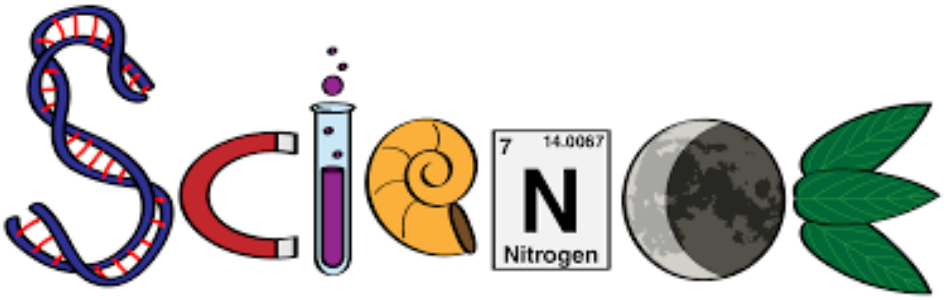
Meopham School



HOMEWORK BOOKLET

Year 7 - Term 1

Homework 1

Laboratory Safety

The picture below shows a science lab, but not everything is as safe as it should be!

Identify **ten** hazards in the picture.

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Homework 1

Safety Rules

1. Always wear _____ during a practical.
2. Stand _____ during a practical.
3. Do not _____ or _____ during a practical.
4. No _____ around the lab.
5. _____ long hair back.
6. When something gets broken, tell a _____.

Can you think of anything else to add to the list?

7. _____

   _____

8. _____

   _____

9. _____

   _____

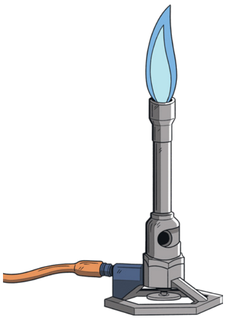
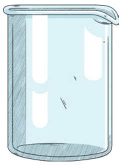
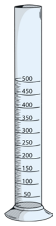
10. _____

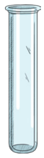
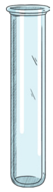
    _____

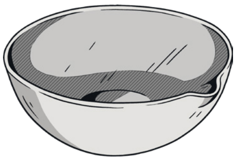
Homework 2

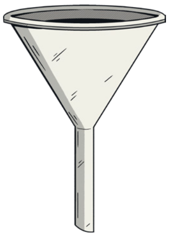
Naming Scientific Equipment

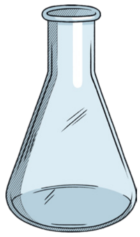
Give the name of each piece of scientific equipment.

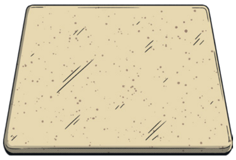
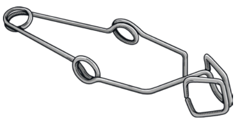
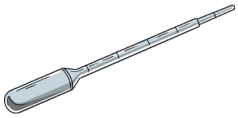
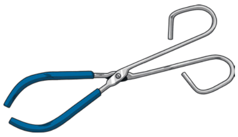




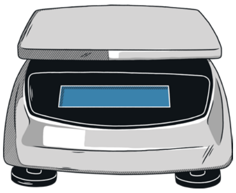
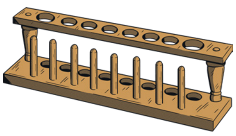









Homework 2

Hazard Symbols **Match and Draw**

Hazard symbols are used to warn us about the potential hazards of a substance.

Draw **one** line from each symbol to the meaning of that symbol, then draw **one** line from each meaning to the correct description.

Symbol	Meaning	Description
	flammable	Could cause illness or death if taken into the body.
	moderate health hazard	Catches fire when it comes into contact with oxygen and a heat source.
	corrosive	Could irritate the skin.
	harmful to the environment	Could cause damage to animal and plant life if released into water systems.
	serious health hazard	Could burn the skin and damage the eyes. Avoid breathing in vapours.

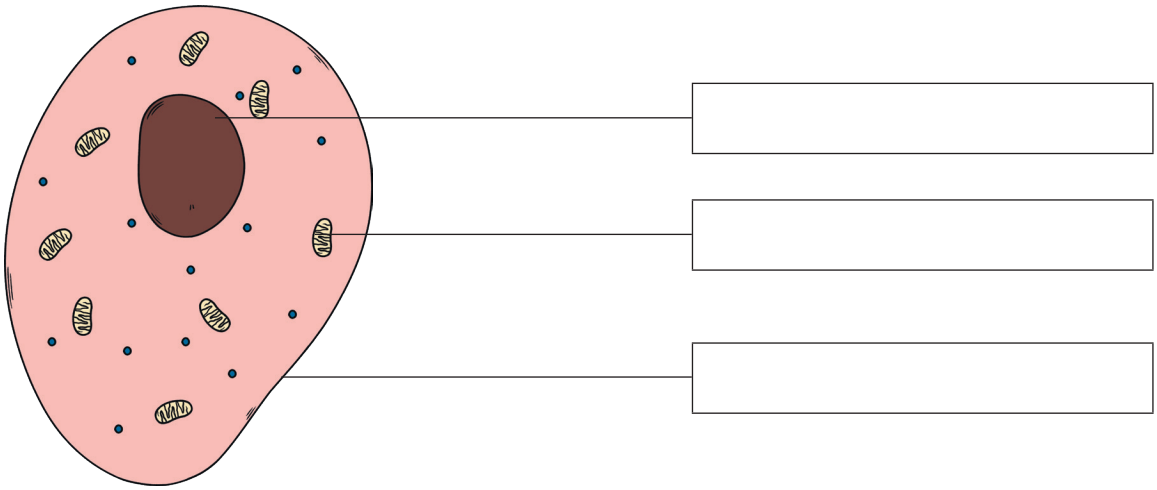
Homework 3

Cells and Organisation

1. The diagram below shows an animal cell.

   Write the name of each structure in the correct box.

nucleus	cell membrane	mitochondria



animal cell

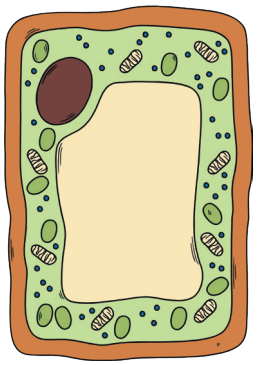
2. Draw **one** line from each sub-cellular structure to its function.

cell membrane	Controls the activities of the cell.
nucleus	Contains the enzymes needed for aerobic respiration.
mitochondria	Controls the movement of substances into and out of the cell.

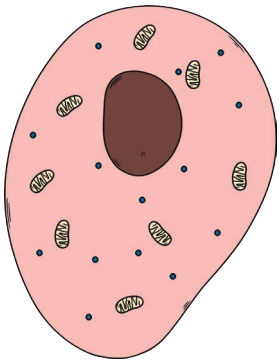
3. Give the function of the cytoplasm.

BEYOND SCIENCE

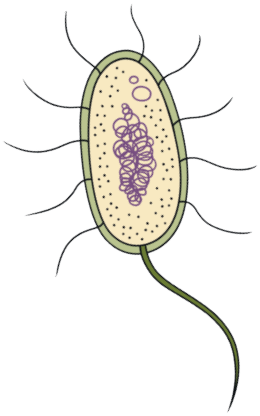
The diagrams below show a plant cell, an animal cell and a bacterial cell.



plant cell



animal cell



bacterial cell

4. Which structure is present in a plant cell but **not** in an animal cell?
   Tick **one** box.

   ☐ cytoplasm

   ☐ circular DNA

   ☐ permanent vacuole

5. Which structure is present in a bacterial cell, but **not** in a plant cell or an animal cell?
   Tick **one** box.

   ☐ chromosomes

   ☐ nucleus

   ☐ plasmid

Plant cells have chloroplasts.

6. Give the function of the chloroplast.

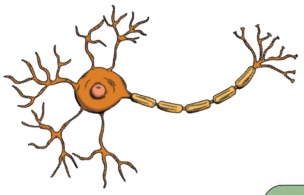
_____

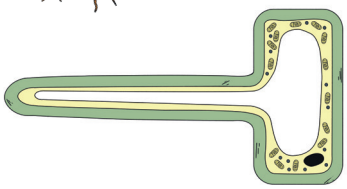
_____

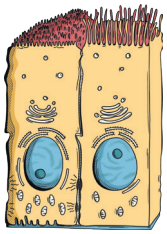
_____

7. Draw **one** line from each specialised cell to the correct diagram.

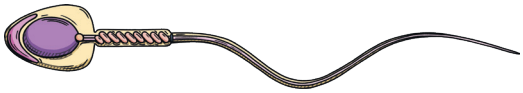
root hair cell
nerve cell
ciliated epithelial cell





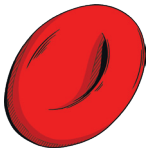


The diagram below shows a sperm cell.



8. Explain why the sperm cell has a tail.

The diagram below shows a red blood cell.



9. Give **one** adaptation of the red blood cell.

10. Rewrite the key words in size order from the smallest to the largest.

tissue **organ system** **cell** **organ**

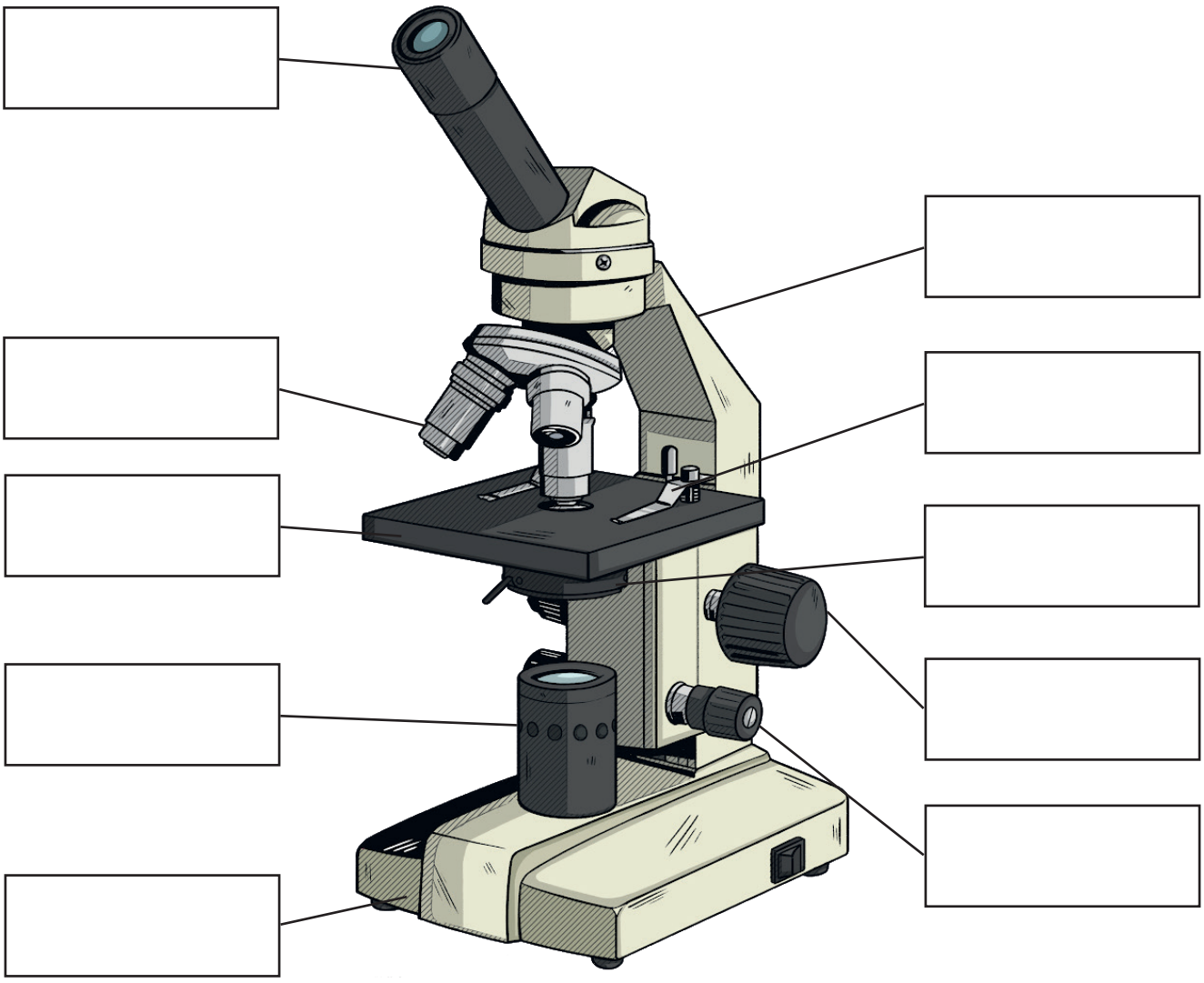
Homework 4

Parts of a Light Microscope

Label the parts of a light microscope on the diagram below. Use the key words in the box.

Key Words

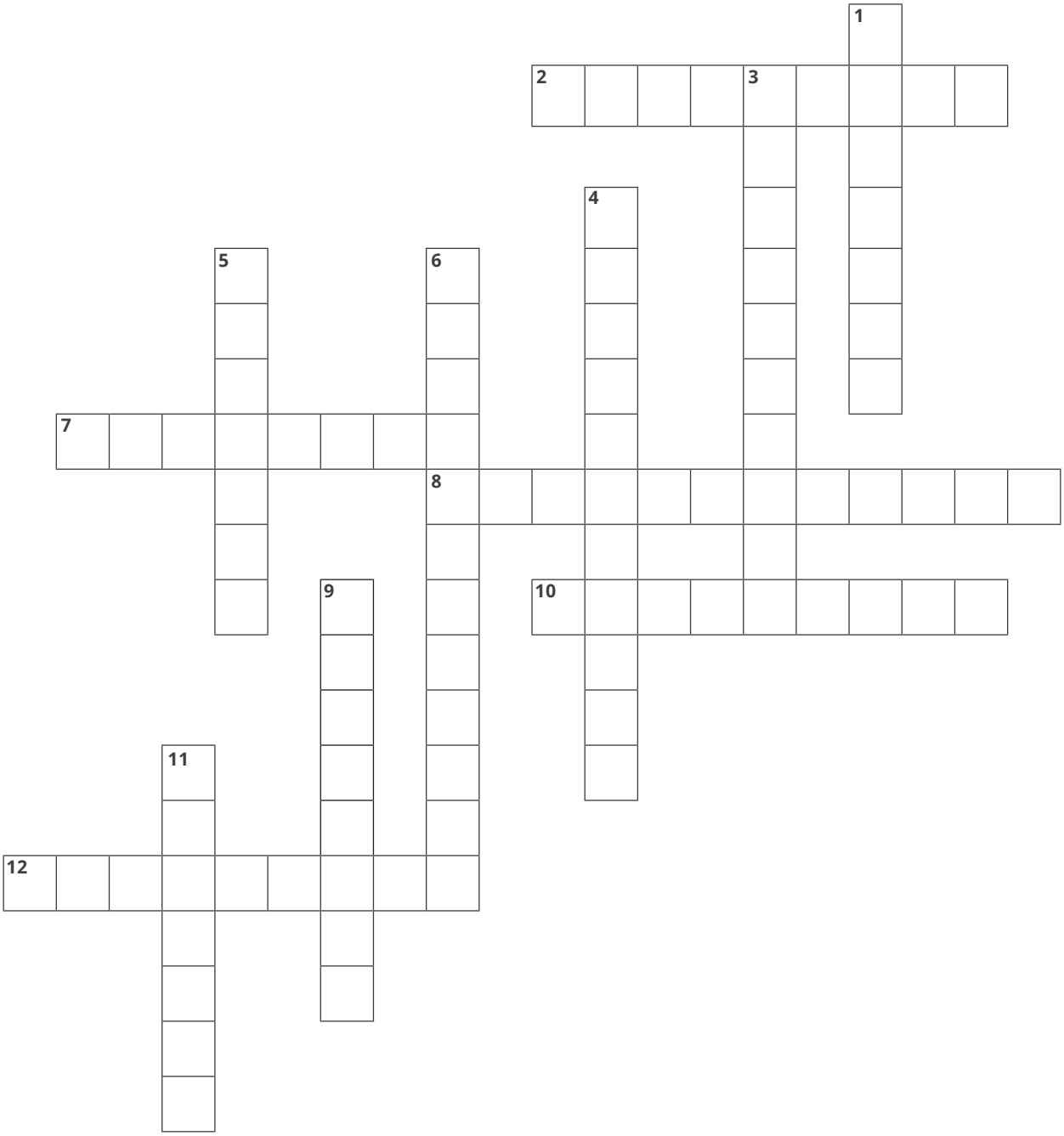
arm	coarse adjustment knob	eyepiece lens
fine adjustment knob	objective lens	stage clips
base	diaphragm	
light source	stage	

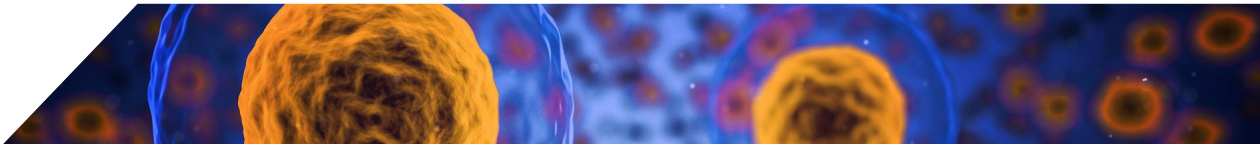


Homework 5

Cells **Crossword**

Solve the clues relating to cells and sub-cellular structures to complete the crossword. The number at the end of each clue tells you how many letters there are in the answer.





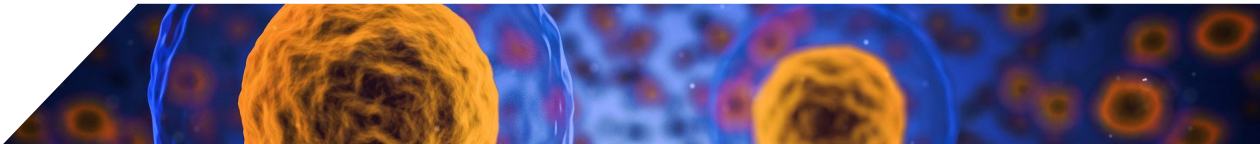
Homework 5

Across

2. The jelly-like substance inside the cell where most chemical reactions occur. (9)
7. A rigid structure found in plant cells and bacterial cells that strengthens the cell and provides support. (4,4)
8. The site of aerobic respiration, a process which releases energy for the cell. (12)
10. A tail-like structure that allows some types of cells to move. (9)
12. An organism with cells that contain a membrane-bound nucleus. (9)

Down

1. The part of a plant cell that contains cell sap to keep the cell rigid. (7)
3. An organism with cells that have no nucleus. (10)
4. A sub-cellular structure that contains the pigment chlorophyll, which absorbs light for photosynthesis. (11)
5. A sub-cellular structure that contains genetic information and controls the activities of the cell. (7)
6. A barrier around the cytoplasm which controls the movement of substances into and out of the cell. (4,8)
9. The part of the cell where protein synthesis takes place. (8)
11. A small ring of DNA that codes for specific features of bacterial cells, such as antibiotic resistance. (7)



Homework 6

Muscles and Joints

Draw a line from the muscle or joint to match the description of its role.

Hinge joint	Allows for movement in all directions, for example hip and shoulder.
Ball and socket joint	Covers the end of bones and is a tough, smooth substance.
Fixed joint	Does not allow movement, for example the skull.
Cartilage	Allows for movement backwards and forwards, for example the elbow and knee.
Ligaments	These are muscles that work in pairs to bring about movement, for example biceps and triceps.
Antagonistic muscles	These are attached to two bones to stop the joints from falling apart.