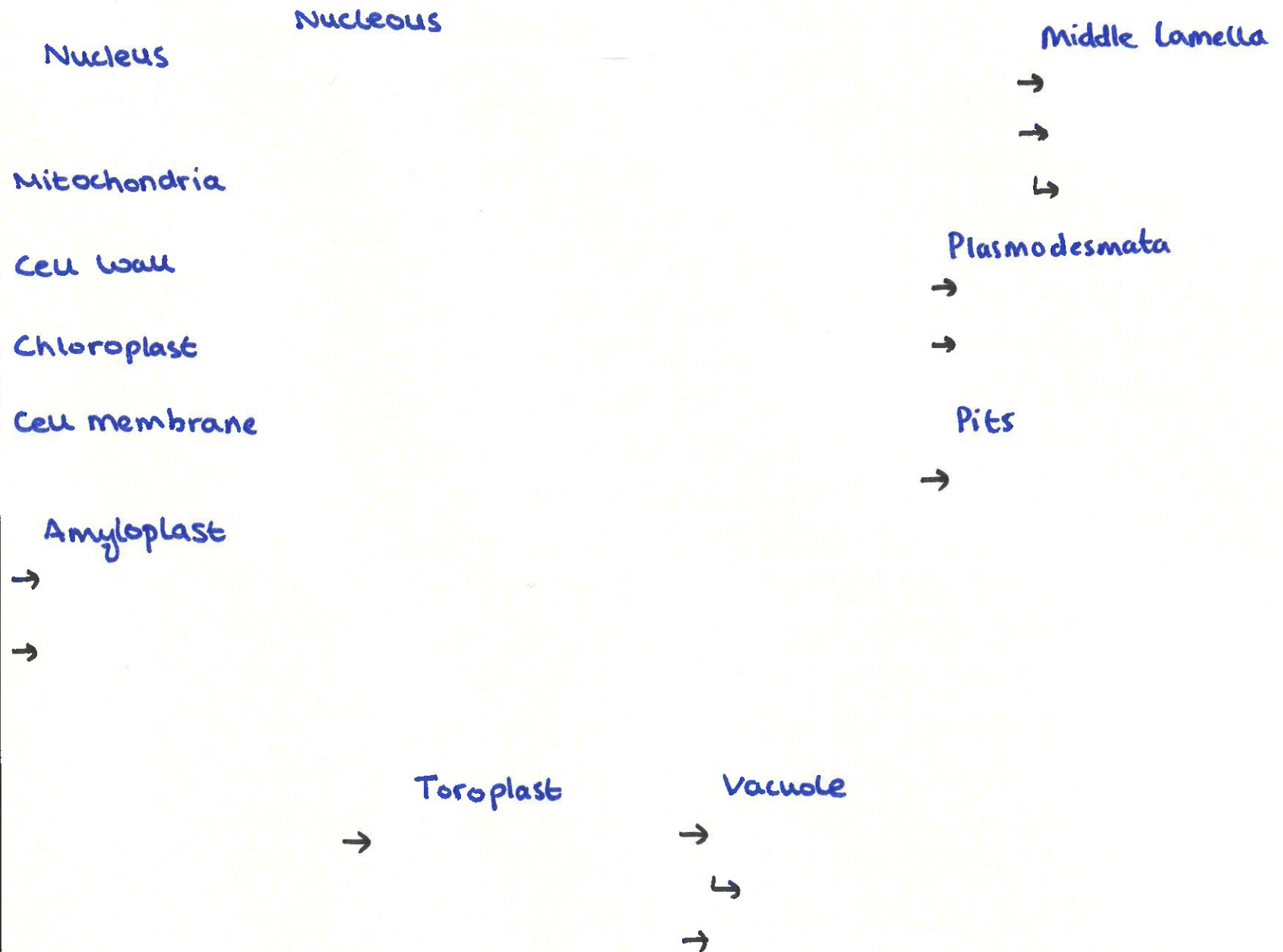




Plant Cell Structure

1 2 3 4 5





Cellulose & Starch

1 2 3 4 5

Cellulose

Starch

Function

Glucose

Bonding

Structure



Plant Cell Walls

1 2 3 4 5

Primary Cell Wall

-
-
-
-
-

Secondary Cell Wall

-
- e.g.
-
-
-
-
-

Plant cell wall Structure

-
-
-
-
-

Using Plant Fibres





Plant Fibres & Starch

1 2 3 4 5

Plant Fibres

Starch



More Sustainable because . . .





Transverse

Longitudinal

Distribution of Xylem, Phloem & Sclerenchyma

1 2 3 4 5

_____ :
_____ :

Transverse Cross Section

Longitudinal Cross Section

Sclerenchyma Fibres

→
→
→
→
→
→

→
→



TT

Transpiration

Transport in Plants : Xylem

1 2 3 4 5

Xylem:

→

→

→

↳

Cohesion - Tension Theory

→

↳

→

→

→

Factors Affecting the Rate
of Transpiration

1)

2)

3)

4)

↳

Cohesion



Mass Transport in Plants: Phloem

1 2 3 4 5

Phloem:

→

→

→

1)

2)

Evidence for Mass Flow / Translocation → Radioactive Labeling

→

→

→

→ Ringing Experiments

→

→

→

→

↳

However...

→

→



Source

Mass Flow Hypothesis / Translocation

1 2 3 4 5

Sink

_____ →

1)

2)

3)

4)

→

→

→

→



Cations

Cations & Anions

1 2 3 4 5

_____:

_____:

Calcium ions ()

→

Nitrate ()

→

Anions

→

Magnesium ()

→



Drug Testing

1 2 3 4 5

Historic Protocols

→

→

→

Placebo

→

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→

→

Contemporary Protocols

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→

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Double Blind Trials

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→

Three Phase Testing

Phase 1: →

→

→

Phase 2: →

→

Phase 3: →

→

→