

Y9 Cell Biology Homework Grids

Name: _____

Science Teacher: _____

	Comment
Grid 1.1	
Grid 1.2	
Grid 1.3	
Grid 1.4	
Grid 1.5	
Grid 1.6	
Grid 1.7	
Grid 1.8	

Grid 1.1: Use KO 1- 2

Due: _____

State the role of each of the following organelles

Cell membrane

.....

Mitochondrion

.....

Ribosome

Circle all the names of the organelles which are found in animal cells.

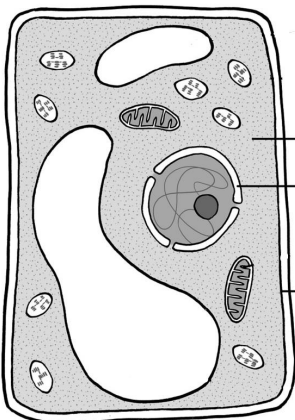
cell membrane ribosome

cell wall mitochondrion

cytoplasm permanent vacuole

chloroplast nucleus

Label parts A – D of the plant cell



A

B

C

D

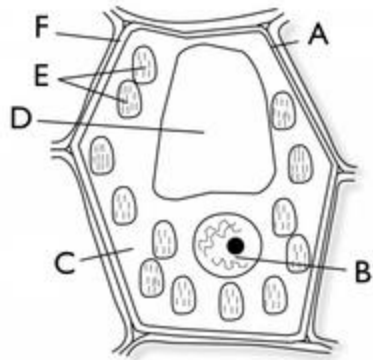
Fill in the missing words

Plant cells contain chloroplasts which are used for _____. They also have a permanent vacuole filled with _____. The whole cell is surrounded by a _____, which is made of _____.

Grid 1.4: Use KO 1, 6

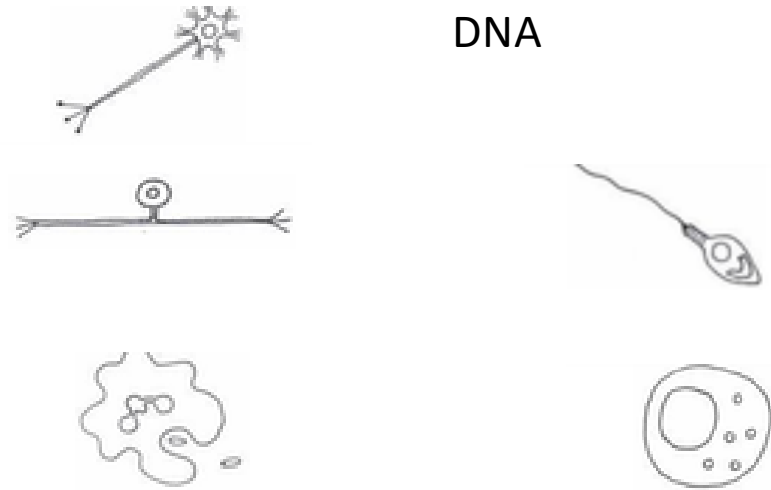
Due: _____

Match the letter with the feature to label the diagram of the plant cell



- A.
- B.
- C.
- D.
- E.
- F.

Label the location of the DNA in each of these cells



State the number of chromosomes in each cell

type of cell	chromosome number
Human skin cell	
Human sperm cell	
Human egg cell	
Human liver cell	
Human zygote	
Human nerve cell	

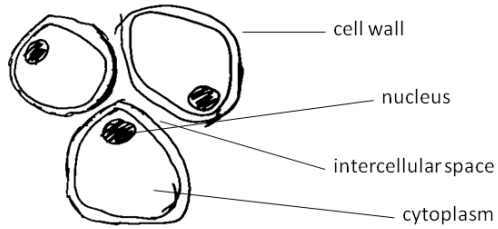
Rearrange the following into size order, starting with the largest

- | | | |
|---------------|--------------------------|---------|
| A. Gene | largest
↓
smallest | 1. |
| B. Nucleus | | 2. |
| C. Cell | | 3. |
| D. Chromosome | | 4. |
| E. Organ | | 5. |

Grid 1.5: Use KO 7, 30

Due: _____

List three errors made by the student who produced this biological drawing



1.
2.
3.

The student looked at a cell using a microscope.

The image width of the cell was 40 mm

The real width of the cell was 0.1 mm

Calculate the magnification of the cell.

Magnification =

.....

Calculate the image width of the same cell, if the magnification was 1000.

Image width =

Produce a biological drawing of this animal cell



Grid 1.8: Use KO 8

Due: _____

List two features of good exchange surfaces in **both** plants and animals

- 1.
- 2.

1. The average number of alveoli in each human lung is 280 million. The average surface area of 1 million alveoli is 0.25 m^2 .

Calculate the total surface area of a human lung.

.....

2. An athlete trains to run a marathon. The surface area of each of the athlete's lungs has increased to 80 m^2 . Give **one** way in which this increase will help the athlete.

.....

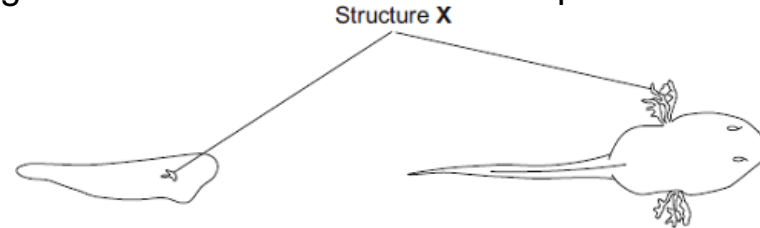
3. List two **other** factors which increase the diffusion rate.

.....

.....

Higher

The young stages of frogs are called tadpoles. The tadpoles live in fresh water. The drawings show a tadpole just before hatching and three days after hatching. Structure X helps in the exchange of substances between the tadpole and the water.



Suggest how the changes in the tadpole shown in the drawings help it to survive as it grows larger. You should **not** refer to movement in your answer. You should refer to structure X.

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