

Annual Examinations for Middle Schools 2025

YEAR 7

INTEGRATED SCIENCE

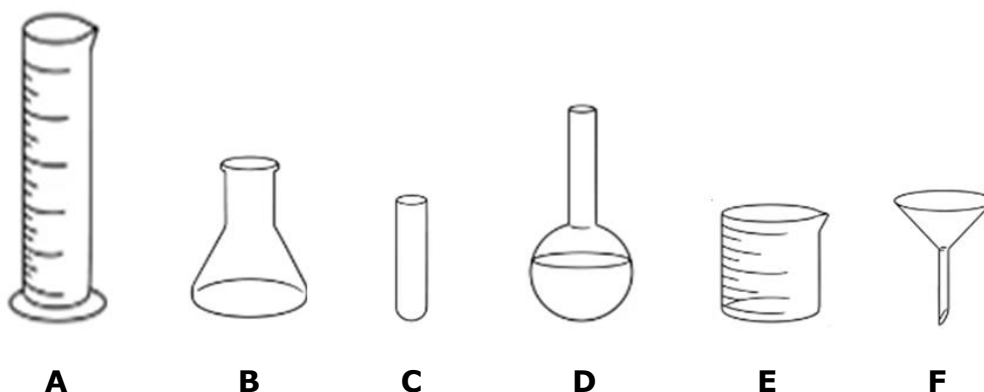
TIME: 1h 30 min

Name: _____

Class: _____

1. This question is about science apparatus.

a. This diagram shows some science apparatus.



Write the letter which shows the following:

- | | | |
|--------------------|-------|-----|
| i. Test-tube | _____ | (1) |
| ii. Funnel | _____ | (1) |
| iii. Conical flask | _____ | (1) |
| iv. Beaker | _____ | (1) |

b. Complete the following sentences about measuring. The following words might help you. Some words may be used once, more than once or not at all.

thermometer litre mass temperature seconds kilogram metres ruler

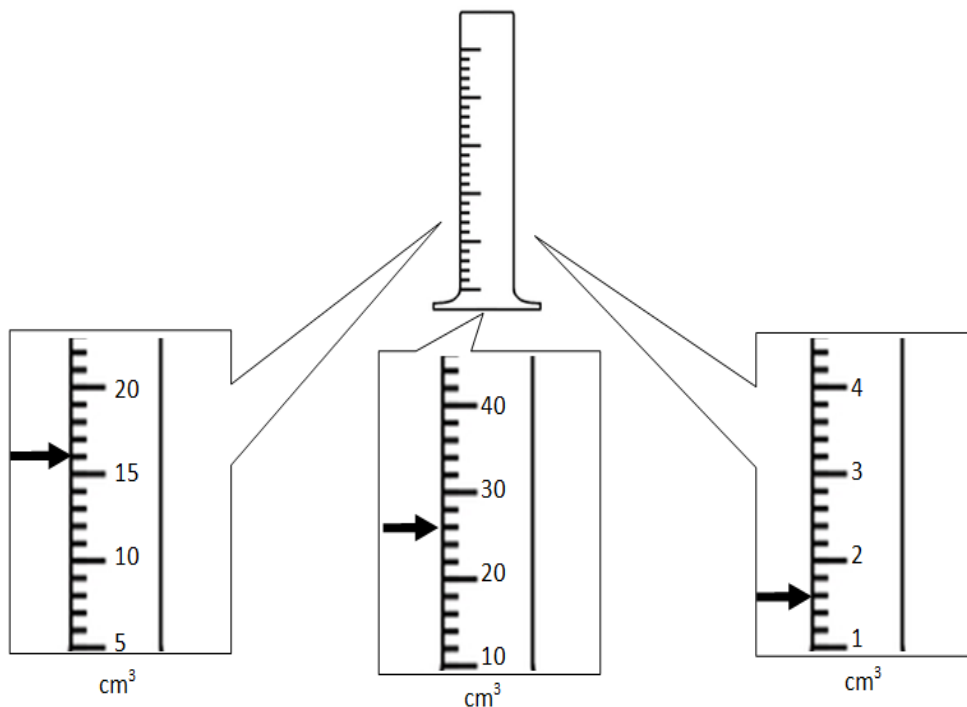
- | | |
|---|-----|
| i. Length can be measured in _____. We use a _____ to measure length. | (2) |
| ii. Mass is measured by using a balance.
1000 grams = 1 _____ | (1) |
| iii. _____ is measured using a _____.
It is measured in degrees Celsius. | (2) |

(Total: 9 marks)

2. a. Match the correct measuring instrument used to complete each of the following tasks. Insert the number in the correct box.

- | | | | |
|-----------------------|----------------------|--|-----|
| 1. metre ruler | <input type="text"/> | It takes 25 seconds to fill a beaker with water. | (1) |
| 2. stopwatch | <input type="text"/> | 400g of glass marbles. | (1) |
| 3. measuring cylinder | <input type="text"/> | The temperature of warm water. | (1) |
| 4. balance | <input type="text"/> | The chair is 40cm high. | (1) |
| 5. thermometer | <input type="text"/> | We need 75ml of water. | (1) |

b. This diagram shows the measuring scales of three measuring cylinders. Each arrow shows the level of water in the cylinder. Write down the volume of water in each measuring cylinder in the space provided.



(i) _____ cm³

(ii) _____ cm³

(iii) _____ cm³ (3)

(Total: 8 marks)

3. Jayden is doing an experiment. He puts some ice cubes in a beaker and heats them up. After some time, he notices drops of water on a window.

Complete these sentences to explain what is happening. The following words might help you. Some words may be used once, more than once or not at all.

condensation	100	0	boiling	gas	melting
evaporation		liquid	freezing	solid	



During heating _____ ice turns to water which is a _____.
On further heating, Jayden notices bubbles of _____ rising within the water. Water is now _____ and its temperature is _____ degrees Celsius ($^{\circ}\text{C}$). _____ of water from the saucepan produces water vapour which then cools on the window. This cooling of water vapour is called _____. This produces small water drops which are seen on the window.

(Total: 7 marks)

4. This question is about living things.

Read this paragraph and then answer the following questions.

Lara woke up early on Sunday morning to the sound of a robin tapping at her window with its beak. She quickly got out of bed, slipped on her wool sweater, and hurried downstairs. Her dad was in the kitchen, preparing breakfast. Lara ate a big bowl of cereal with honey. The weather was perfect, so Lara decided to head out to the garden to check on her tomato plants.

She noticed they had grown significantly since last week. As she filled her plastic watering can, she spotted a large, slimy snail sliding over the soil. "Aghh!" she exclaimed, rushing back inside.



- a. The paragraph lists a number of living and non-living things. Put TWO living things and TWO non-living things in their correct place in the table below.

Living things	Non-living things

(4)

- b. Name ONE invertebrate mentioned in the paragraph. _____ (1)

- c. From the paragraph above, copy TWO words which show a living thing doing a characteristic of living things. State which characteristic of living things is shown by this word and explain as shown in this example.

Example:

run This shows that living things MOVE

_____ (2)

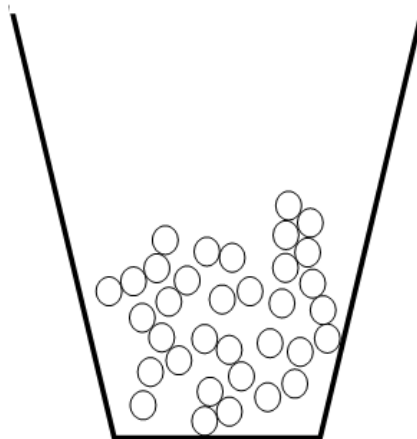
_____ (2)

- d. i. Name a living thing mentioned in text that is a bird.
 _____ (1)
- ii. Identify TWO characteristics of birds not mentioned in the text.
 _____ (1)
 _____ (1)
- e. i. Name ONE producer mentioned in the text. _____ (1)
- ii. Explain why this living thing can be called a producer.
 _____ (1)

- iii. State in which position of a food chain a producer is always found.
 _____ (1)
- iv. Name ONE consumer mentioned in the text. _____ (1)

(Total: 16 marks)

5. Paula drew this picture to show how the particles are arranged in a glass of water. List THREE mistakes she has made.



- _____ (1)
- _____ (1)
- _____ (1)

(Total: 3 marks)

6. Sandro helped with some house chores. This week he cleaned the bathroom. He used a strong cleaning product. It had this symbol on the container.



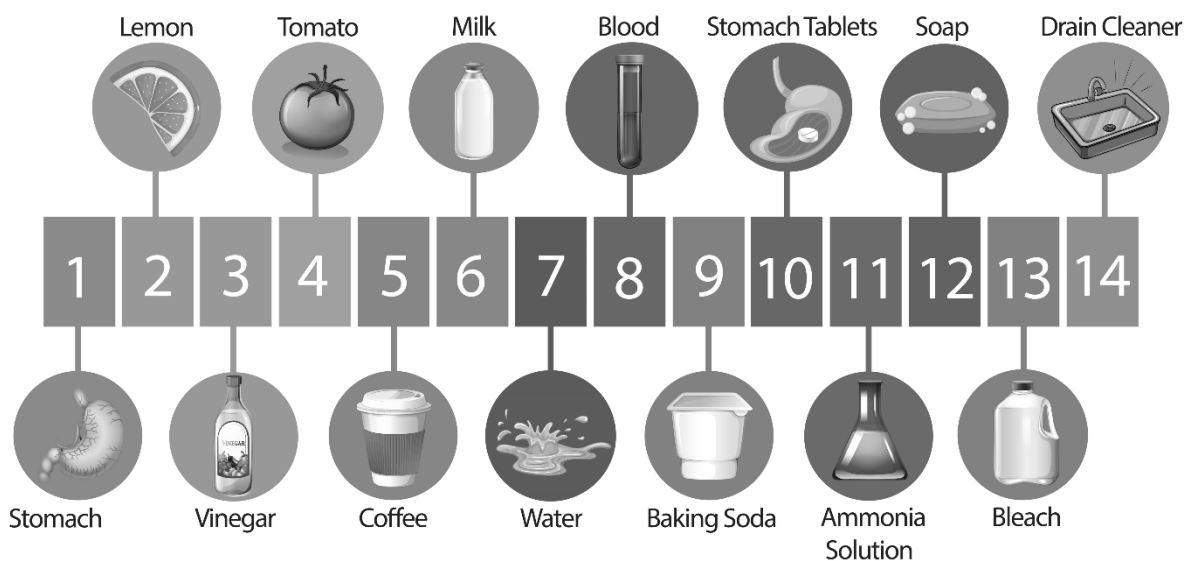
- a. Explain what this symbol means.

_____ (1)

- b. State what Sandro should do to stay safe while using this product.

_____ (1)

- c. Look at this pH scale and answer the following questions.



- i. Explain what the pH number shows about a substance.

_____ (1)

- ii. On the diagram, mark an **X** to show where you are likely to find Sandro's cleaning product. (1)

- iii. Write True (T) or False (F) next to each statement about this scale.

Statement	True or False
All acids are dangerous.	
You cannot find alkalis in nature.	
Most metals are corroded by acids.	
pH 1 is a strong alkali.	
Acids taste sweet.	

(5)

(Total: 9 marks)

7. A group of students were testing different food items with red litmus paper and blue litmus paper. These are the results they obtained.

a. From the results, indicate if the sample is an acid, an alkali or neutral.



Food sample	Red Litmus	Blue Litmus	Acid, alkali or neutral
A	Blue	Blue	
B	Red	Blue	
C	Red	Red	
D	Blue	Blue	

(4)

b. The girl suffers from heartburn and the doctor prescribed some tablets with a pH value of 10 to help decrease the amount of acid in her stomach. Fill in the missing words in the paragraph below:

i. The medicine given is an _____. It reacts with the acid in her stomach. This chemical reaction is called

_____.

(2)

ii. From the list of food samples in the table above, state which she should avoid eating. Explain why.

Food sample: _____.

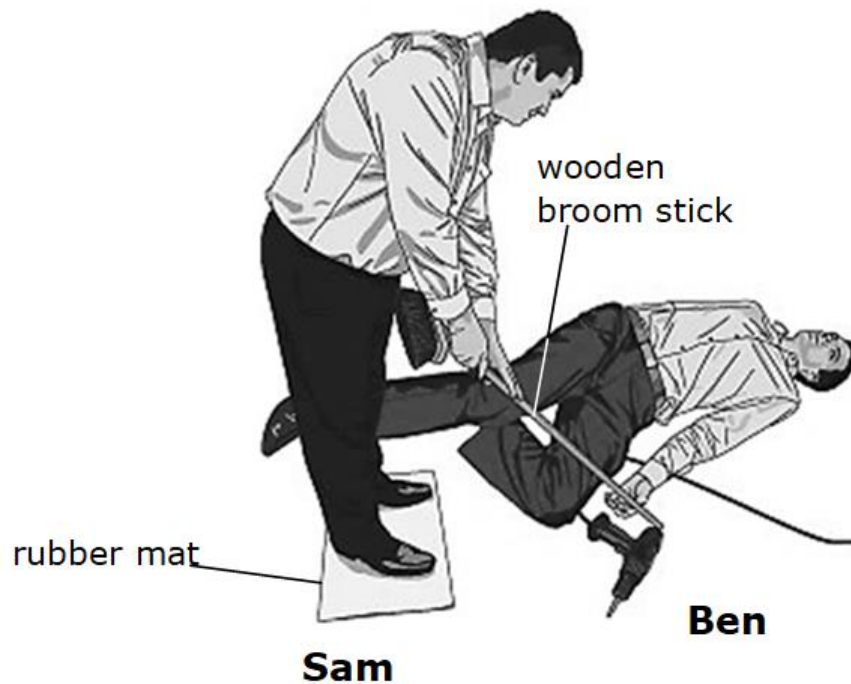
(1)

Reasons why it should be avoided. _____

(1)

(Total: 8 marks)

8. Ben was using a drill when he got electrocuted. His friend Sam went to help him out. Answer the following questions.



- a. Explain why Sam should not touch Ben.

_____ (1)

- b. i. List TWO other good practices Sam is doing to avoid getting electrocuted.

_____ (1)

_____ (1)

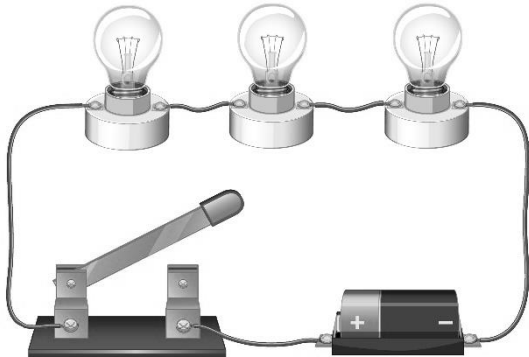
- ii. Explain how these will protect him.

_____ (2)

(Total: 5 marks)

9. Angela and her friends were setting up their new doll house. They wished to add some lighting in all the rooms.

They decided to install the following circuit.



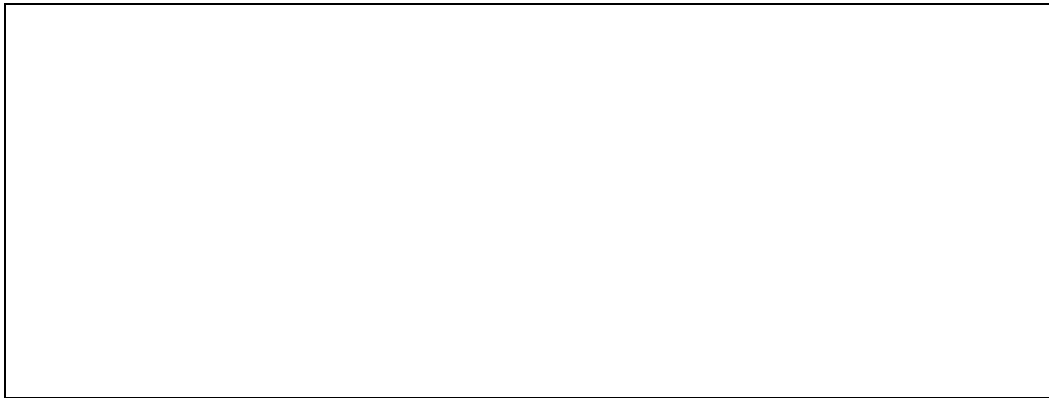
- a. Write the name of this type of circuit.

_____ (1)

- b. Explain why the bulbs are not lit.

_____ (1)

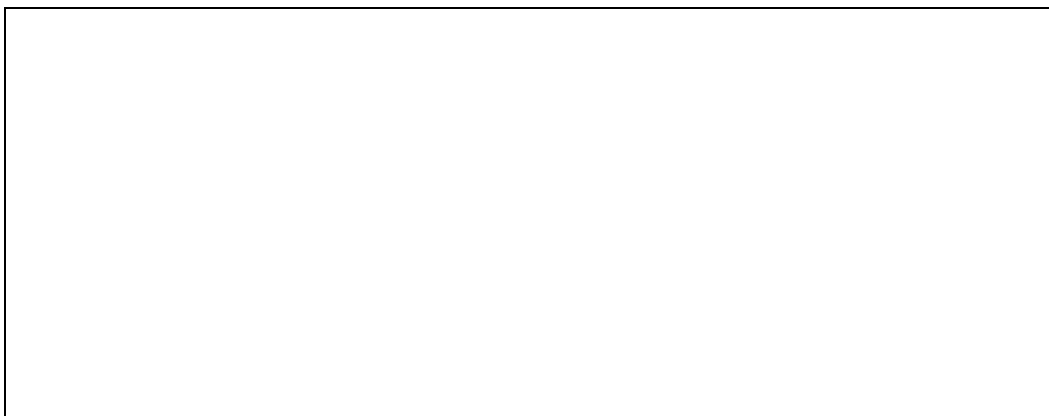
- c. In the box below, draw this circuit using electrical symbols.



(3)

- d. When they tested out the circuit, they noticed that the bulbs were not bright enough.

- i. Without adding any batteries or bulbs, redesign the circuit to make the bulbs light brighter.

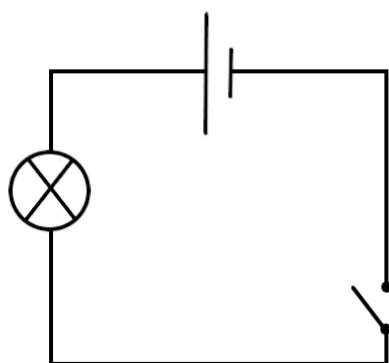


(3)

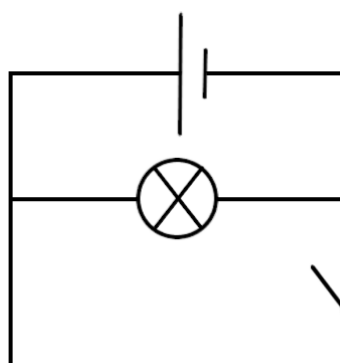
- ii. What is this type of circuit called? _____ (1)

e. Look at the following circuits.

The switch in one of the circuits will not switch the bulb on and off.



A



B

i. State which circuit it is and why this happens.

Circuit: _____ (1)

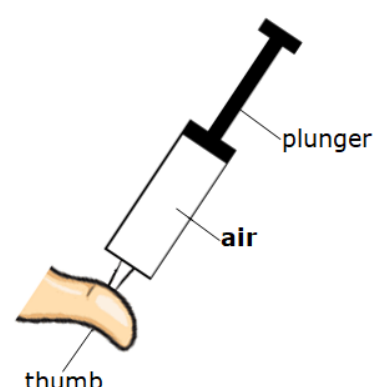
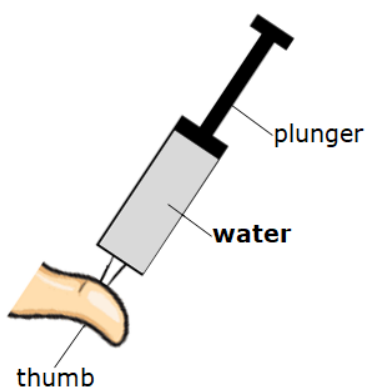
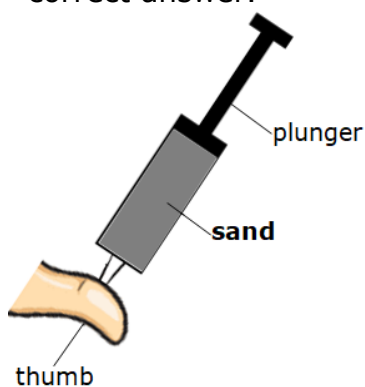
Reason: _____
_____ (1)

ii. Mark with an **X** to show where the switch should be placed to control the bulb. (1)

(Total: 12 marks)

10. The end of these syringes are sealed so that nothing can come out of them. One syringe is full of **sand**, the other with **water** and the third one with **air**.

Answer the following questions about two of these syringes. Underline the correct answer.

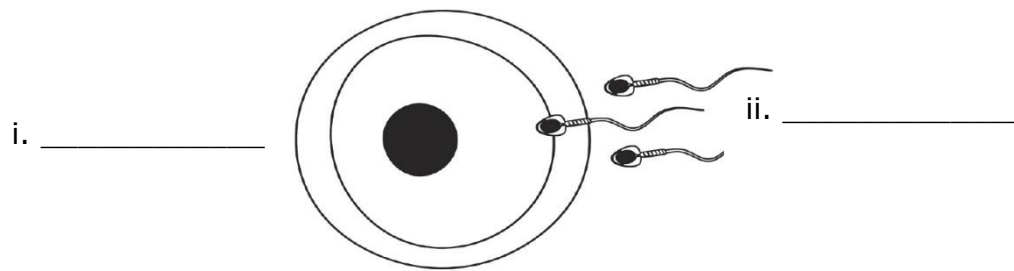


a. You (can / cannot) push in the plunger in the **water syringe**. (2)
This is because the particles in the water are very (far apart / close together).

b. You (can / cannot) push in the plunger in the **air syringe**. This is (2)
because the particles in the air are very (far apart / close together).

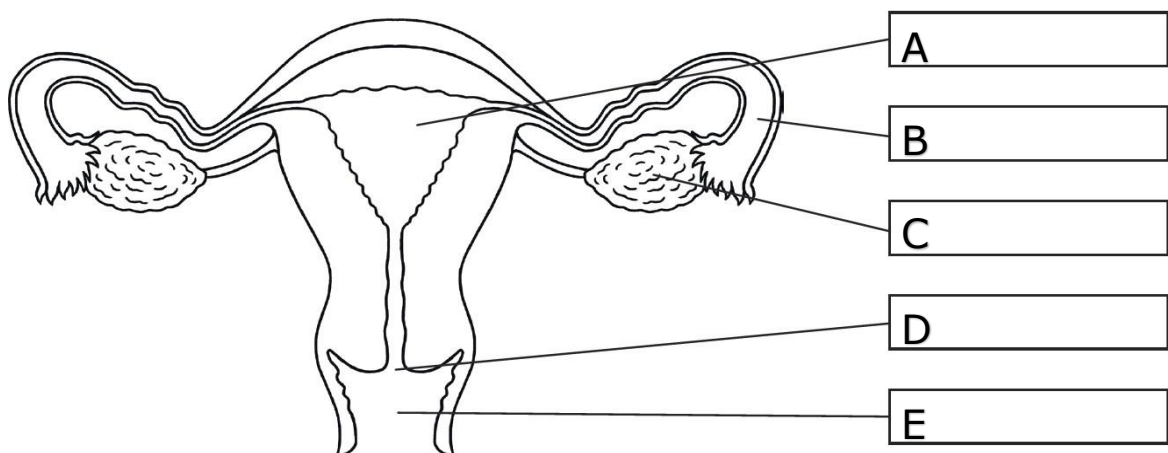
(Total: 4 marks)

11. This diagram shows two specialised reproductive animal cells.



- Label the cells in the space provided. (2)
- Name the process shown in this diagram. (1)
- Use the words given below to label the female reproductive organ. (5)

ovary, uterus, vagina, egg tube, cervix

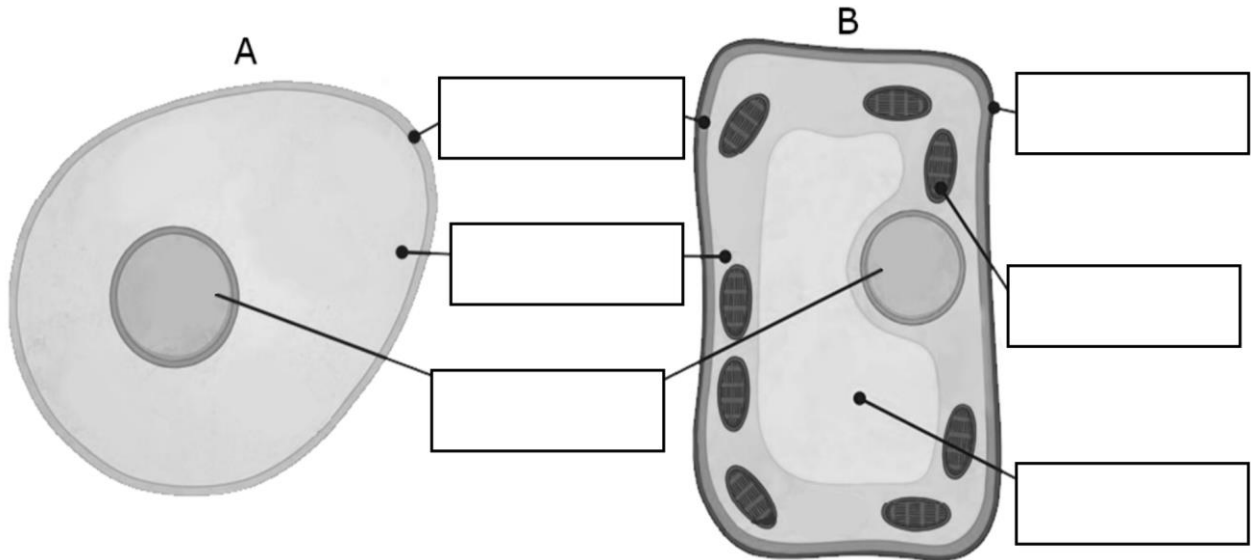


- Name the part of the female reproductive organ where the process mentioned in question 11b occurs. (1)
- As we grow and reach puberty, our body changes. Fill in the table below and list ONE change in each column. (3)

ONE change experienced by...		
Girls only	Boys only	Both girls and boys
_____	_____	_____
_____	_____	_____

(Total: 12 marks)

12. Mikaela was looking at some cells under the microscope. She observed the two cells below. One of them is a cell from a leaf and the other is a cheek cell.



- a. State which image shows the animal cell and which shows the plant cell.

Animal cell: _____ Plant cell: _____ (2)

- b. Use the words below to label the parts shown in the diagram. (3)

**nucleus, vacuole, cell wall, cytoplasm,
chloroplast, cell membrane**

- c. Select a part which is present only in the plant cell and explain its function.

Name of part: _____ (1)

Function: _____ (1)

(Total: 7 marks)

End of paper. Check your work again.