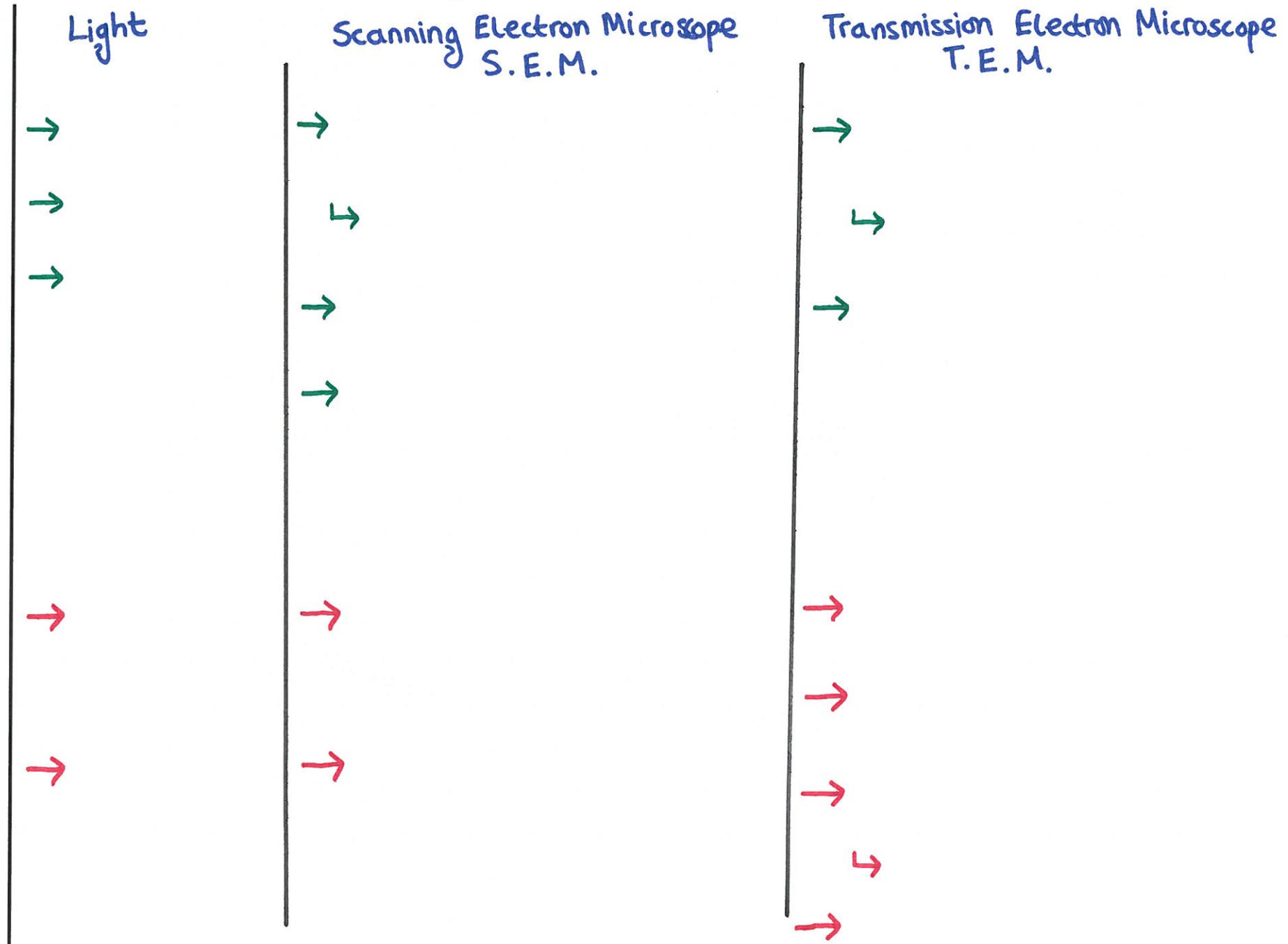




Comparing Microscopes

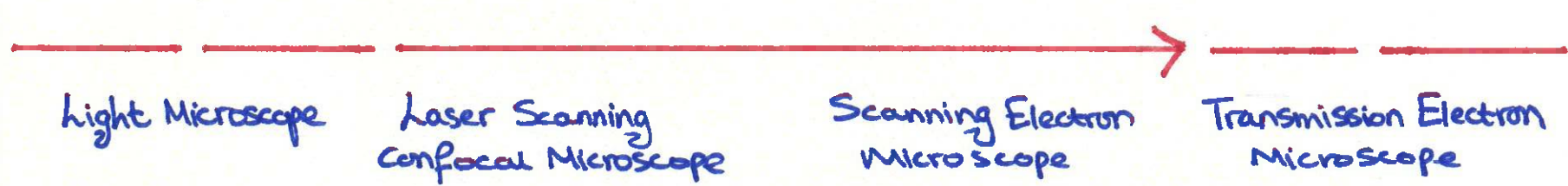
1 2 3 4 5





Microscopes

1 2 3 4 5



Laser Scanning Confocal Microscope

-
-
-
-
- ↳

Advantages

-
-

Disadvantages

-
-

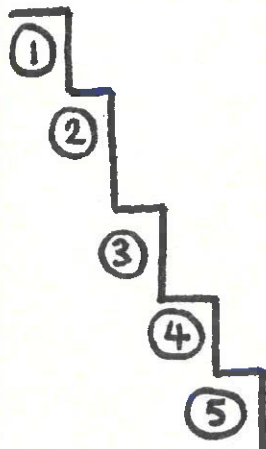
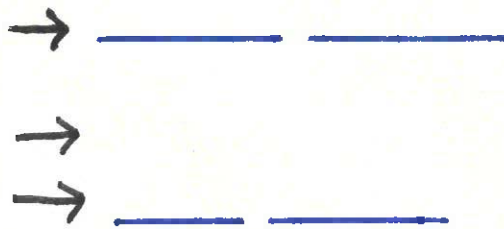


Using a Light Microscope

1 2 3 4 5



Eyepiece Graticule & Stage Micrometer





Slide Preparation

1 2 3 4 5

Slide Preparation

-
-
-
-
-
-
-
-

Staining

-
-
-
-
-

-
-
-



Order of Magnitude Calculations

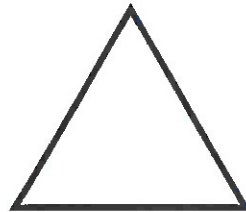
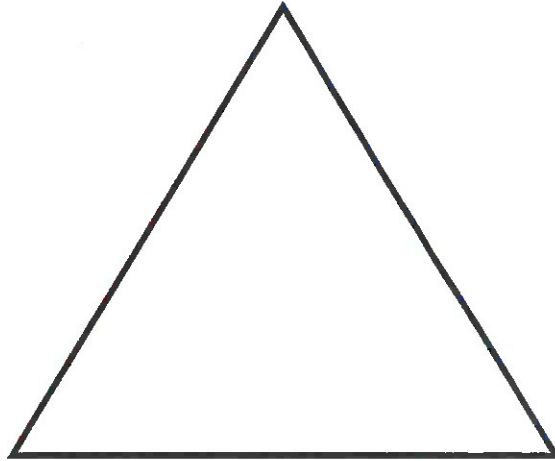
1 2 3 4 5

Magnification

_____:

_____:

Resolution





Chitin

Eukaryotic Cells

1 2 3 4 5

Plants

Animal

Algae: →
→

Fungi: →
→



Eukaryotic Cell Organelles 1

1 2 3 4 5

Lysosomal
Enzymes /
Lysozymes

Nucleus

Rough Endoplasmic
Reticulum ()

Smooth Endoplasmic
Reticulum ()



Golgi Aparatus

Golgi Vesicle

lysosomes





Eukaryotic Cell Organelles 2

1 2 3 4 5

Mitochondria

Cell Wall

Vacuole



Chloroplast

Ribosome





Microtubule

Eukaryotic Cell Organelles 3

1 2 3 4 5









Transcription

1



2

3

Translation

4

5

Exocytosis

6

7

Production & Secretion of Proteins

1

2

3

4

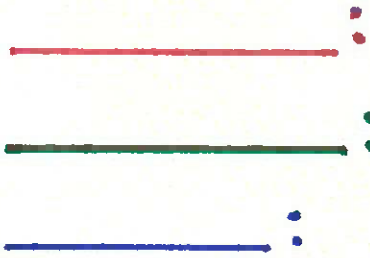
5



Cytoskeleton

1 2 3 4 5

Cytoskeleton



Microfilaments

Function



e.g. →



Microtubules

Microfilaments



Microtubules





Prokaryotic Cell Structure

1 2 3 4 5

Loop of DNA



Cytoplasm



Small Ribosomes



Cell membrane



Capsule



Cell Wall



Plasmids



Flagella





Prokaryotes Vs Eukaryotes

1 2 3 4 5

Prokaryotes		Eukaryotes	
→		→	
①		①	
②		②	
③		③	
④		④	
⑤		⑤	
⑥		⑥	