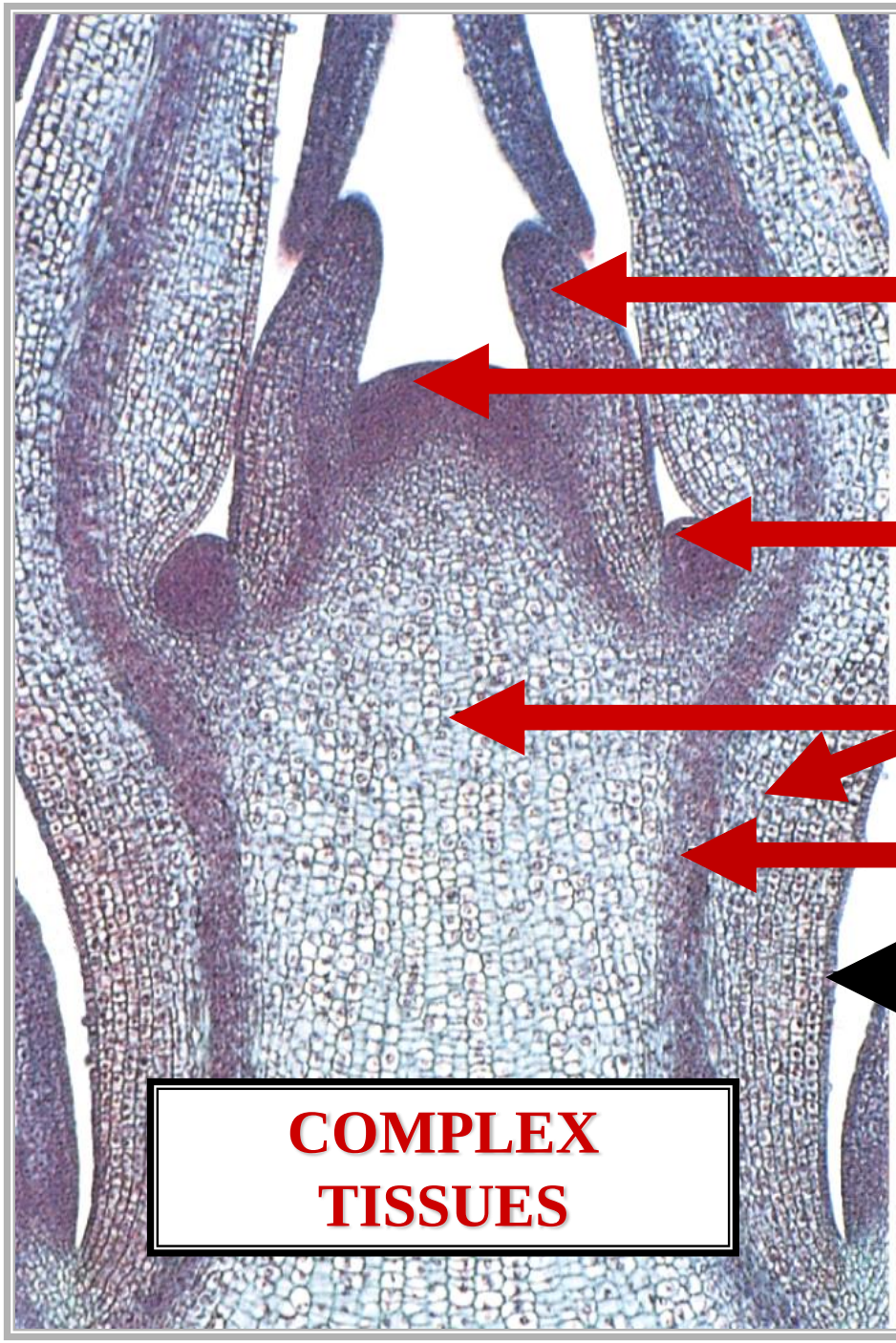
VASCULAR TISSUE

COMPLEX TISSUE

COMPLEX TISSUES

STEM

L.S.



ANGIOSPERM COMPLEX TISSUES

+

S

APICAL MERISTEM

GROUND TISSUE

VASCULAR TISSUE

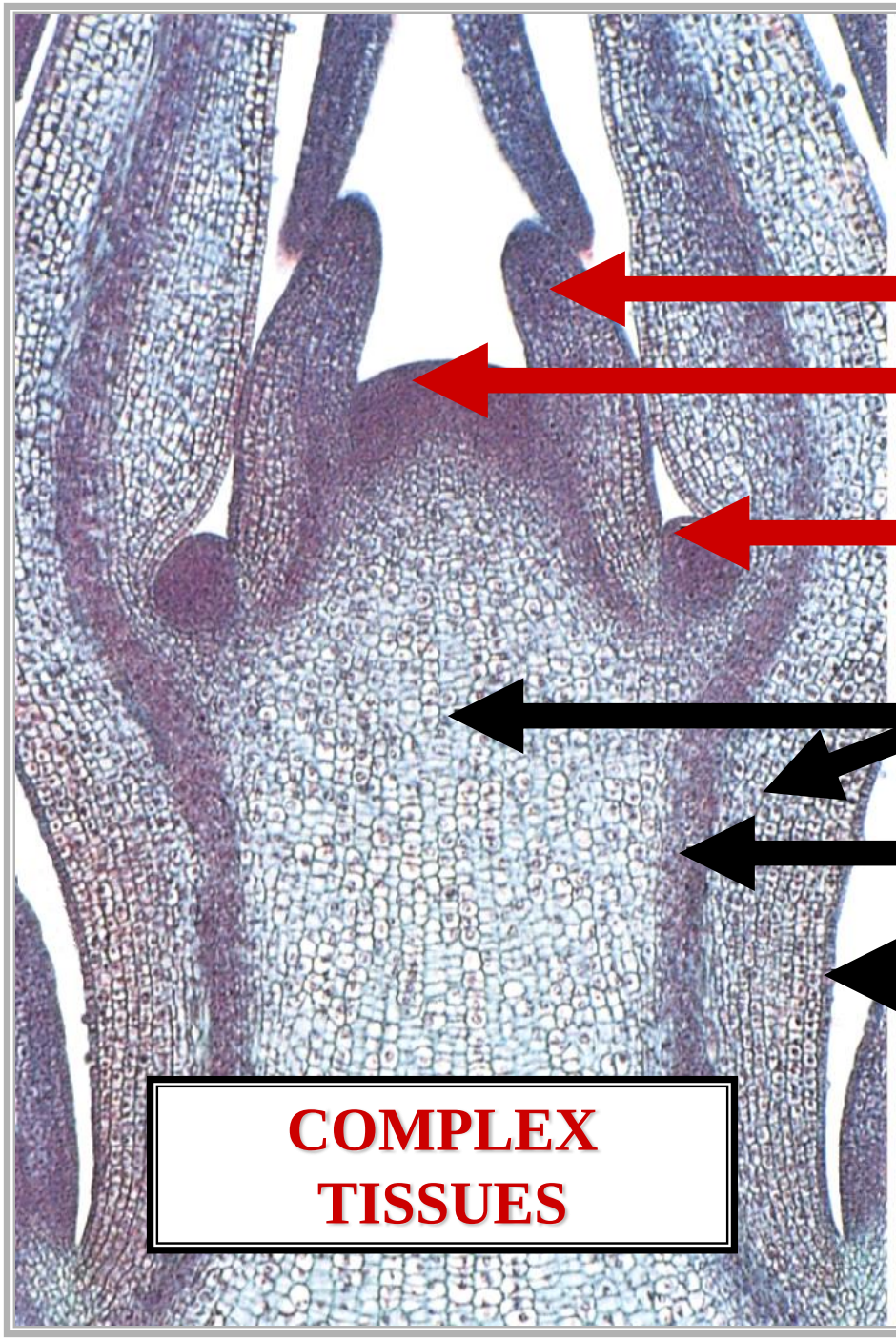
DERMAL TISSUE

COMPLEX TISSUES

STEM

L.S.

ANGIOSPERM COMPLEX TISSUES



APICAL MERISTEM

GROUND TISSUE

VASCULAR TISSUE

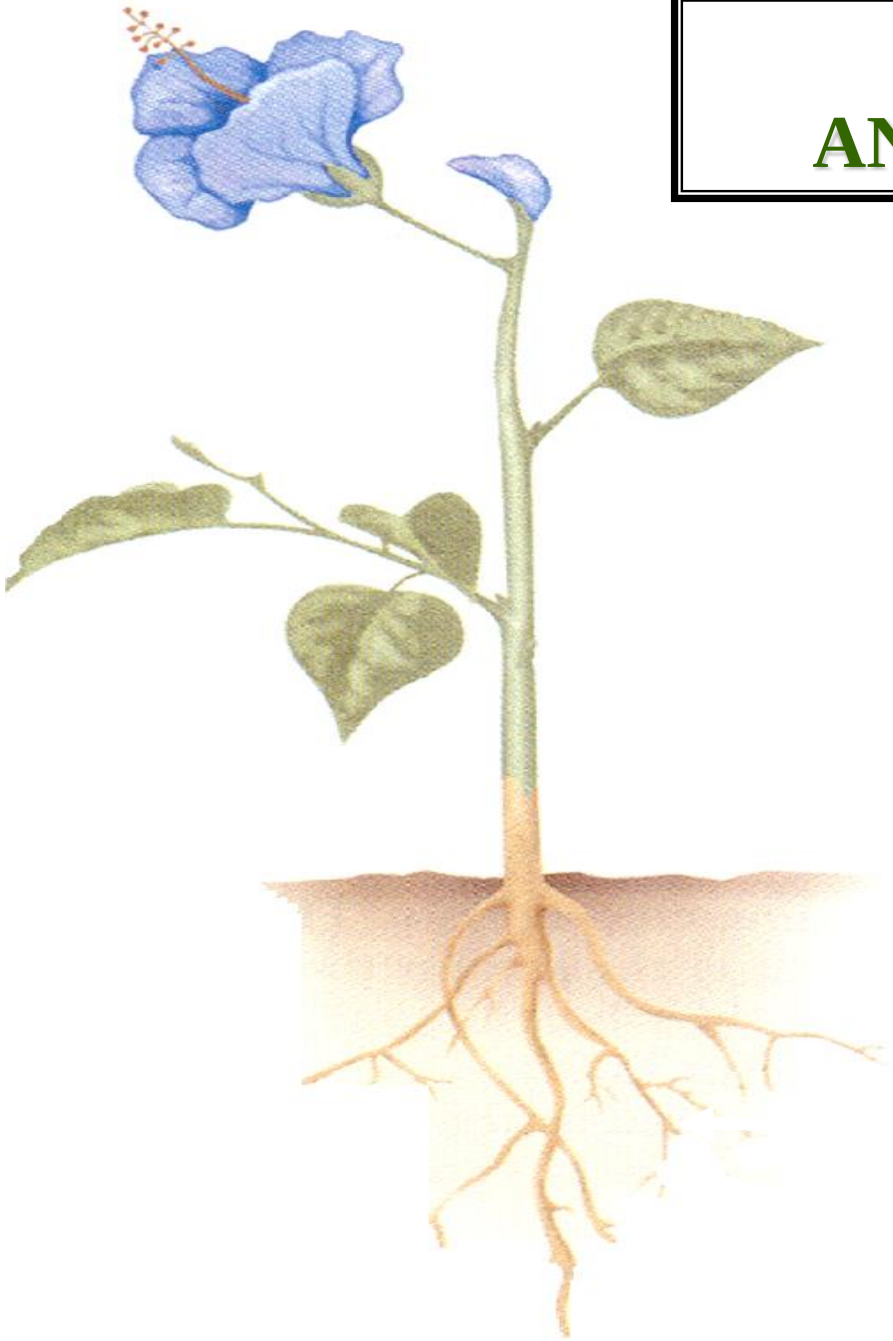
DERMAL TISSUE

COMPLEX TISSUES

STEM

L.S.

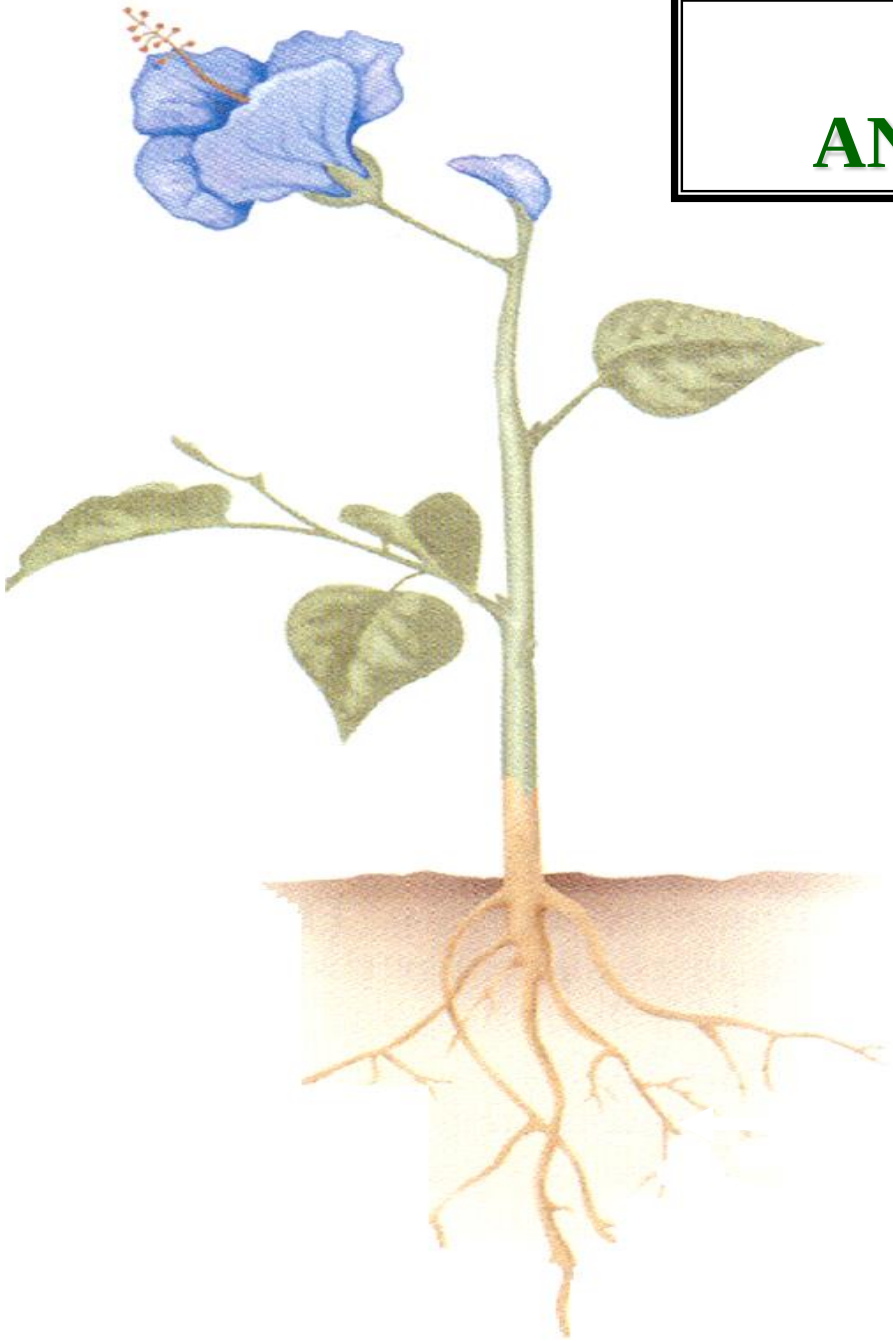
TYPICAL ANGIOSPERM

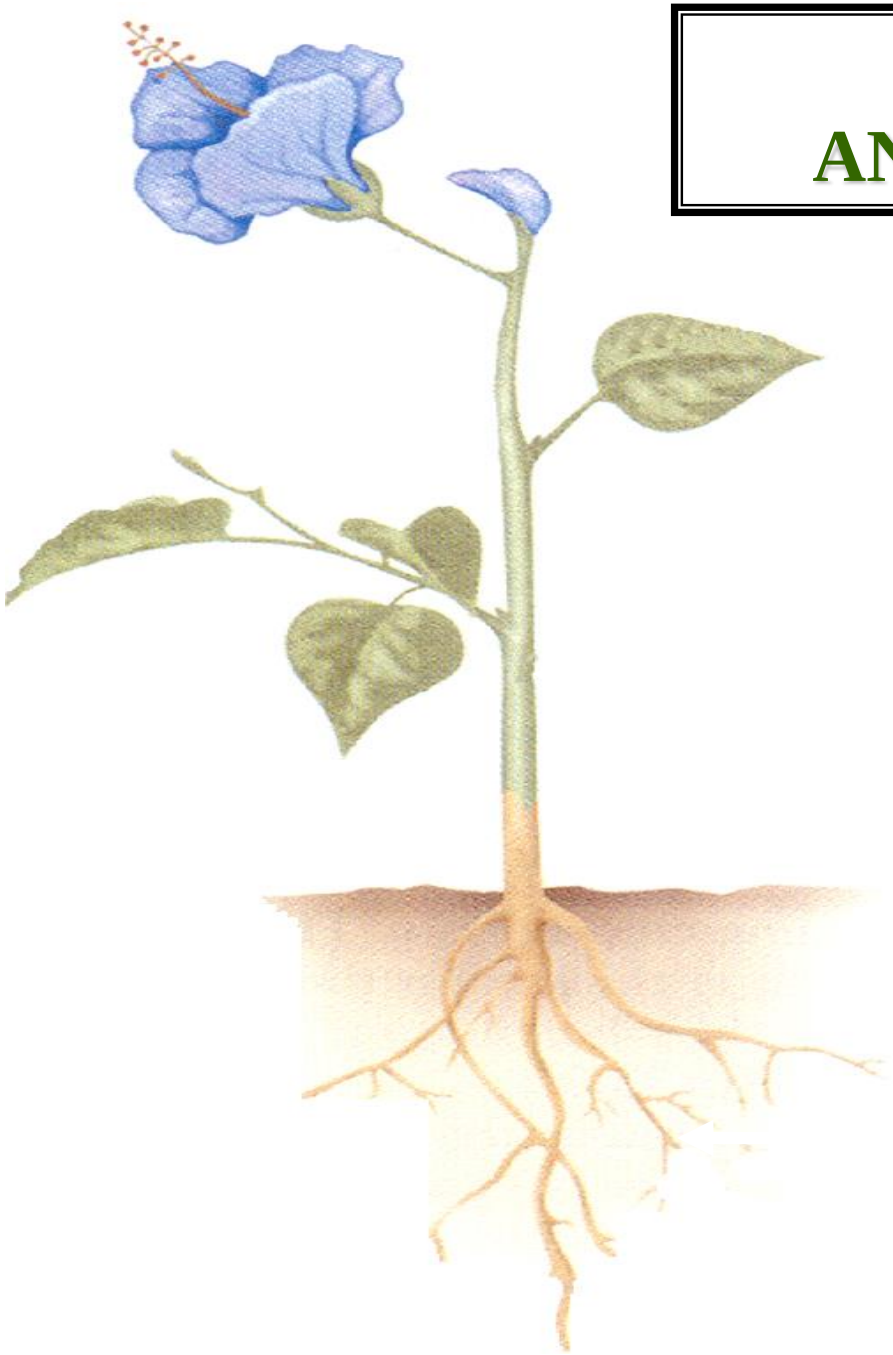


O

TYPICAL ANGIOSPERM

ANGIOSPERM PRIMARY GROWTH





TYPICAL ANGIOSPERM

ANGIOSPERM PRIMARY GROWTH

ANGIOSPERM PLANT ORGANS

ANGIOSPERM PLANT ORGANS

PLANT ORGAN TYPES

PLANT ORGAN TYPES

ROOT

PLANT ORGAN TYPES

PLANT ORGAN TYPES

ROOT

STEM

PLANT ORGAN TYPES

PLANT ORGAN TYPES

ROOT

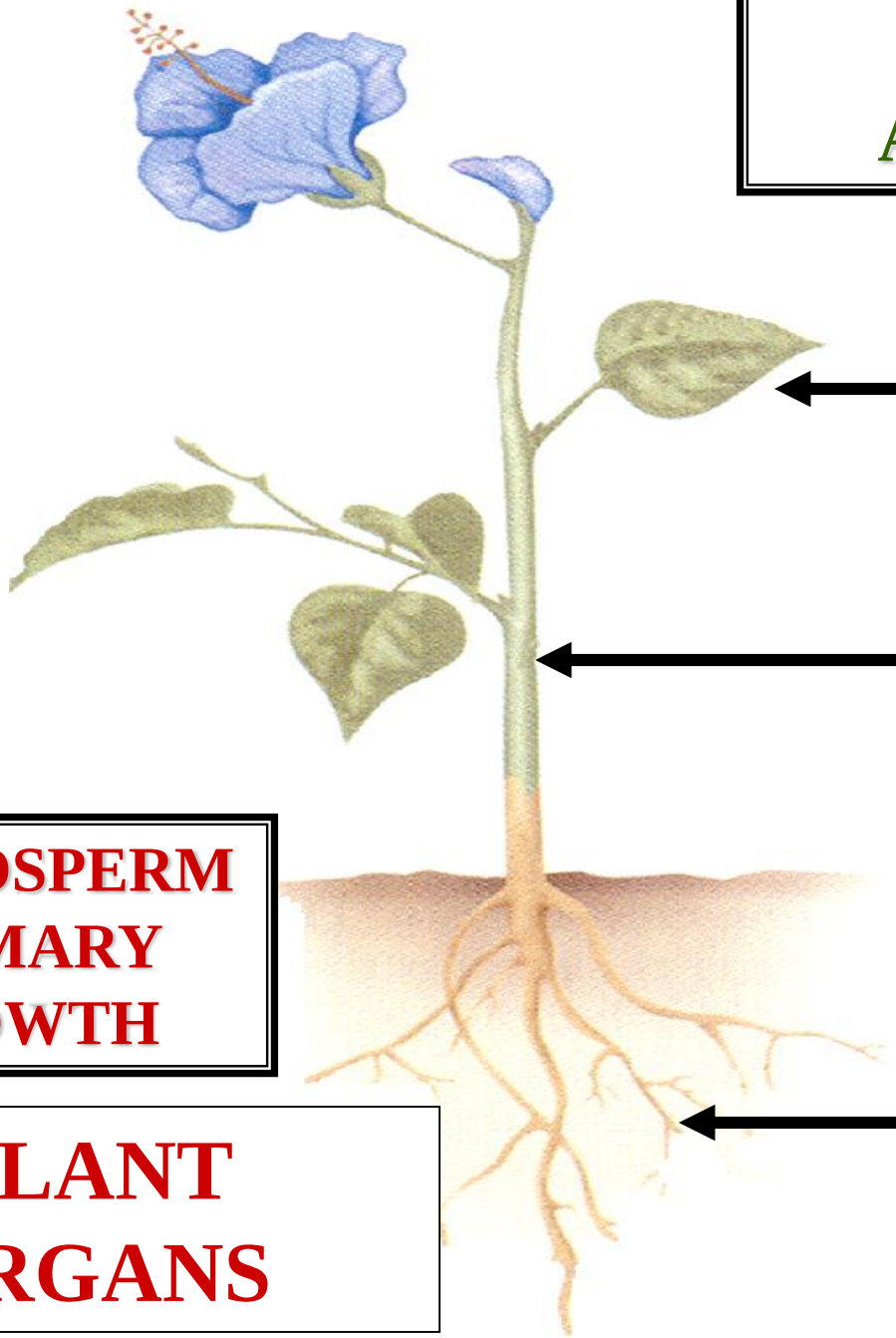
STEM

LEAF

PLANT ORGAN TYPES

TYPICAL ANGIOSPERM

R

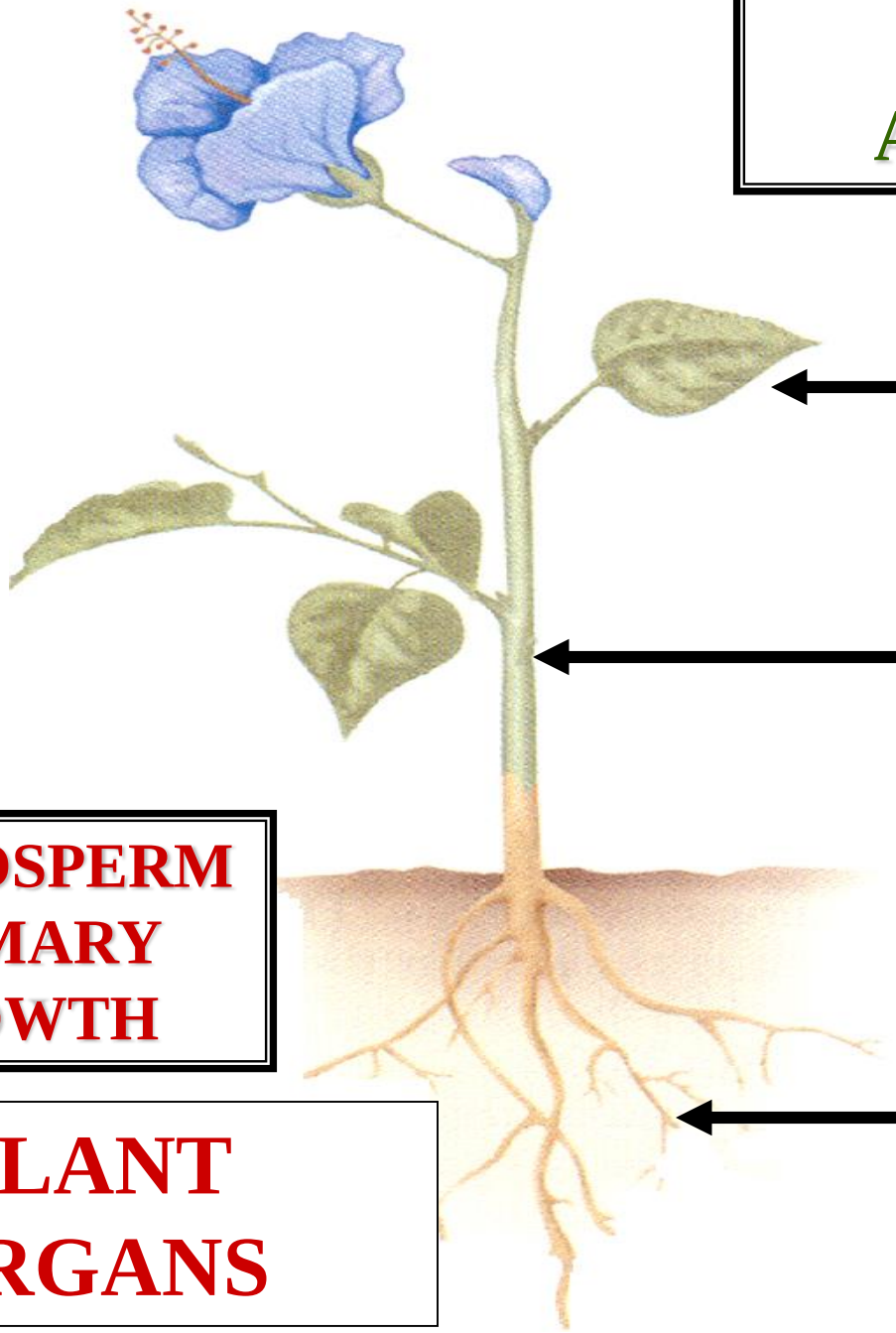


ANGIOSPERM PRIMARY GROWTH

PLANT ORGANS

TYPICAL ANGIOSPERM

S



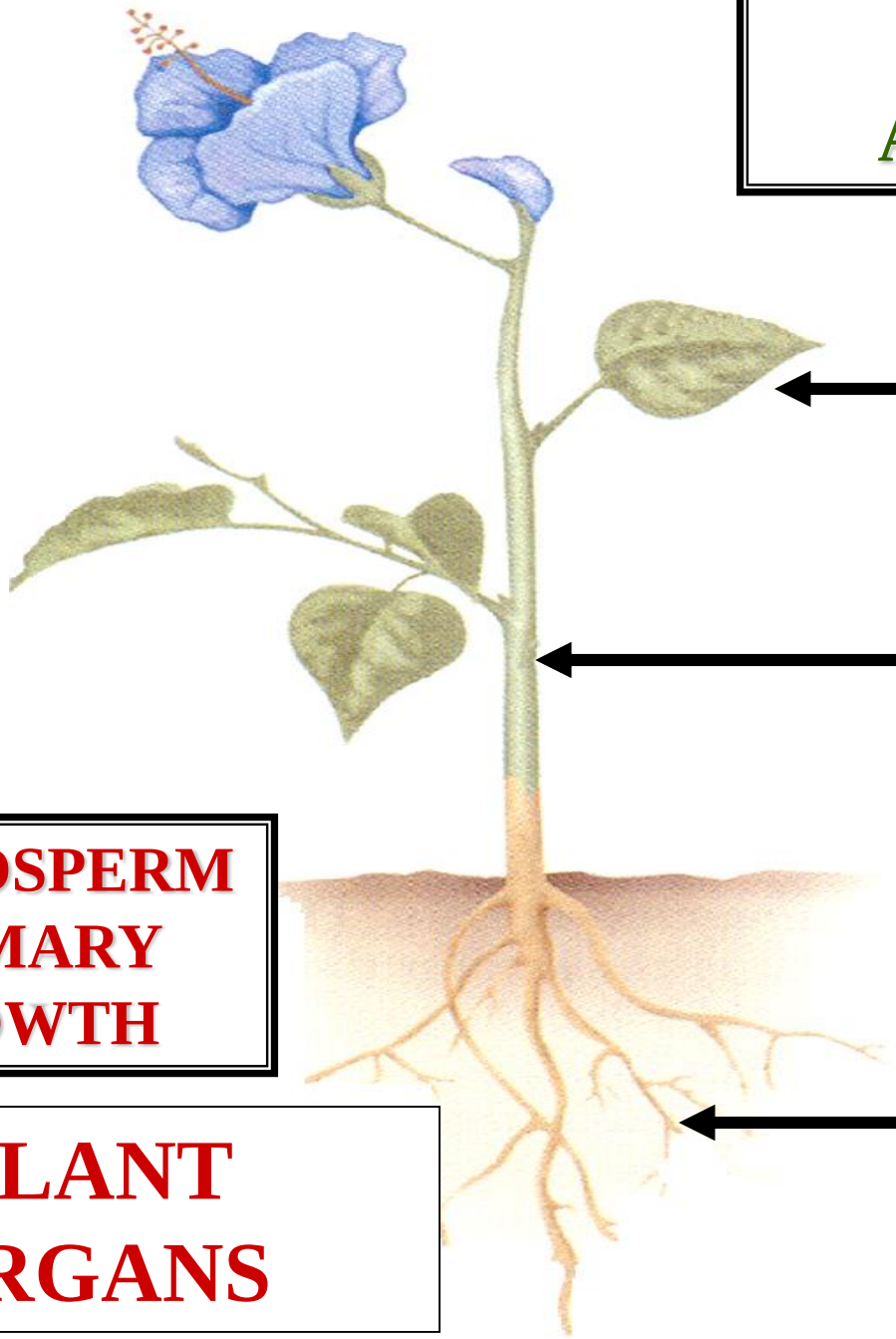
ROOT

ANGIOSPERM PRIMARY GROWTH

PLANT ORGANS

TYPICAL ANGIOSPERM

L



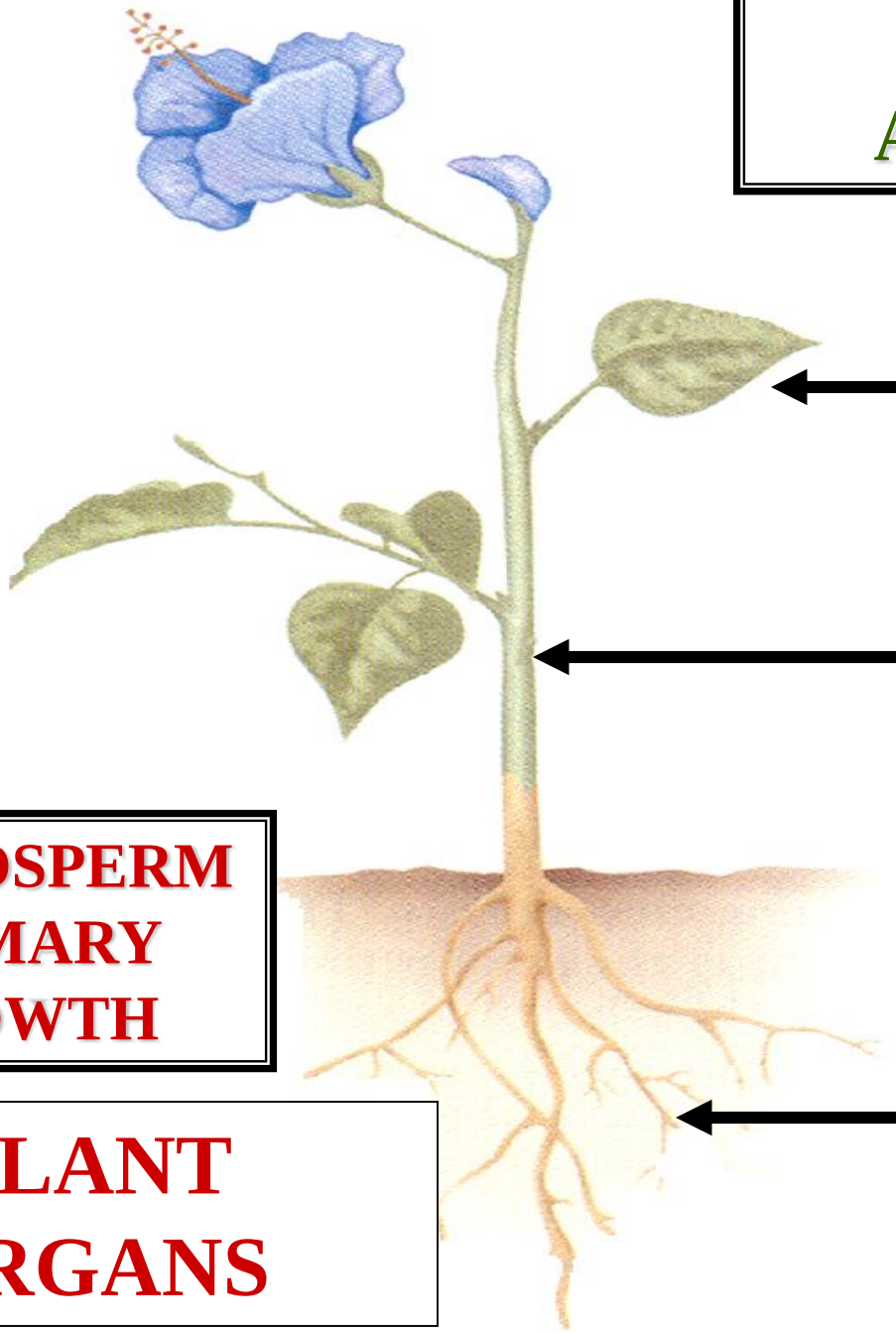
STEM

ROOT

ANGIOSPERM PRIMARY GROWTH

PLANT ORGANS

TYPICAL ANGIOSPERM



LEAF

STEM

ROOT

ANGIOSPERM PRIMARY GROWTH

PLANT ORGANS

R

ROOT

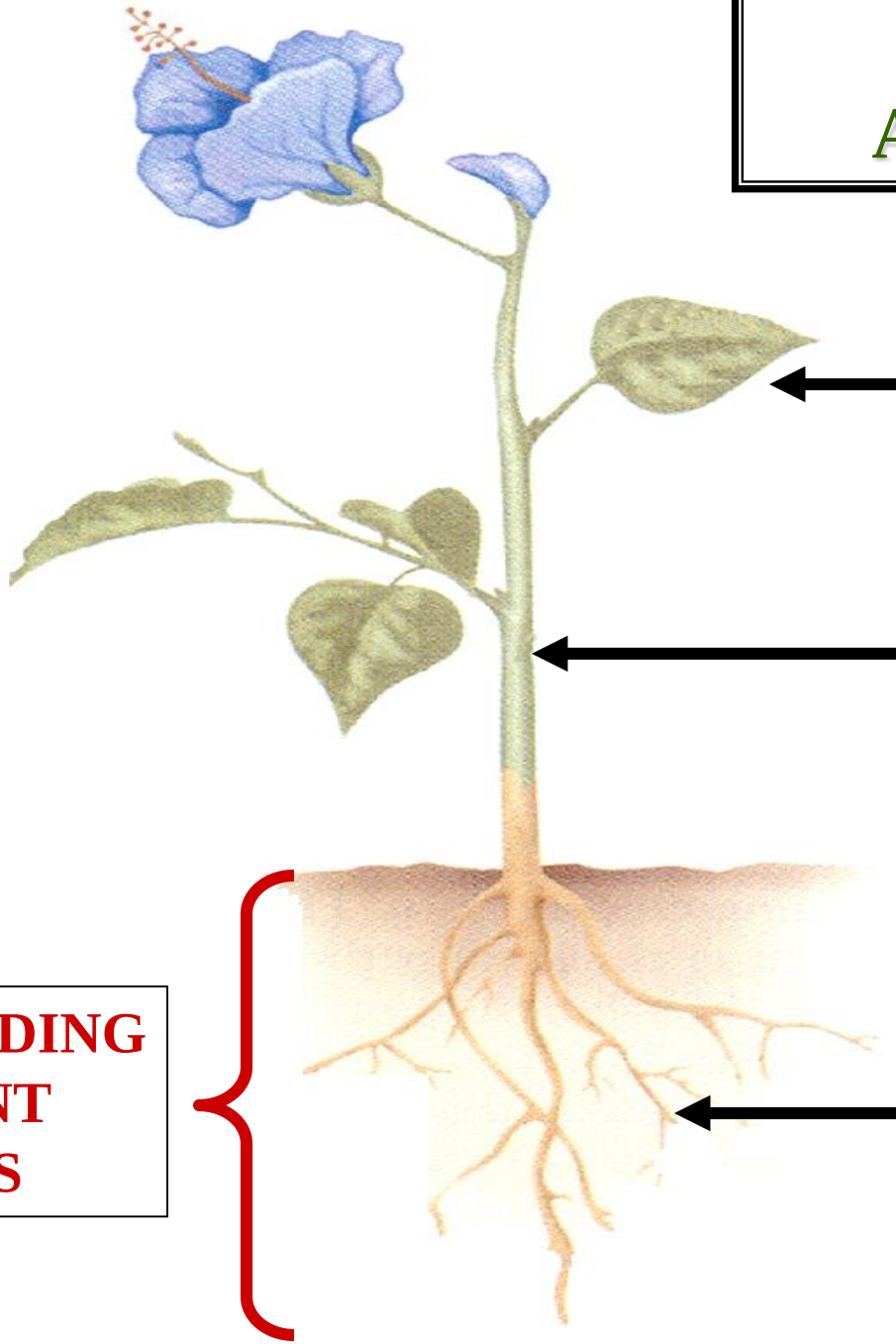
ROOT

PLANT ORGANS
ROOT

DESCENDING PLANT AXIS

PLANT ORGANS
ROOT

TYPICAL ANGIOSPERM



LEAF

STEM

ROOT

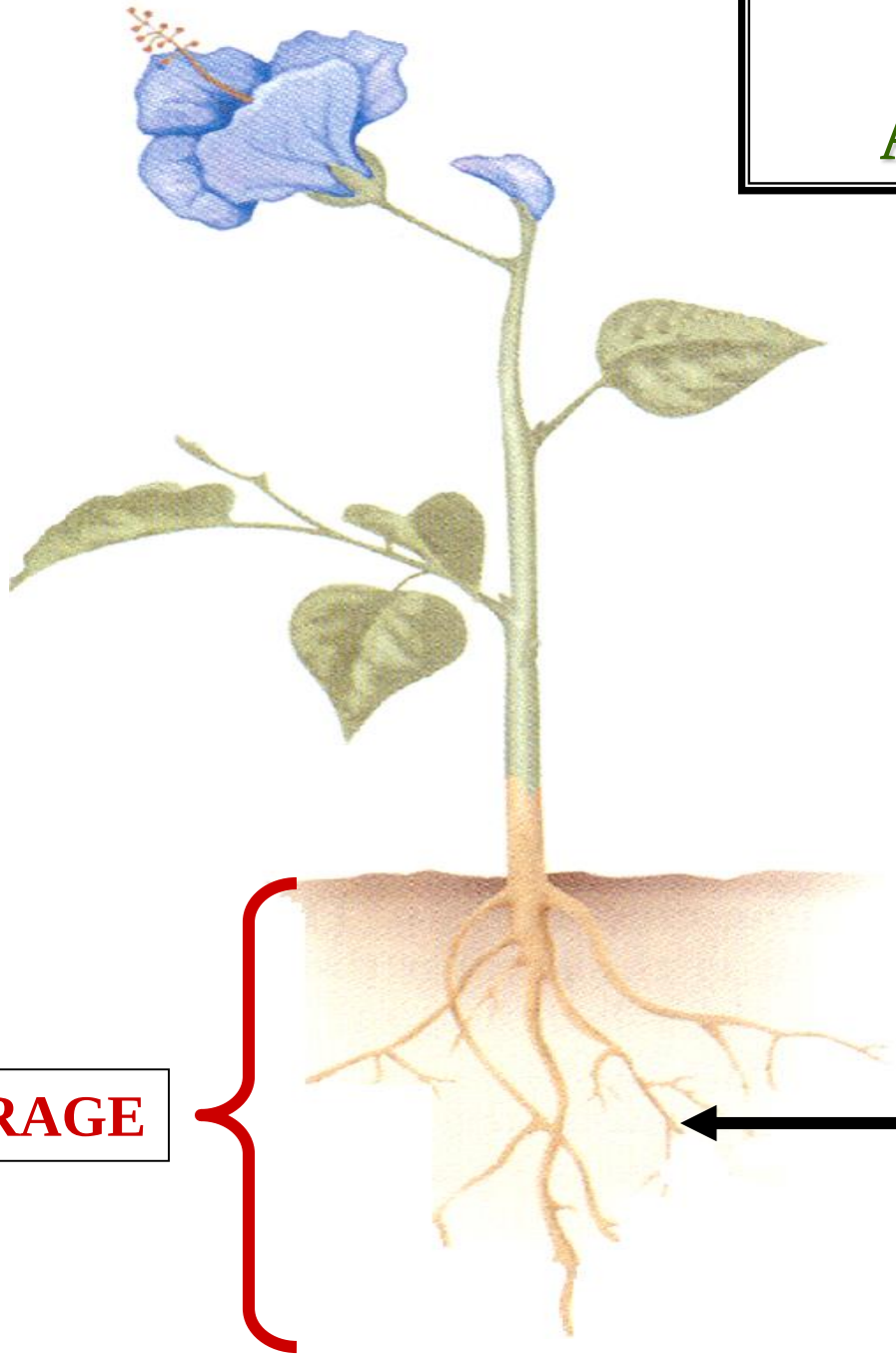
DESCENDING PLANT AXIS

A

ROOT FUNCTION

TYPICAL ANGIOSPERM

A



ANCHORAGE

ROOT

TYPICAL ANGIOSPERM

S

ANCHORAGE
ABSORPTION

ROOT

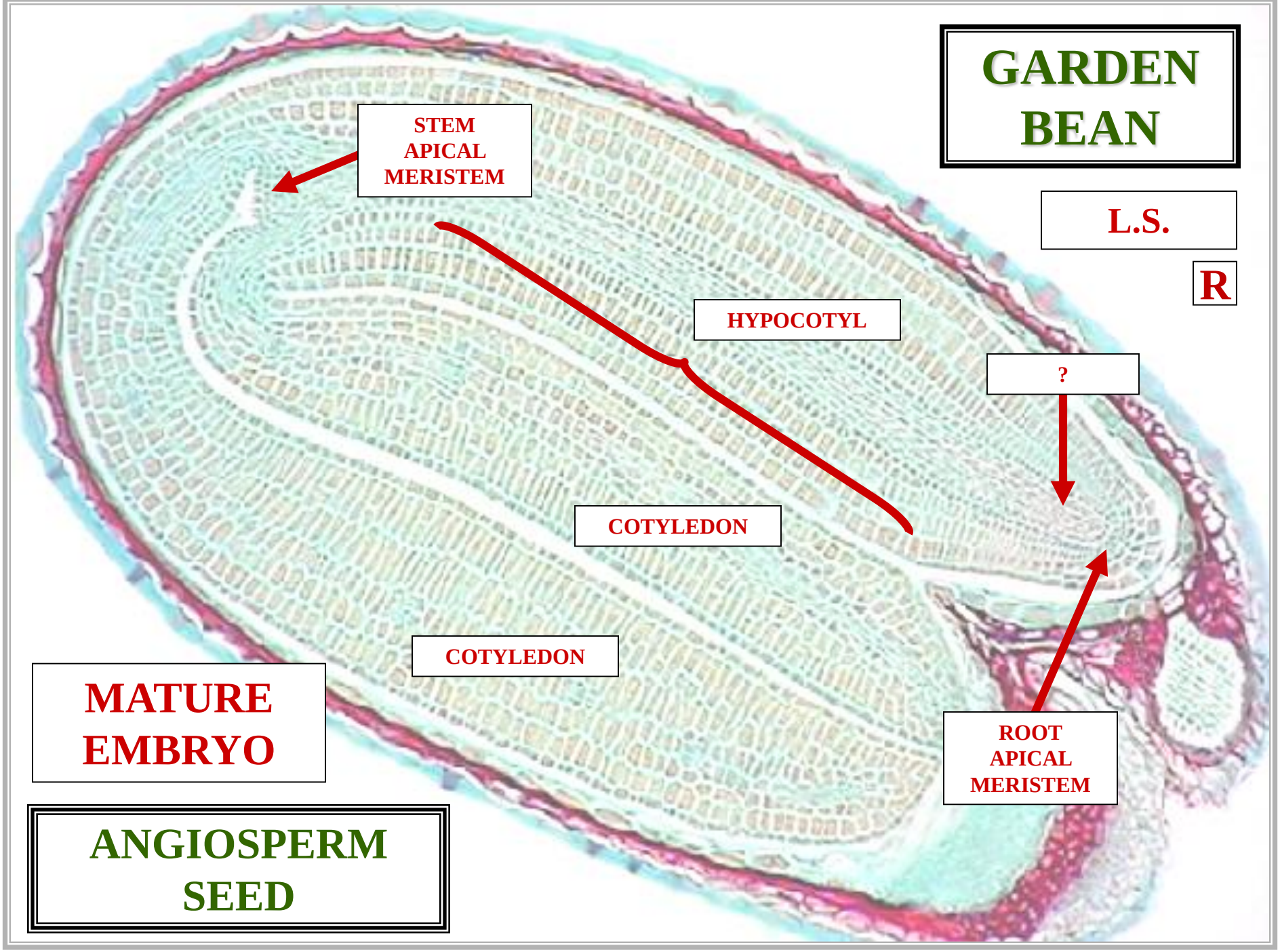
TYPICAL ANGIOSPERM

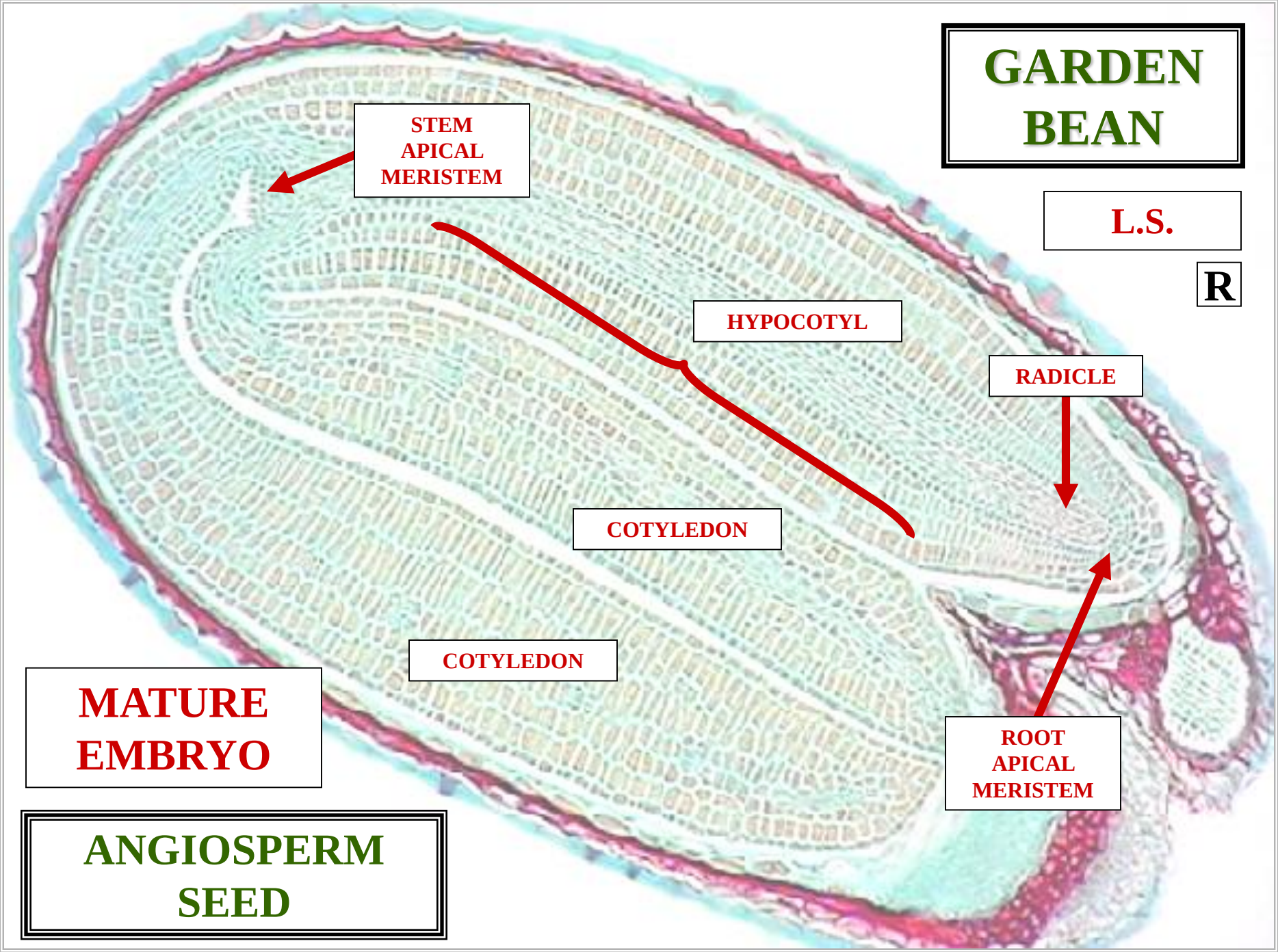
ROOT

ANCHORAGE
ABSORPTION
STORAGE

ROOT MORPHOLOGY & ROOT ANATOMY

ROOT MORPHOLOGY


GARDEN BEAN
L.S.
R
STEM APICAL MERISTEM
HYPOCOTYL
?
COTYLEDON
COTYLEDON
ROOT APICAL MERISTEM
MATURE EMBRYO
ANGIOSPERM SEED


GARDEN BEAN
L.S.
R
STEM APICAL MERISTEM
HYPOCOTYL
RADICLE
COTYLEDON
COTYLEDON
ROOT APICAL MERISTEM
MATURE EMBRYO
ANGIOSPERM SEED

RADICLE

ROOT
MORPHOLOGY
RADICLE

EMBRYONIC ROOT

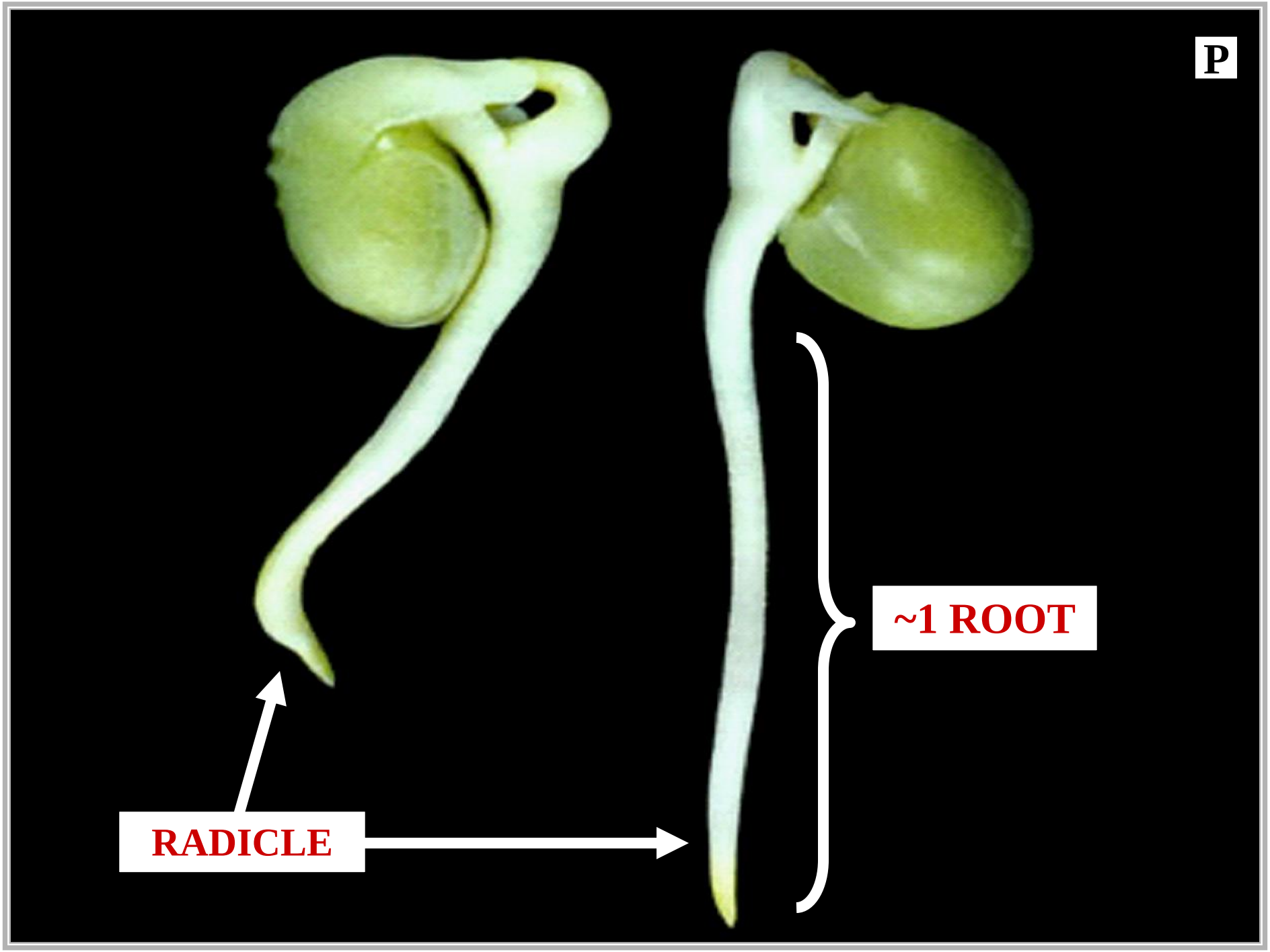
ROOT
MORPHOLOGY
RADICLE

ROOT
MORPHOLOGY
RADICLE

EMBRYONIC ROOT

DERIVES PRIMARY ROOT

ROOT
MORPHOLOGY
RADICLE


P
~1 ROOT
RADICLE

PRIMARY ROOT

ROOT
MORPHOLOGY
PRIMARY ROOT

INITIAL FUNCTIONAL ROOT

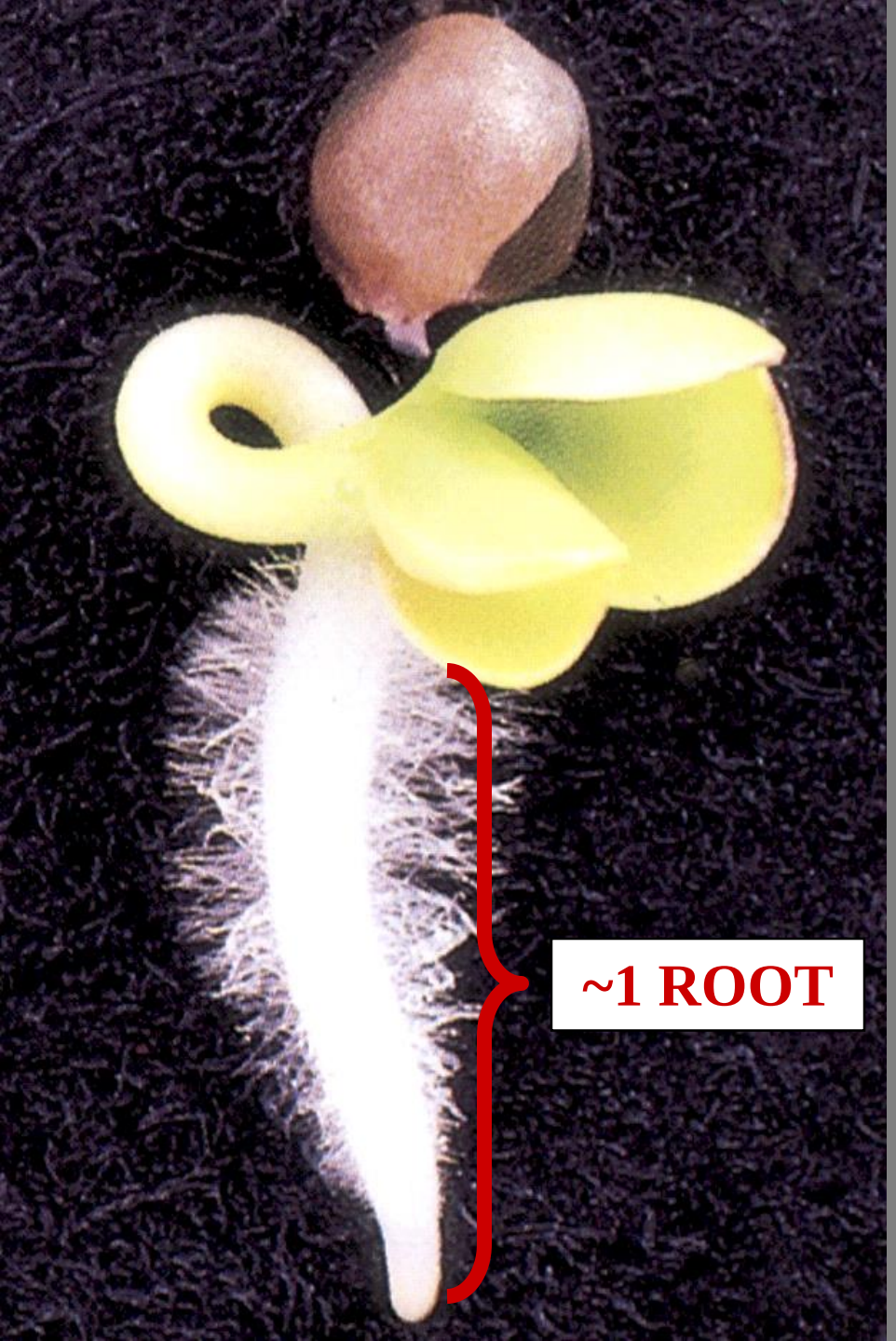
ROOT
MORPHOLOGY
PRIMARY ROOT

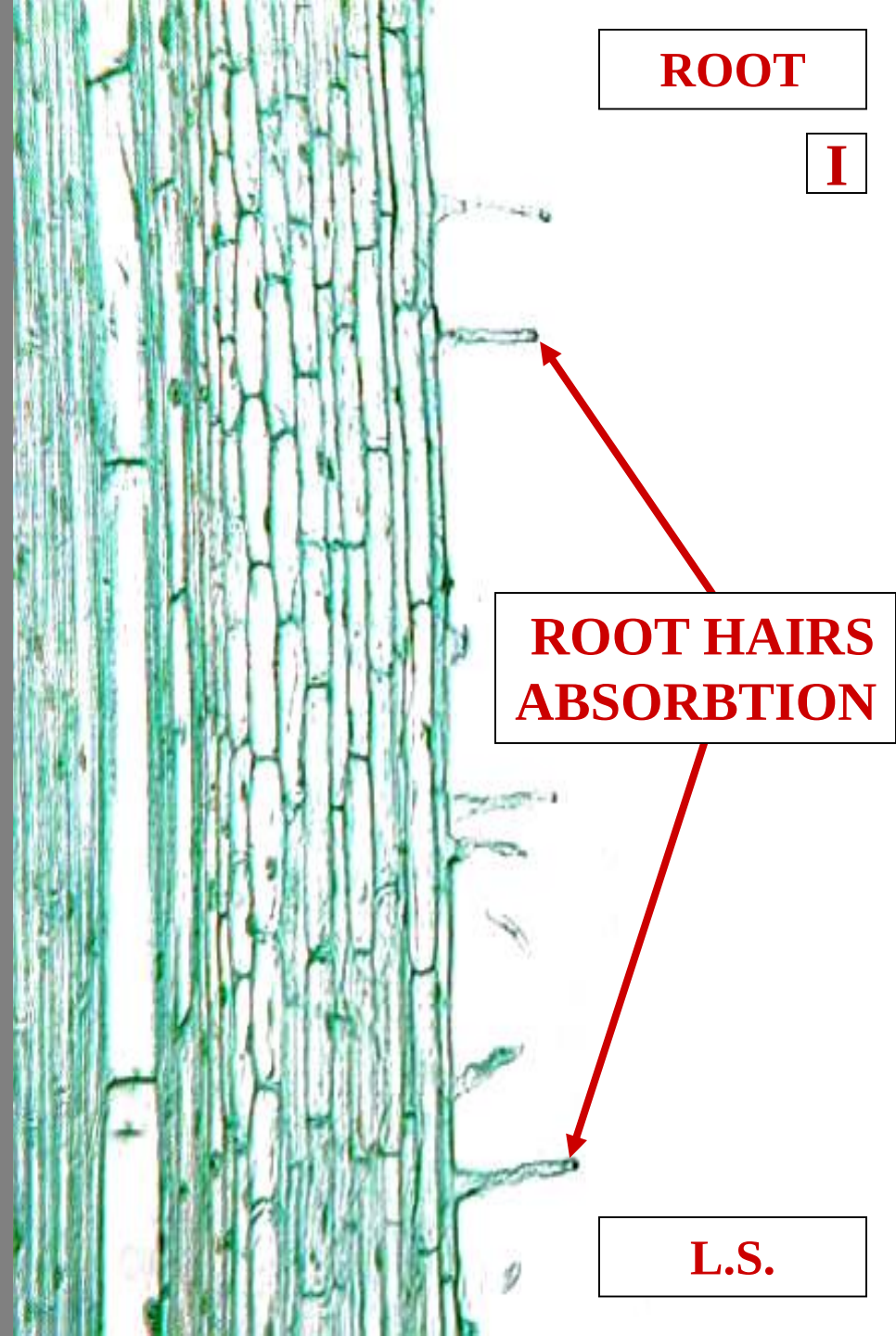
ROOT
MORPHOLOGY
PRIMARY ROOT

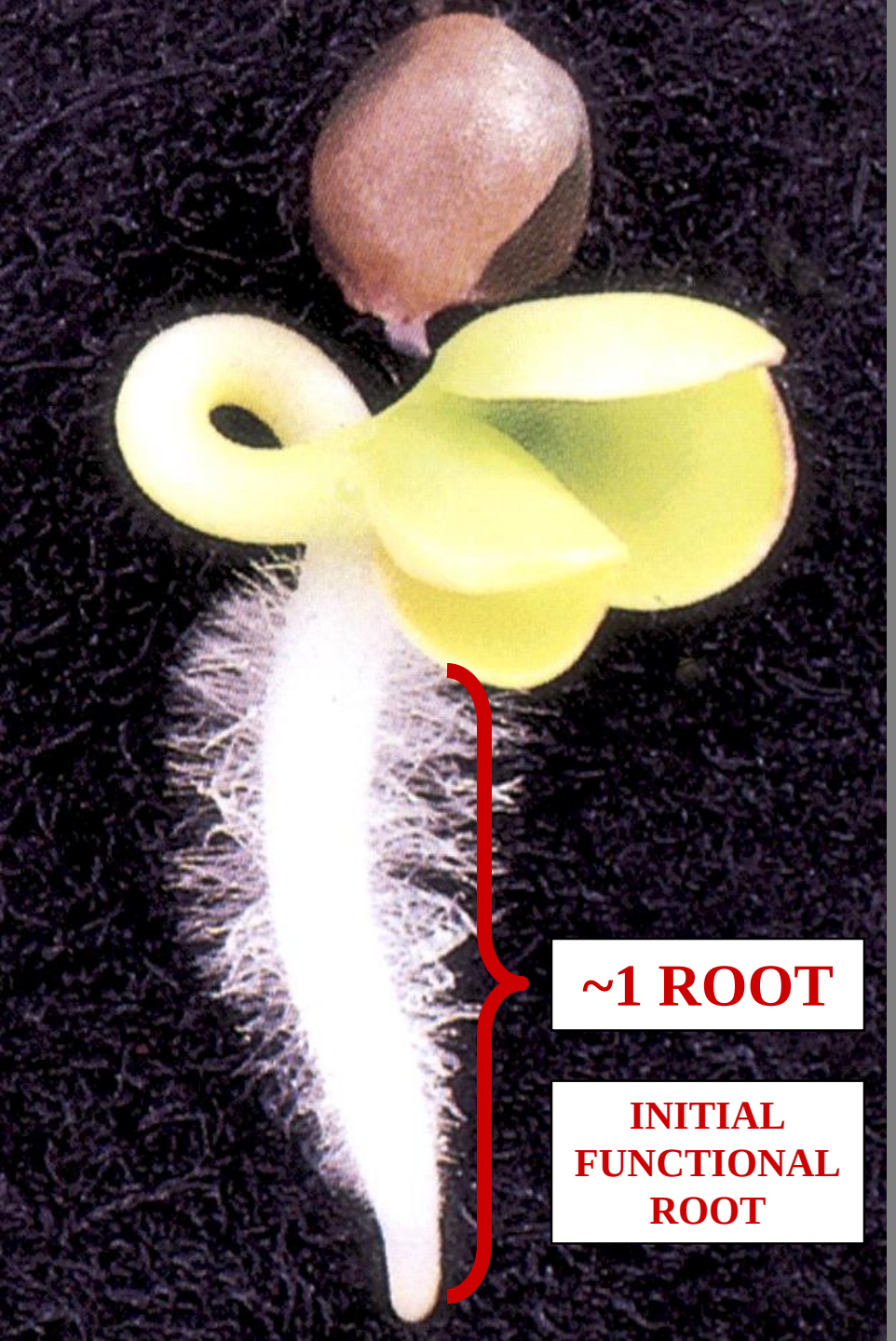
INITIAL FUNCTIONAL ROOT

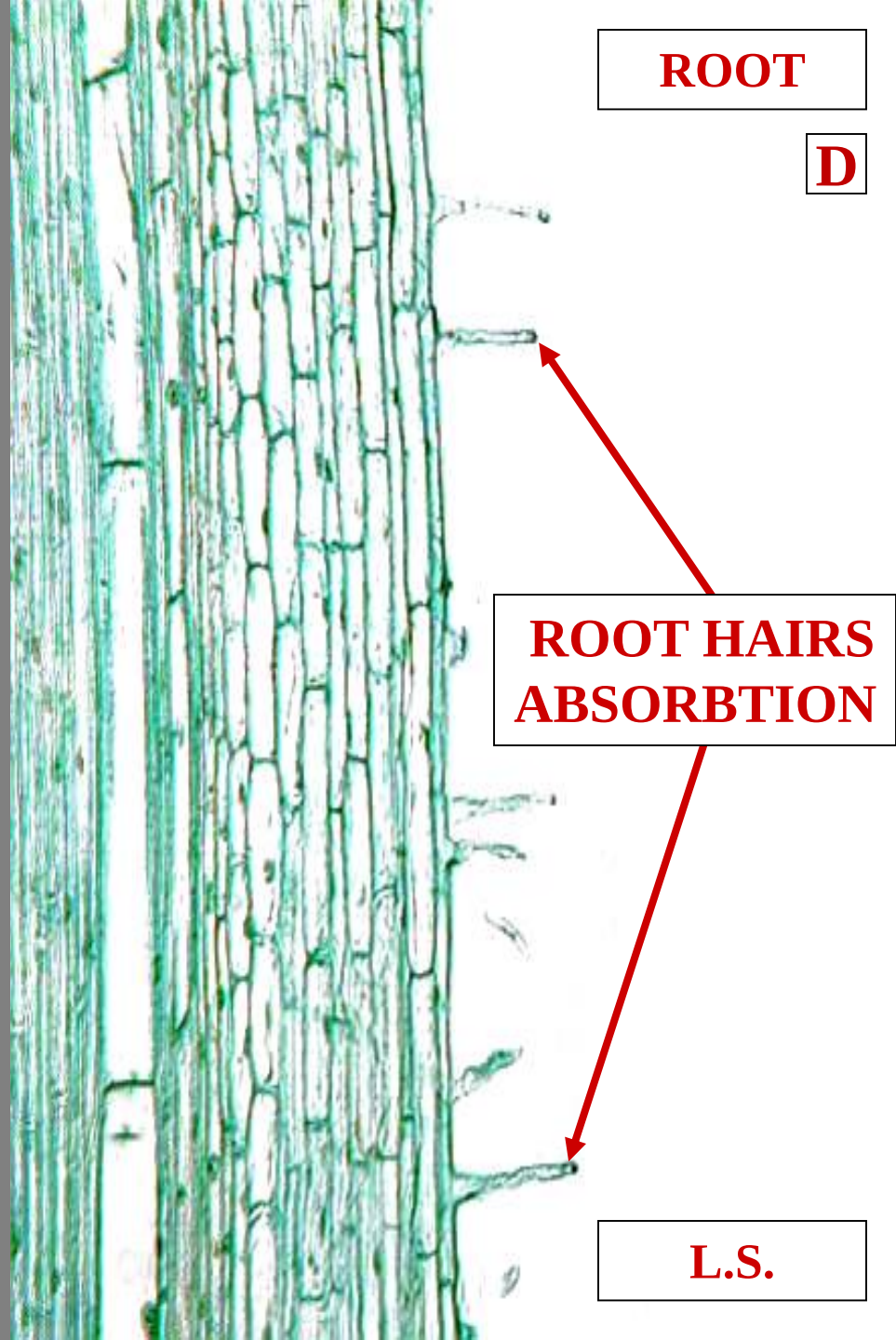
DERIVES SECONDARY ROOTS

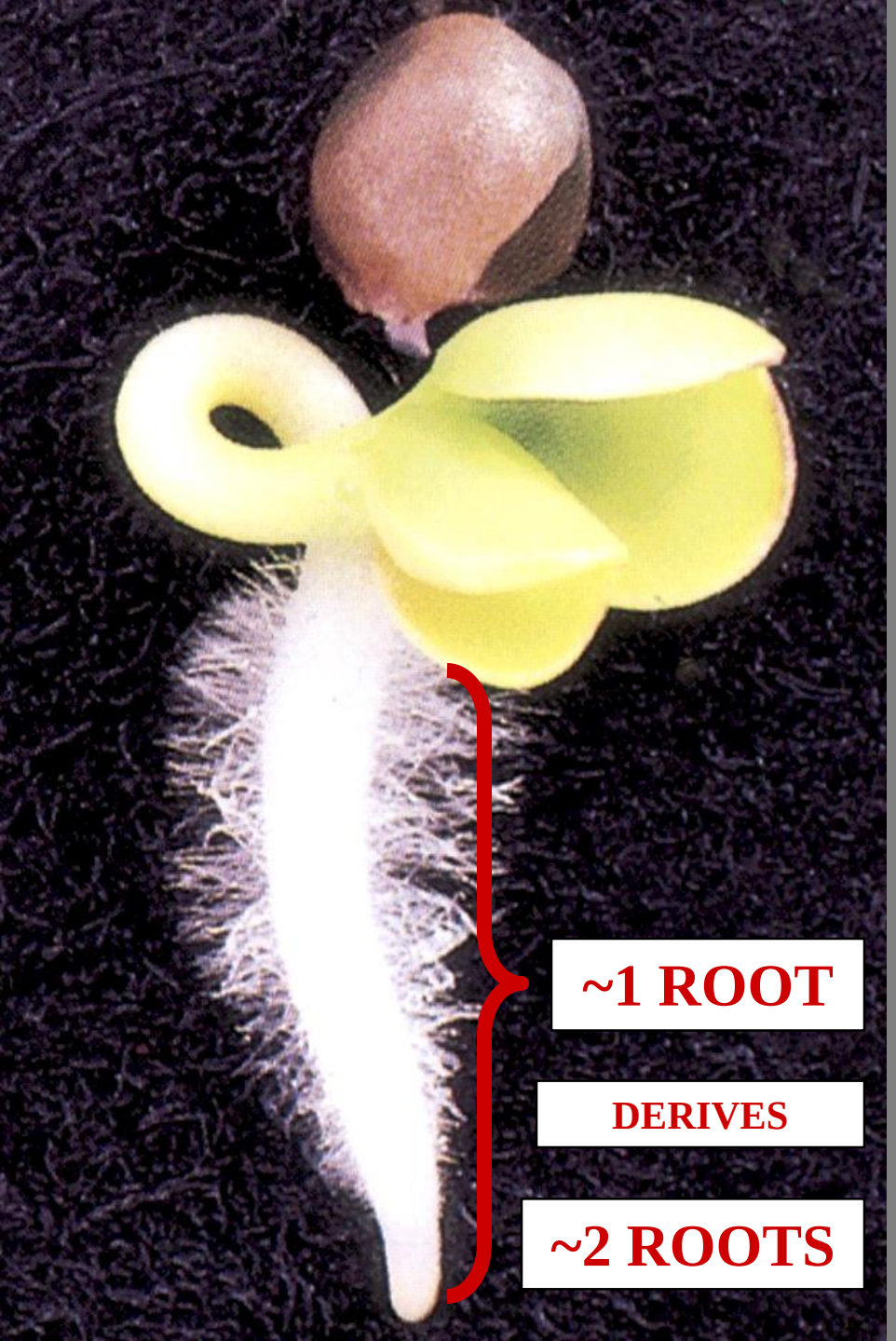
ROOT
MORPHOLOGY
PRIMARY ROOT

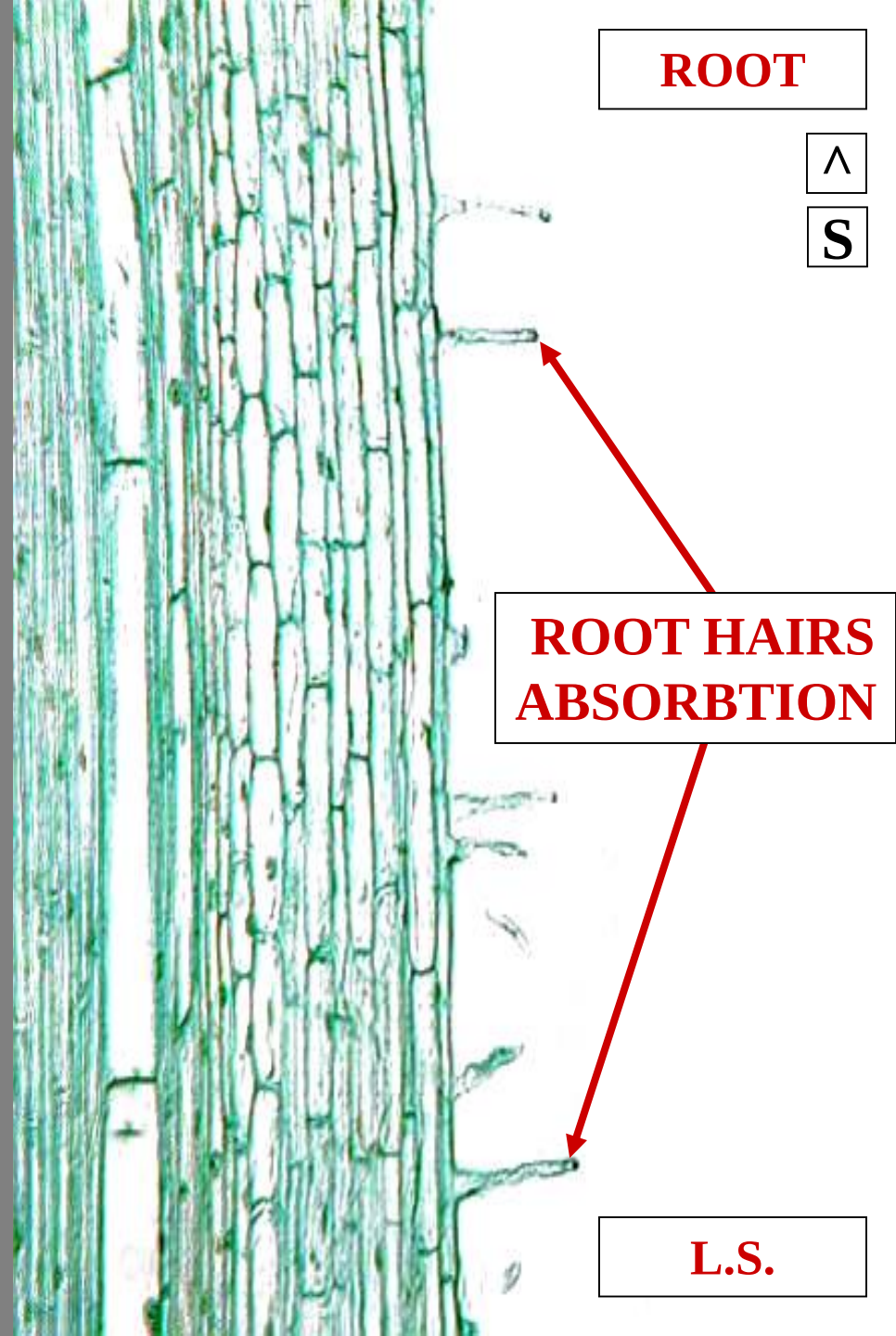

~1 ROOT


ROOT
I
ROOT HAIRS
ABSORBTION
L.S.


~1 ROOT
INITIAL FUNCTIONAL ROOT


ROOT
D
ROOT HAIRS ABSORBTION
L.S.


~1 ROOT
DERIVES
~2 ROOTS


ROOT
^
S
ROOT HAIRS
ABSORBTION
L.S.

SECONDARY ROOT

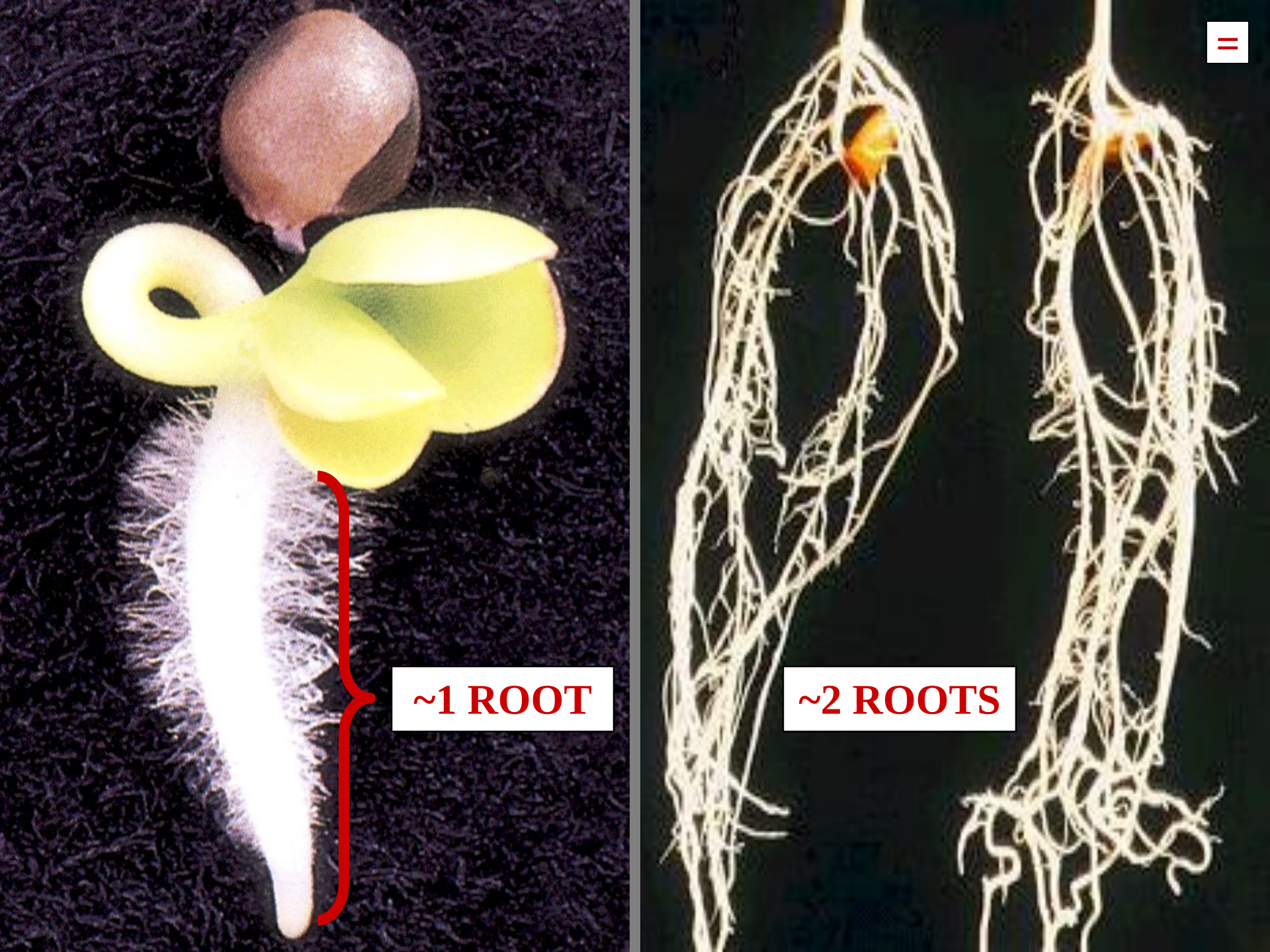
ROOT
MORPHOLOGY
SECONDARY ROOT

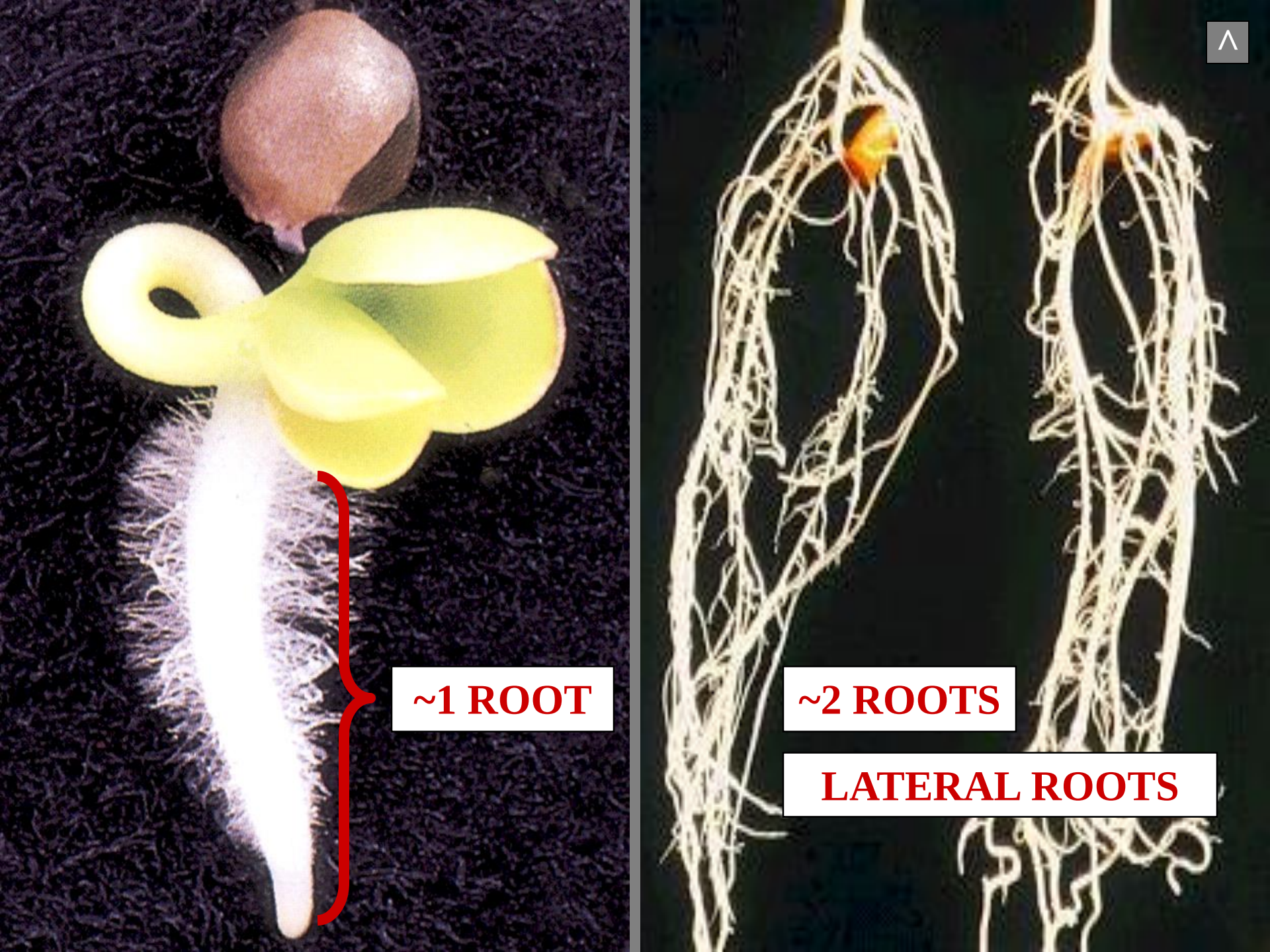
SECONDARY ROOT

=

LATERAL ROOT

ROOT
MORPHOLOGY
SECONDARY ROOT


~1 ROOT
=
~2 ROOTS


~1 ROOT
~2 ROOTS
LATERAL ROOTS

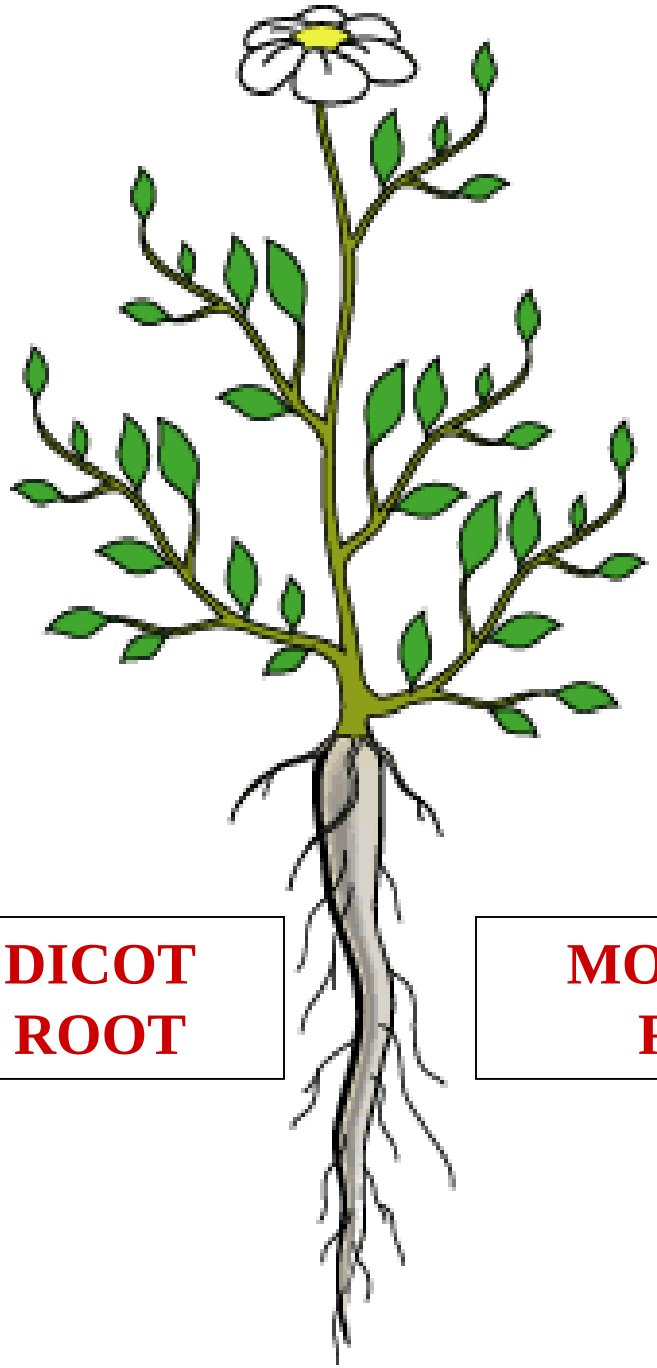
DICOT ROOT MORPHOLOGY VS MONOCOT ROOT MORPHOLOGY

D

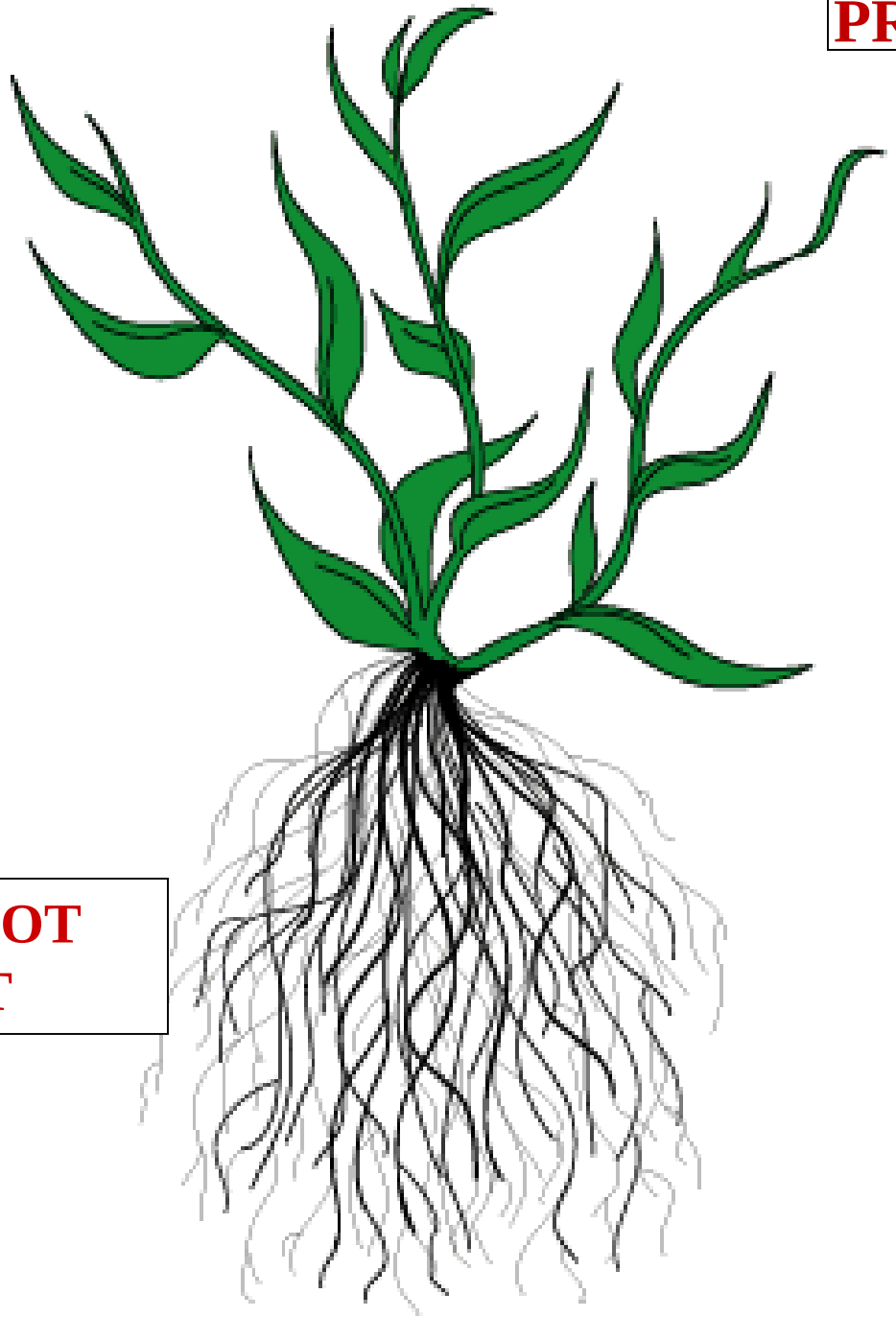
DICOT ROOT MORPHOLOGY

DICOTS

PR

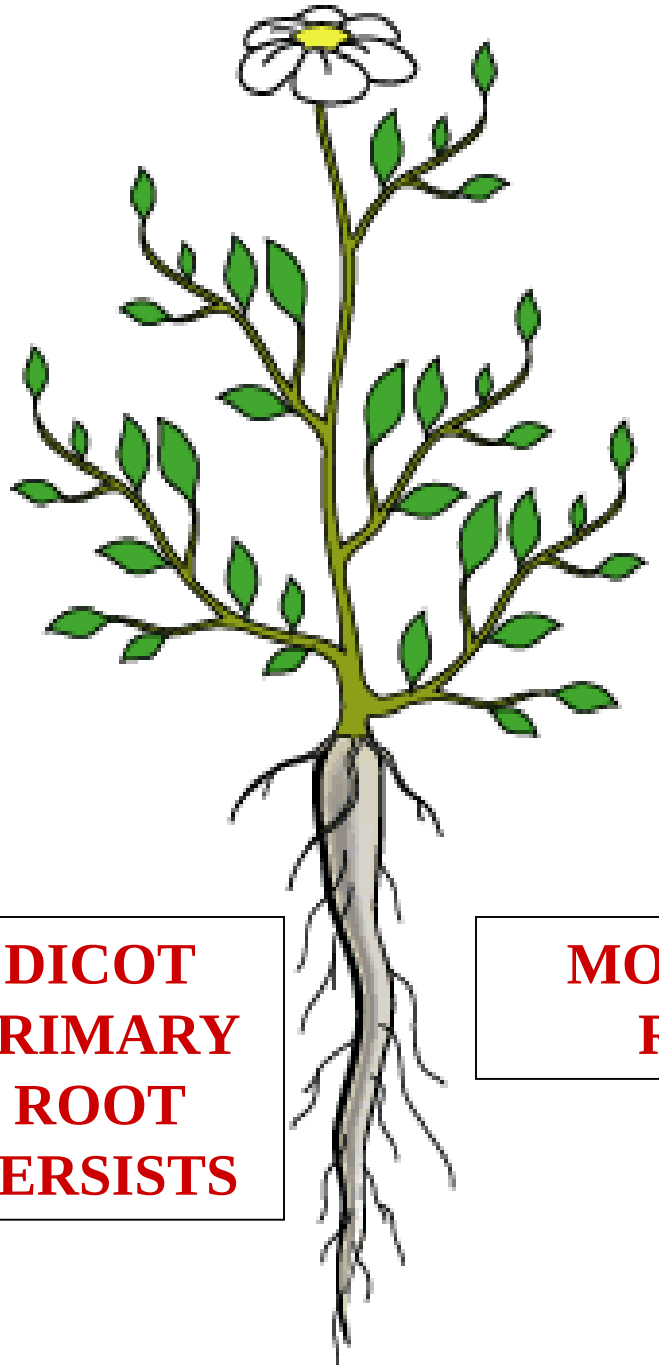


DICOT ROOT



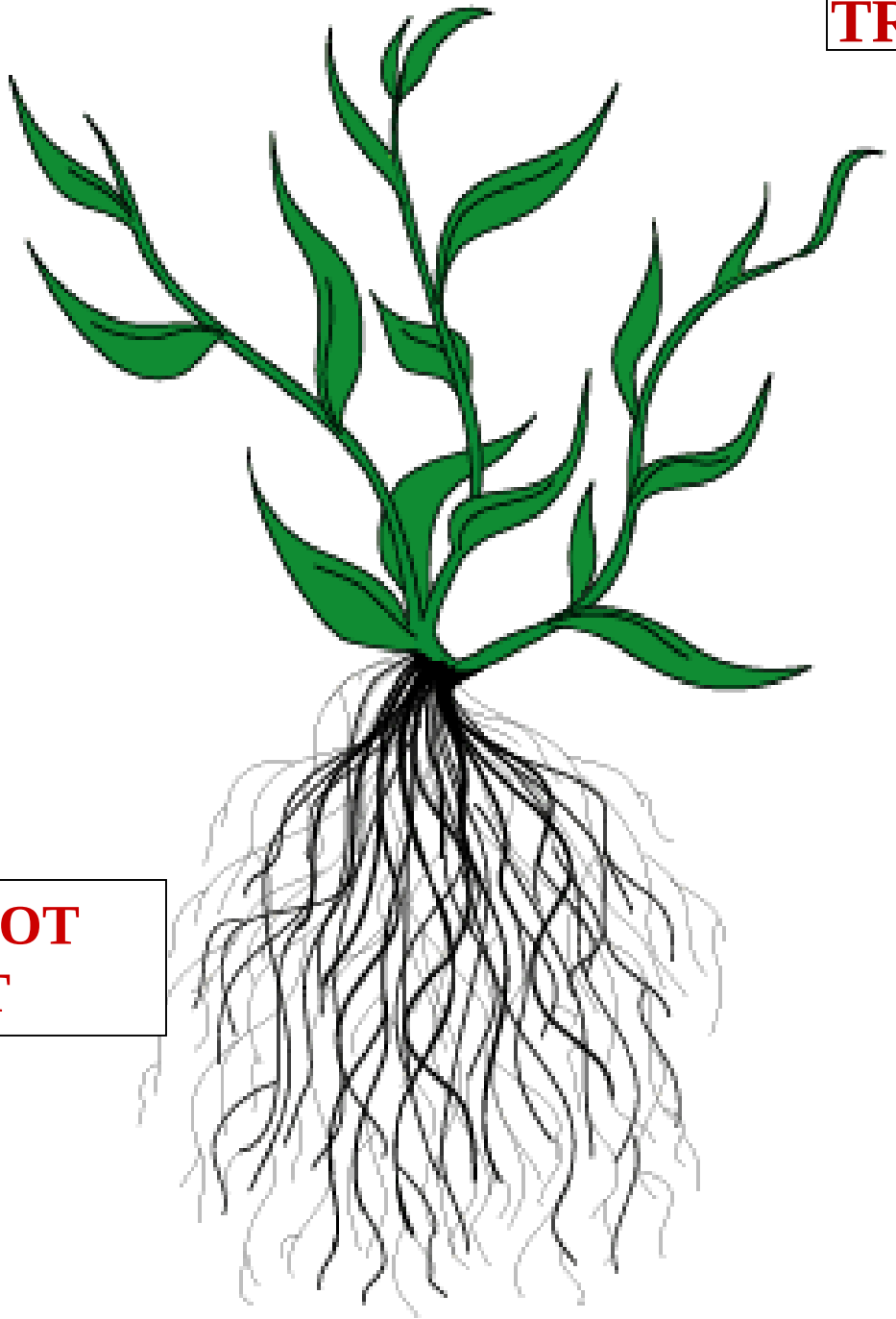
MONOCOT ROOT

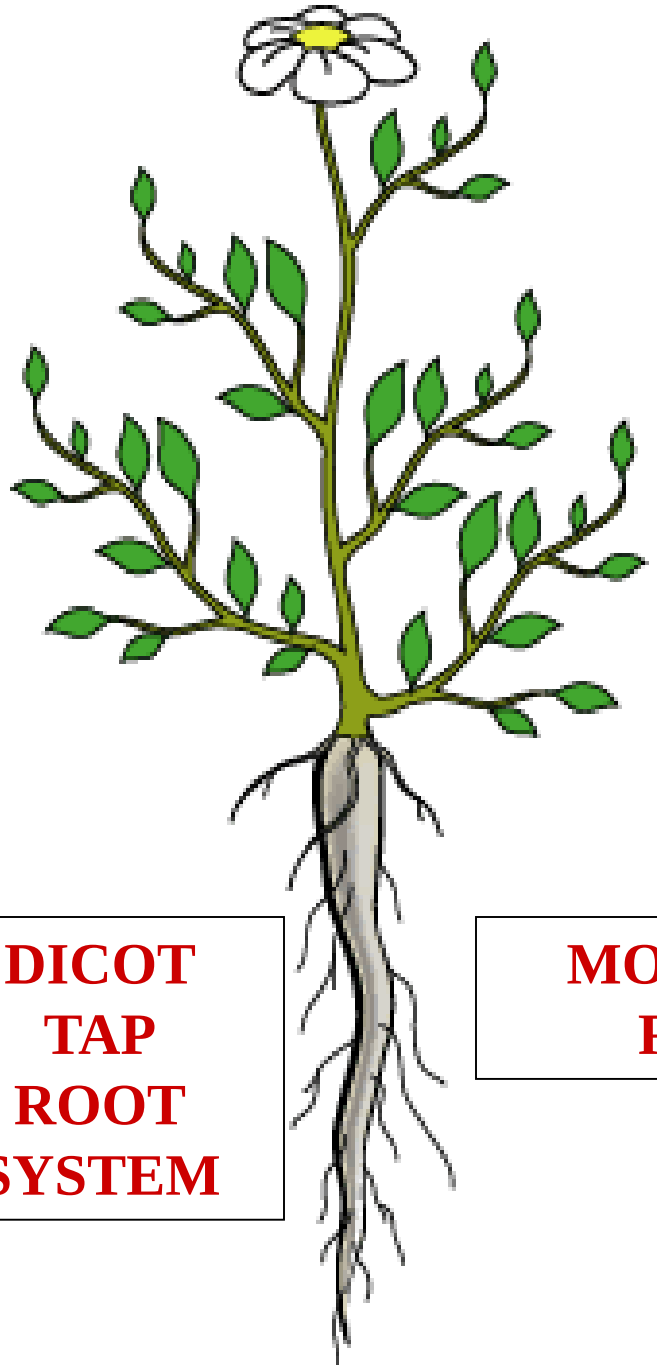
TR



DICOT PRIMARY ROOT PERSISTS

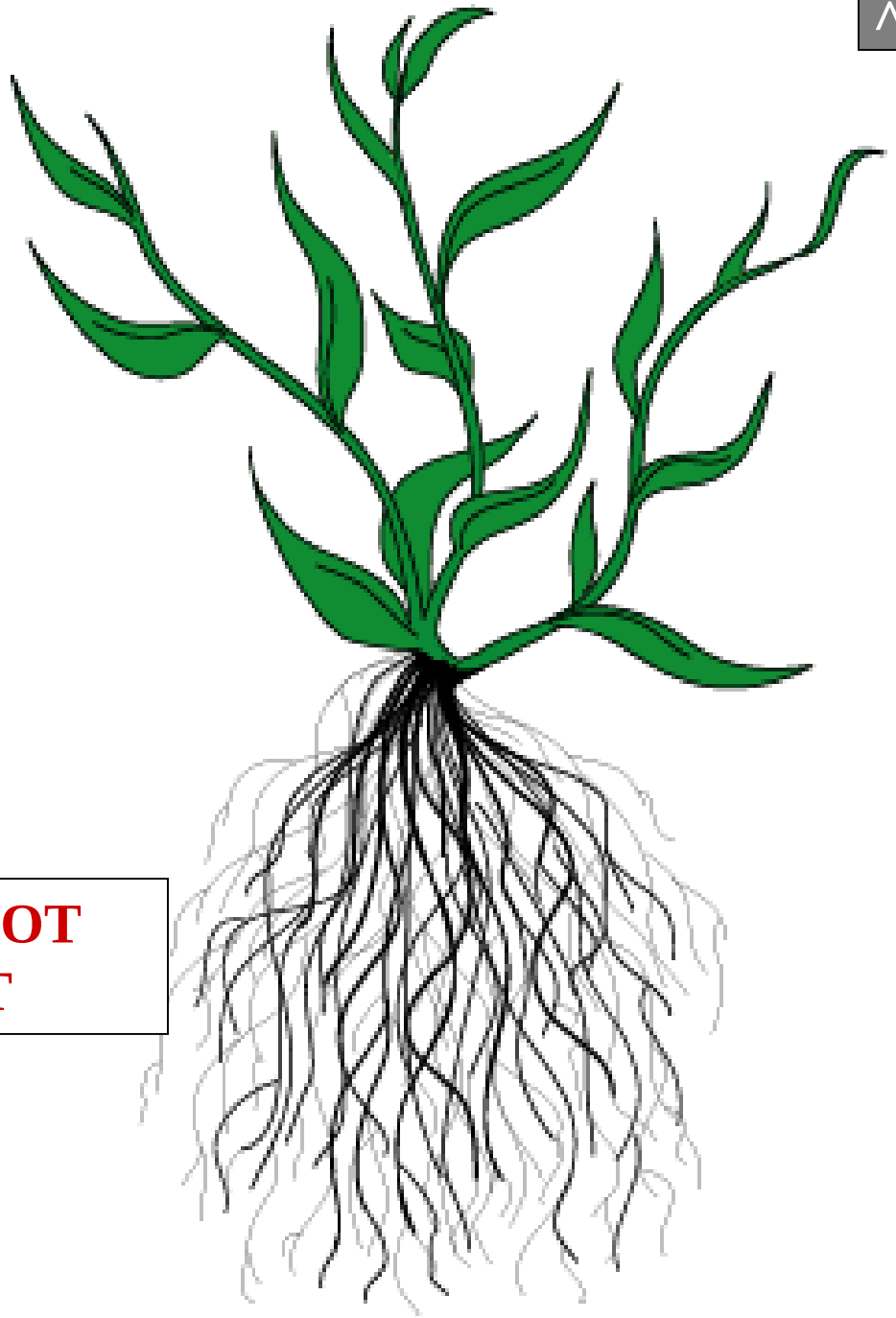
MONOCOT ROOT





DICOT TAP ROOT SYSTEM

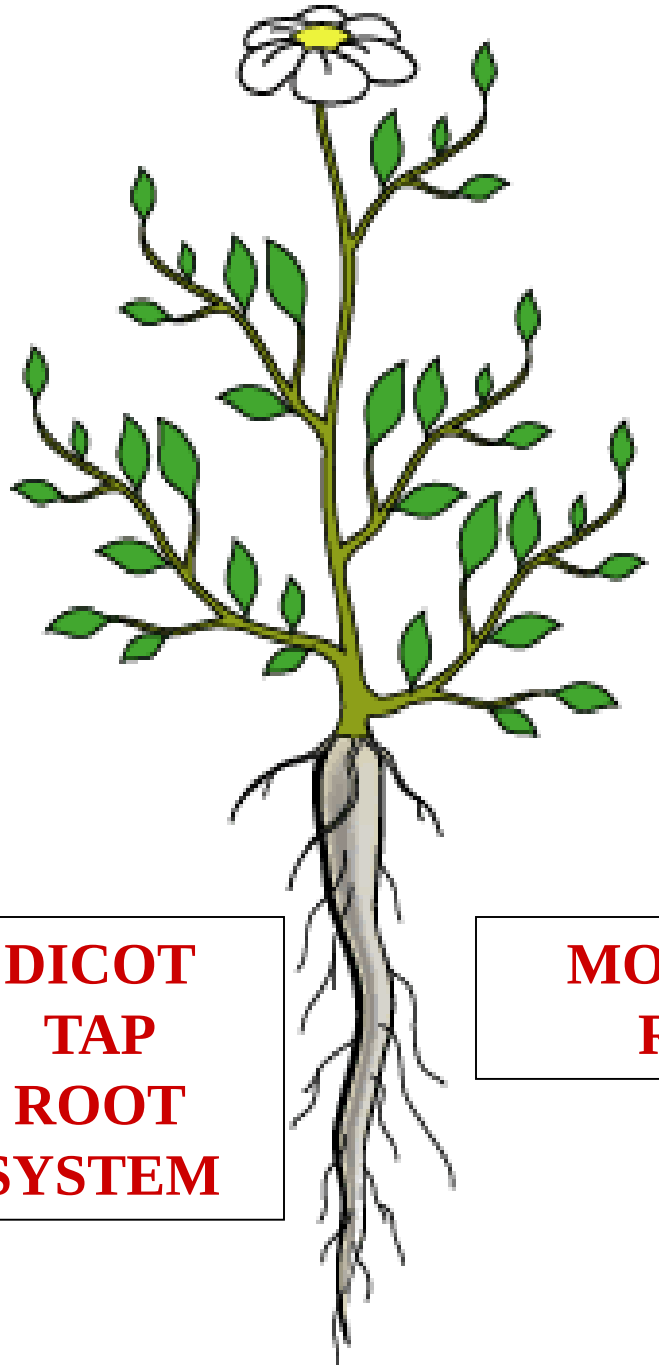
MONOCOT ROOT



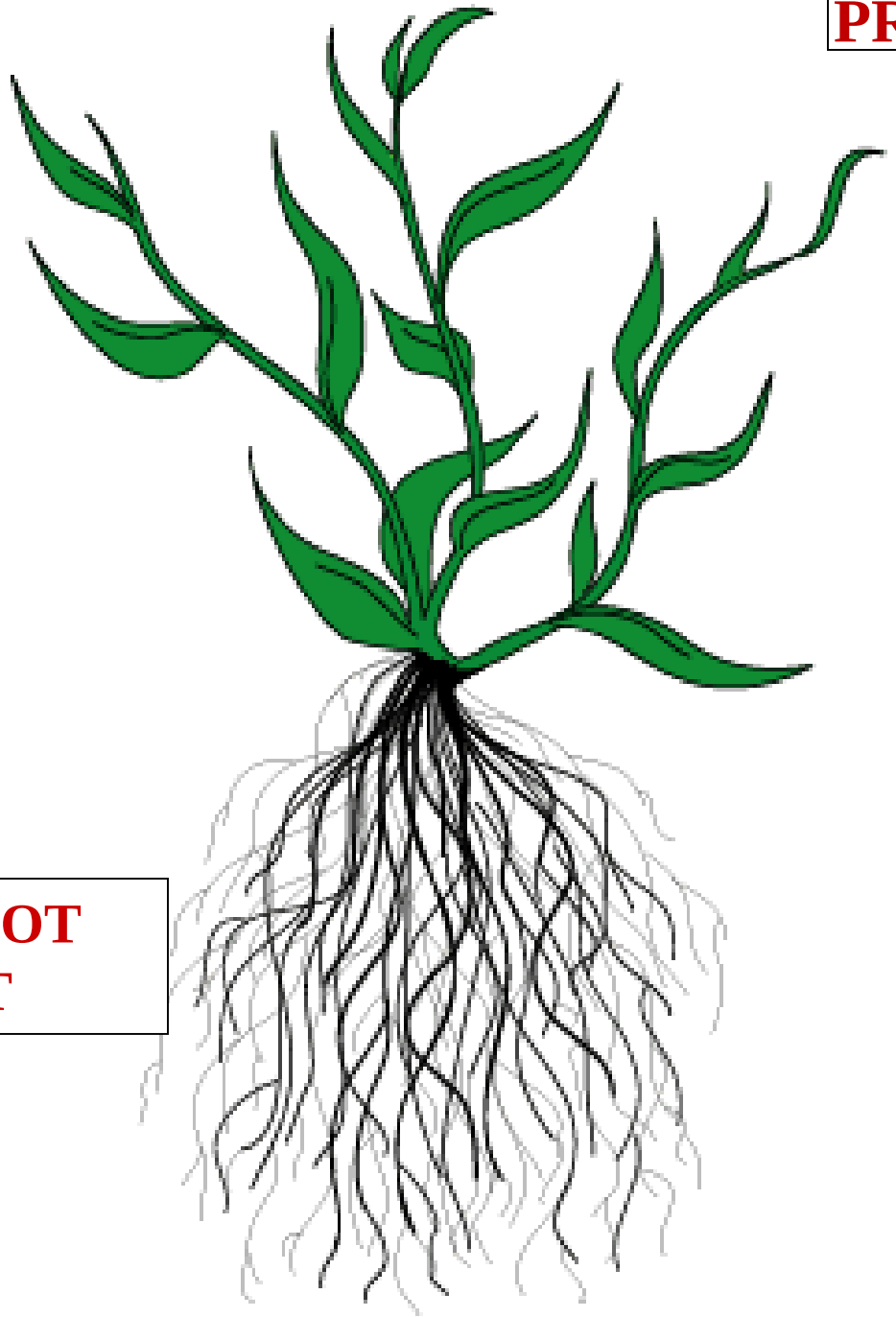
MONOCOT ROOT MORPHOLOGY


MONOCOTS


PR

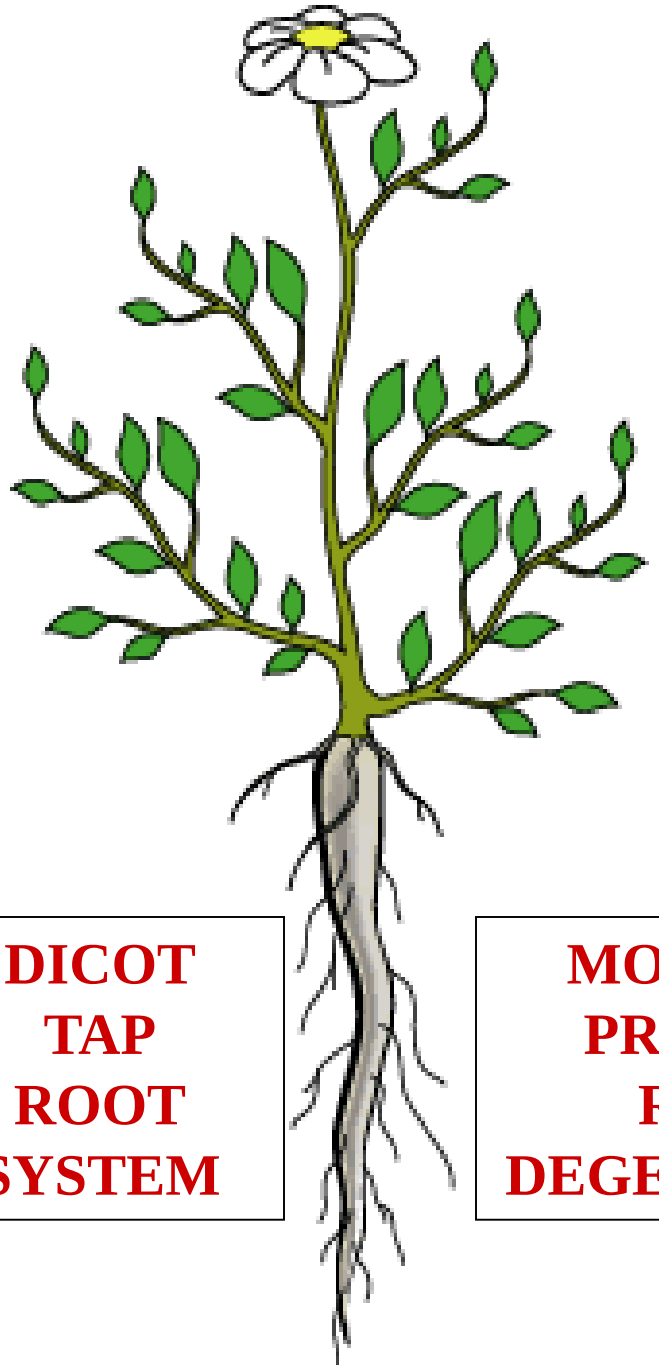


DICOT
TAP
ROOT
SYSTEM

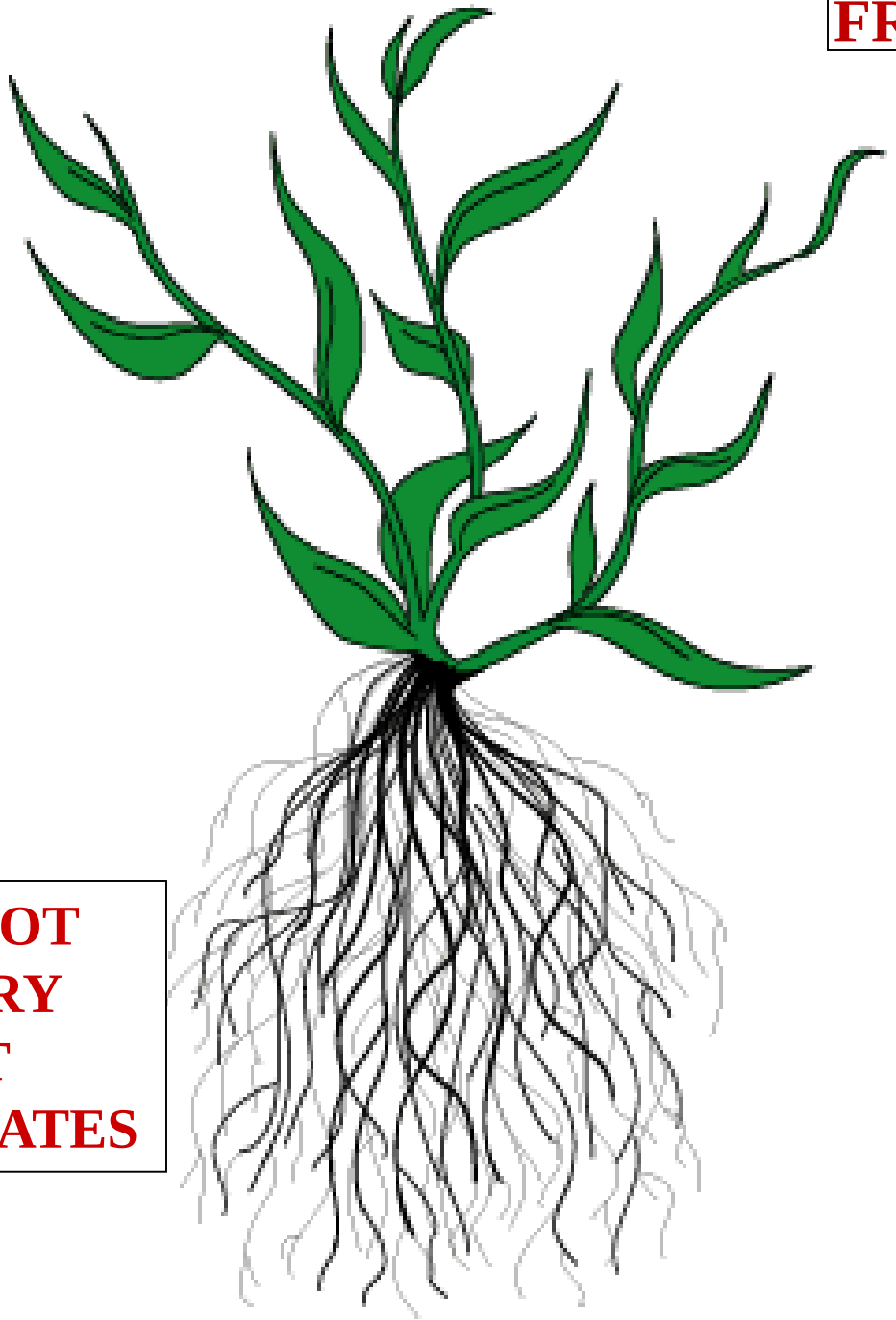


MONOCOT
ROOT

FR



DICOT
TAP
ROOT
SYSTEM



MONOCOT
PRIMARY
ROOT
DEGENERATES