Cell Cycle & Mitosis

Mitosis

Cytokinesis

Apoptosis

_____ :

→

→

Cell Cycle

→

→

_____ =

→

* G2 Checkpoint

→

→

→

* G1 Checkpoint

→

→

→

→

* Metaphase Checkpoint

→

→

→

Cell Division : Mitosis

1 2 3 4 5

Centromeres

Chromatides

cytokinesis

Centrioles

WARNING

Be careful not to mix up centrioles with centromeres

Introduction to Meiosis

1 2 3 4 5

Meiosis _____ :

Mitosis _____ :

Gametes _____ :

Haploid (n)

Meiosis

↳

Mitosis

Diploid (2n)

→ →

Fertilisation

→ →

→ →

↳

↳

TT

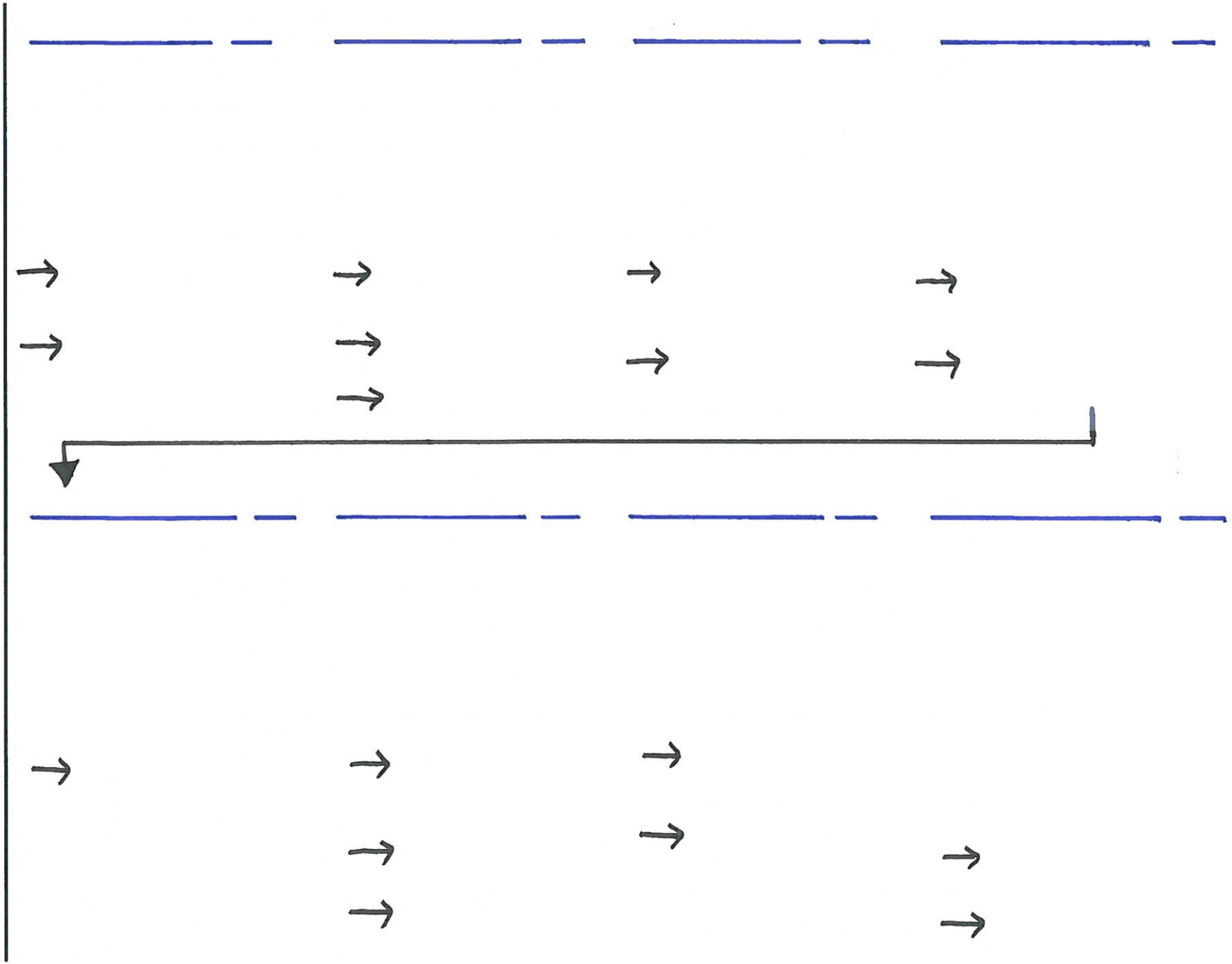
Before Meiosis

1 2 3 4 5

Homologous Pairs

Meiosis

1 2 3 4 5



Eukaryotic Cells

1 2 3 4 5

TT

Specialised Cells

Cell Organisation

_____ _____ : →

→

Specialised Cell

Specialised Cell

Tissue

Tissue

Organ

Organ

Organ System

Organ System

Specialised Animal Cells

1 2 3 4 5

( )

Specialisations:

Specialisations:

Meiosis & Genetic Variation

Crossing Over

Independent Segregation

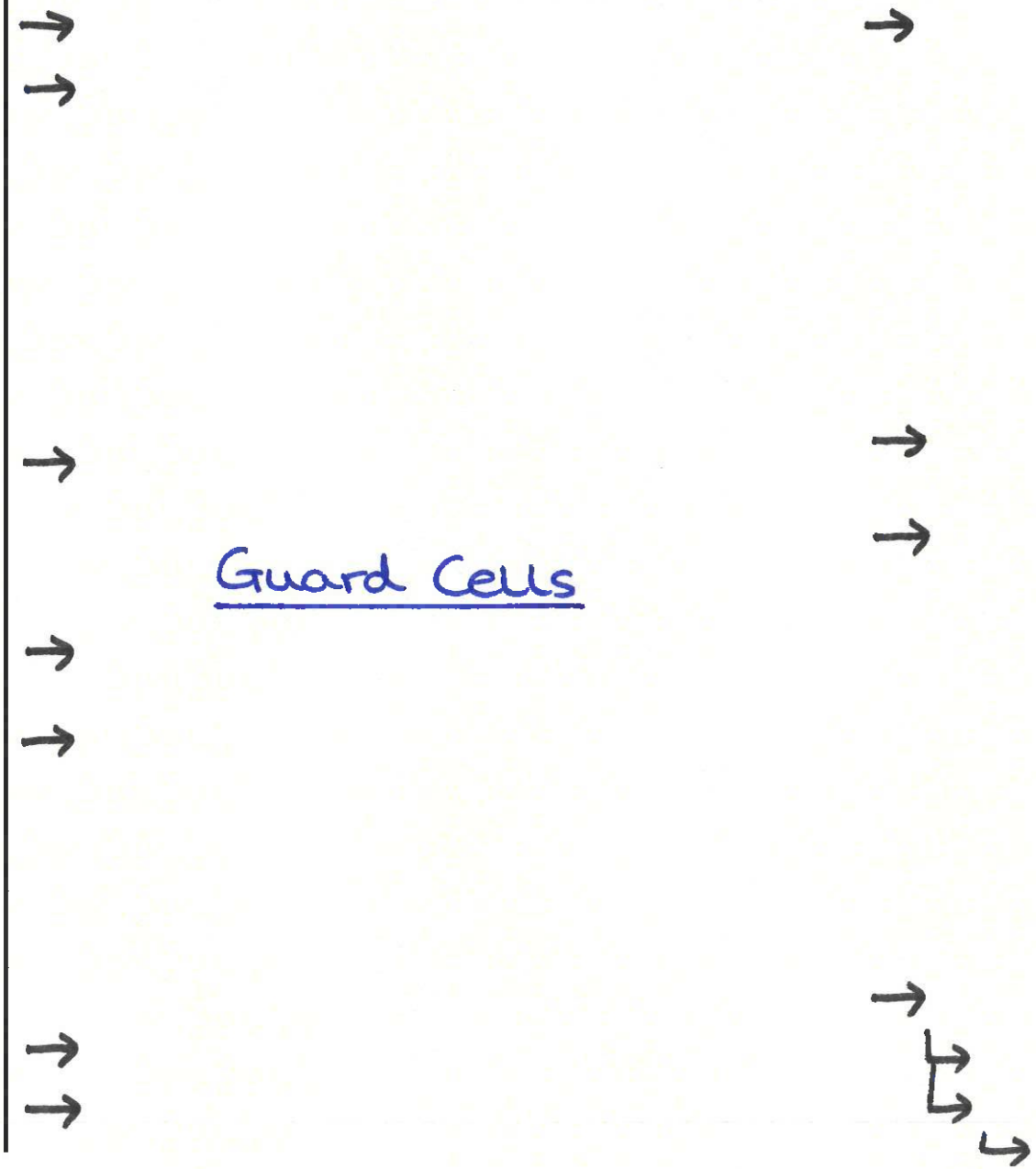
→

→

Specialised Plant Cells

1 2 3 4 5

_____ (_____) ____ ____ ____ _____



Guard Cells

Plant & Animal Tissues

1 2 3 4 5

TT

Tissue

_____ :

Plant Tissues

Xylem Tissue

→

→

→

→

Phloem Tissue

→

→

Animal Tissues

Squamous Epithelial Tissue

→

→

Ciliated Epithelial Tissue

→

→

→

Cartilage

→

→

→

Muscle Tissue

→

Stem Cells

1 2 3 4 5

Stem Cells

Totipotent

Pluripotent

Multipotent

Unipotent

Cell Specialisation / Differentiation

Stem Differentiation

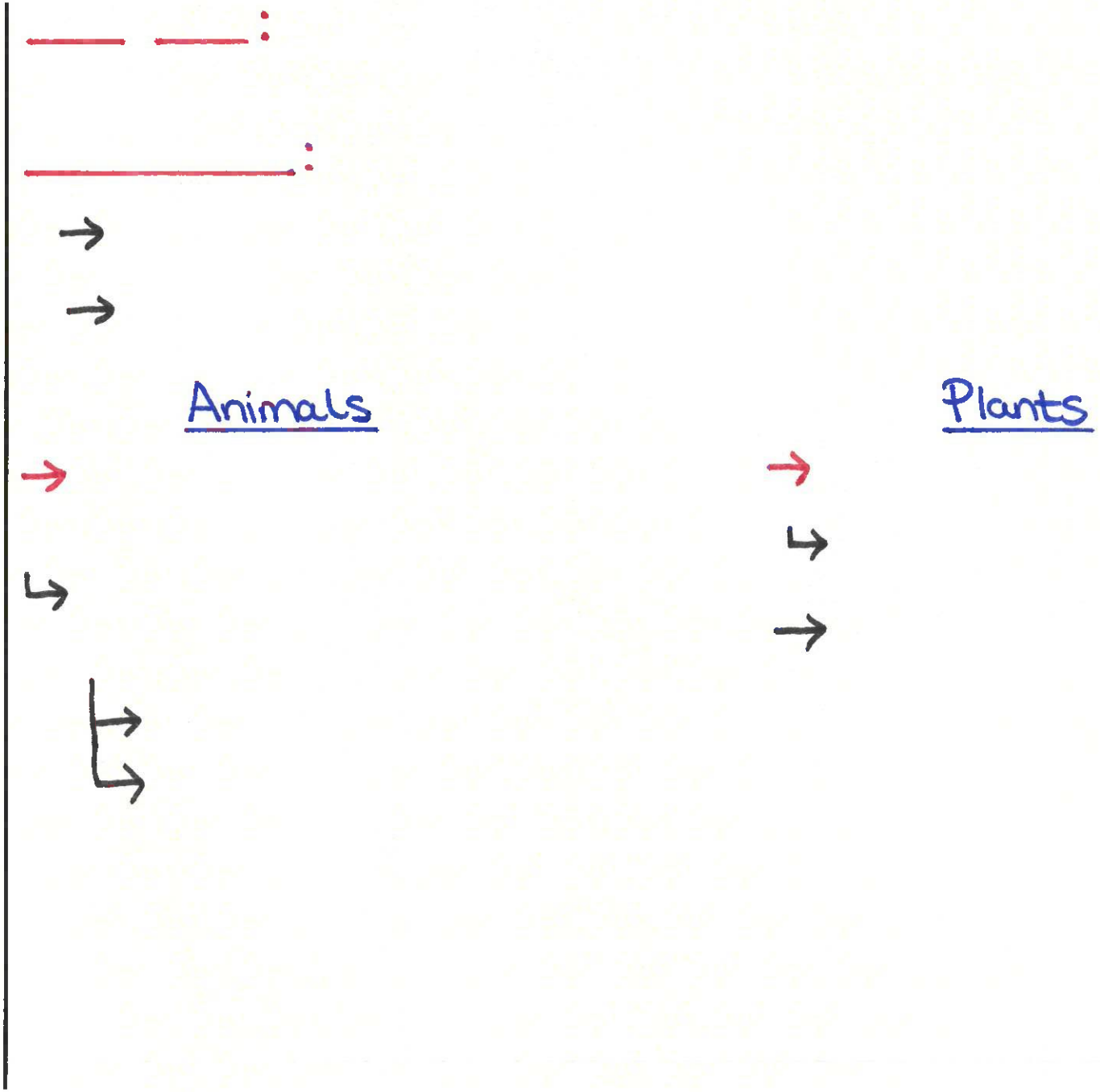
1 2 3 4 5

Stem Cell

Differentiation

Animals

Plants



Stem Cells & Medicine

Bone Marrow Transplant

Grow New Organs

Advantages

Ethical Issues