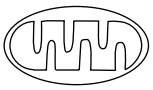
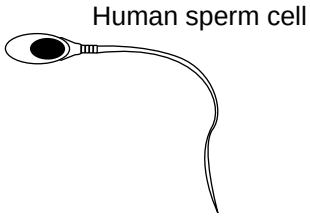
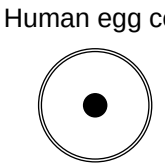
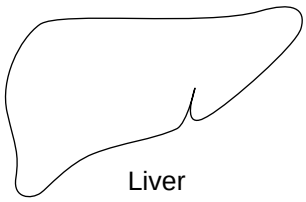
Levels of organisation

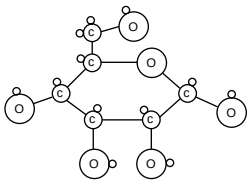
1 Rearrange the following items in order of size, starting with the **smallest**. Note that the drawings are not to scale:

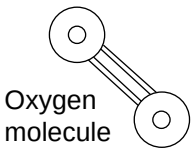












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2 Which atom or atoms:

a are found in water?.....

b are found in carbon dioxide? .....

c are found in carbohydrates (eg sugar)?.....

d are found in proteins? .....

3 Underline the substances which are organic:

proteins vitamins calcium oxygen fats water sugar starch

4 Which organ of the human body:

a protects the body and helps it to cool down or keep warm? .....

b filters the blood? .....

c pumps blood around the body? .....

d collects oxygen gas from the air and passes it to the blood? .....

e is used to detect light? .....

f is used in memory? .....

g controls breathing and heart rate? .....

h produces sperm in males? .....

5 To which of the seven systems of the body, noted below, do the following belong?

Systems: Digestive, circulatory, nervous, excretory, respiratory, reproductive, locomotive.

a Heart .....

b Brain .....

c Stomach .....

d Kidneys .....

e Ovaries .....

f Bladder .....

g Lungs .....

h Intestines .....

i Blood vessels .....

j Bones .....

k Muscles .....

l Diaphragm .....

6 What is the difference between:

a a population and a community?

.....

.....

b a habitat and an ecosystem?

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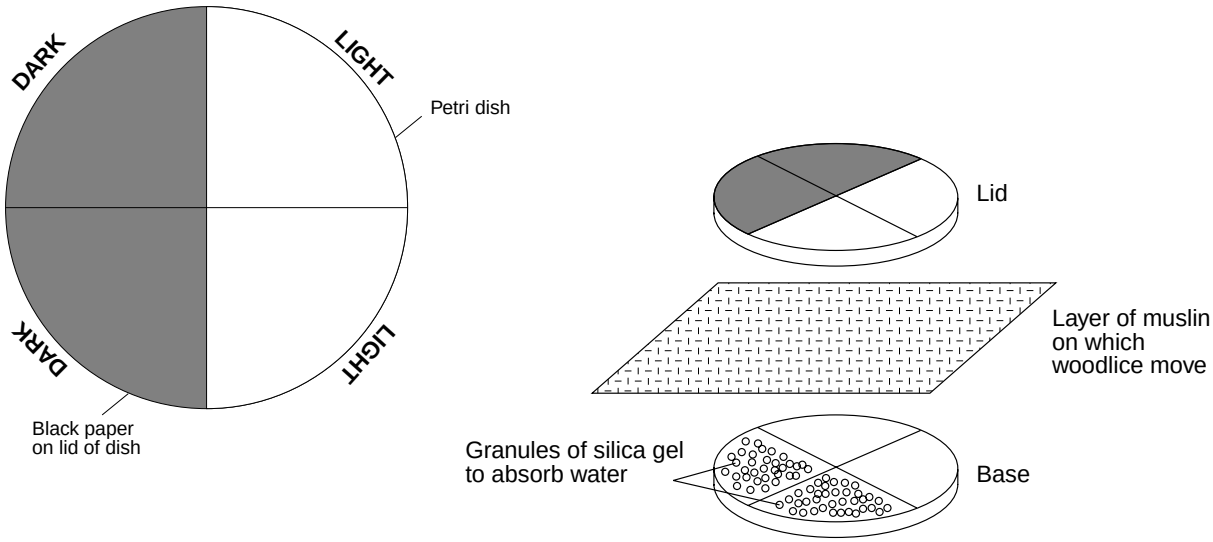
Adaptations

1 In an experiment to investigate the preferred environment of woodlice, a 'choice chamber' was set up as shown below:



a In which quarter of the chamber would you expect to find the most woodlice after a few hours? Explain your answer.

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b Give two ways in which the woodlouse is well adapted to survive in its natural environment.

.....

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c Why might the results of this experiment be unreliable?

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d How could the apparatus be modified to improve the reliability of the results? Draw a diagram and explain your answer.

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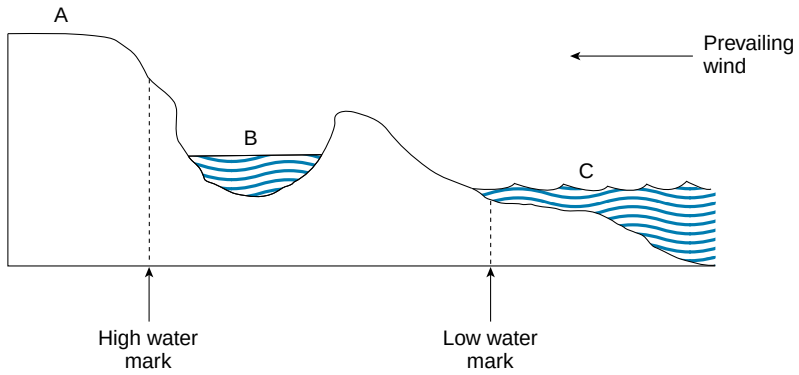
2 Below is a diagram showing a section of rocky shore:



a The organisms inhabiting three regions of the shore – A, B and C – face different challenges from the environment.

Suggest one problem and one advantage of living in regions A, B and C:

	Problem	Advantage
Region A		
Region B		
Region C		

b In which region would you expect the following organisms to survive best?

i Lichens growing on the rocks.

.....

ii Large seaweeds.

.....

iii Sea anemones.

.....

c Describe how the sea anemone is well adapted to:

i avoid being dried out

.....

ii obtain food

.....

iii avoid predation.

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