

Name:
Science Class:
Teacher:
Hand in day:

Y7 Science

Term 3 Homework Booklet

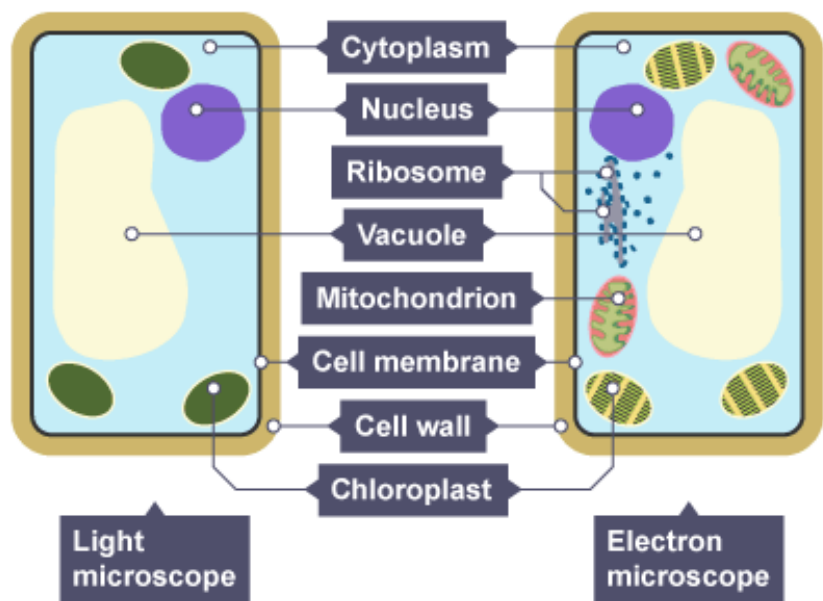
Biology

	Hand in Date	Parents Signature
Plants		
Homework 1		
Homework 2		
Homework 3		
Homework 4		

Plants Homework 1:

Read through the information then answer the questions below:

Plant cells



Animal and plant cells have certain structures in common:

	Function
Cytoplasm	A jelly-like material that contains dissolved nutrients and salts and structures called organelles. It is where many of the chemical reactions happen.
Nucleus	Contains genetic material, including DNA, which controls the cell's activities.
Cell membrane	Its structure is permeable to some substances but not to others. It therefore controls the movement of substances in and out of the cell.
Mitochondria	Organelles that contain the enzymes for respiration, and where most energy is released in respiration.
Ribosomes	A tiny organelle where protein synthesis occurs.

Plant cells also have additional structures:

	Function
Chloroplast	Organelles that contains the green pigment, chlorophyll, which absorbs light energy for photosynthesis. Contains the enzymes needed for photosynthesis.
Cell wall	Made from cellulose fibres and strengthens the cell and supports the plant.
Permanent vacuole	Filled with cell sap to help keep the cell turgid.

Questions

1. List the five structures that both plant and animal cells have.

2. List the three structures that only plant cells have.

3. In which structure does protein synthesis occur?

4. In which structure is DNA found?

5. What is the cell wall made from?

6. What is the function of the cell wall?

7. In which structure is chlorophyll found?

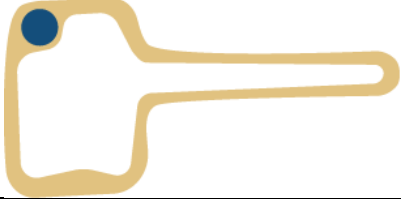
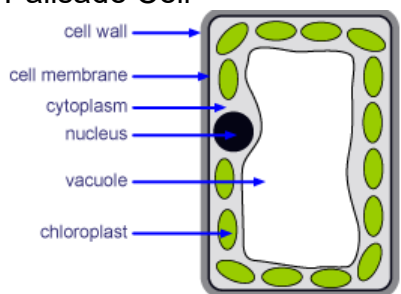
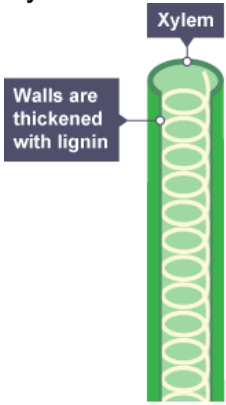
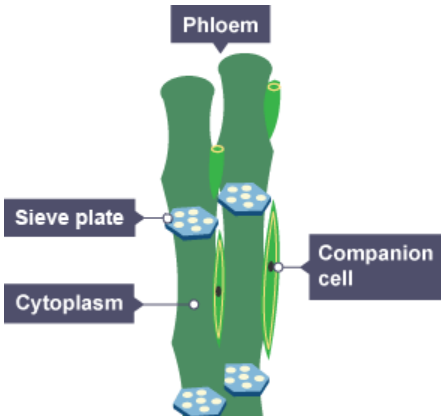
8. What does chlorophyll absorb and why?

9. What is the function of the cell membrane?

10. What is the function of the mitochondria?

Plants Homework 2:

Complete the table below. Use the knowledge organiser to help.

Type of Plant Cell	What role does it have in a plant?	How is it adapted?
<p>Root Hair Cell</p> 		
<p>Palisade Cell</p> 		
<p>Xylem Cell</p> 		
<p>Phloem Cell</p> 		

Plants Homework 3:

Label the different structures you would find in a flower then complete the table to describe the role of the main parts of a flower.



Structure	Function
Stamen	
Anthers	
Stigma	
Ovary	

Plants Homework 4:

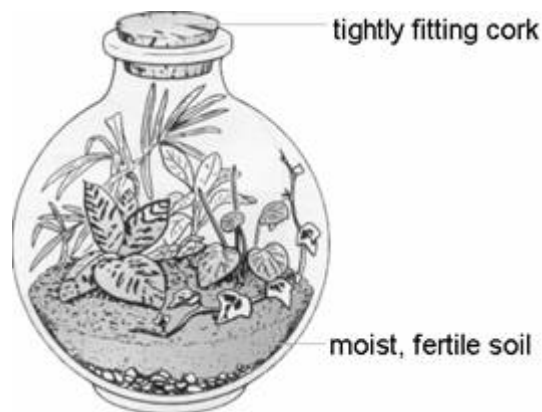
Pollination

1. What is the definition of pollination? (1 mark)
2. In which two ways can pollen be transferred? (2 marks)
3. Compare and contrast the two types of pollination (how are they similar and how are they different)? (2 marks)

Similarities:

Differences:

4. The cork in the neck of the bottle is not taken out.



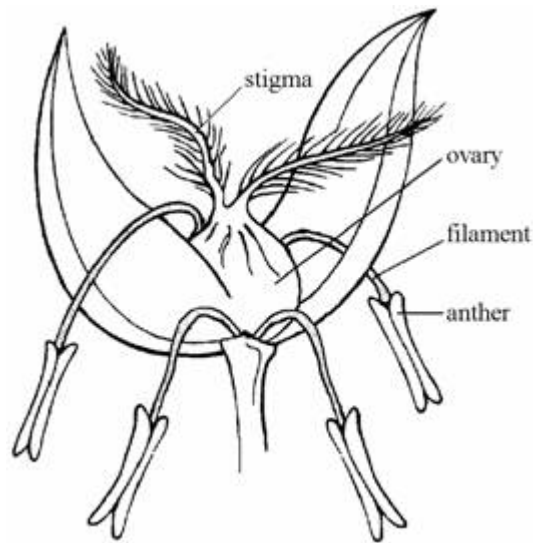
Cross-pollination is the transfer of pollen from one plant to another.

Give **two** reasons why cross-pollination is less likely to happen in this bottle garden than in an outdoor garden.

1. _____
2. _____

2 marks

5. The drawing shows a single flower of rye grass.



- (a) Rye grass flowers are adapted for wind pollination.
Explain how **two** features, shown on the drawing, show that the flower is adapted for wind pollination.

1. _____

2. _____

2 marks

- (b) In a single flower, anthers and stigmas usually mature at different times.
What is the advantage of this?

_____ 1 mark

(Total 10 marks)