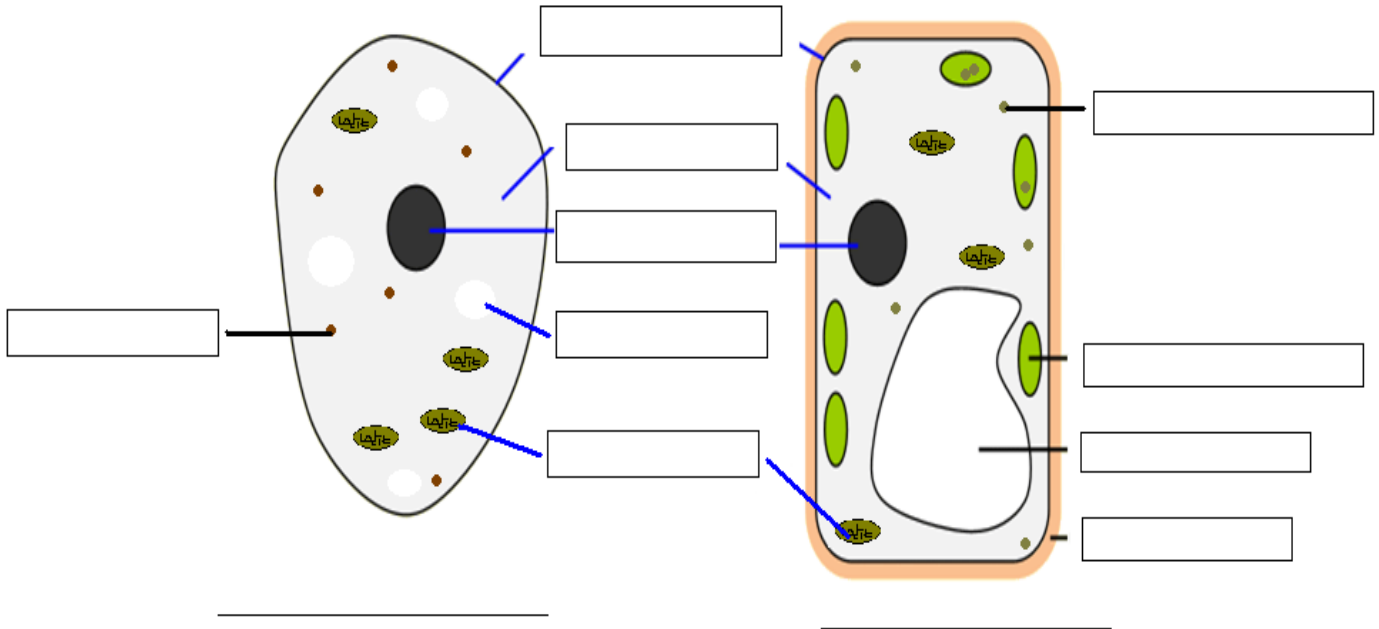


SECTION A: Living Organisms In The Environment
PRACTICE QUESTIONS

1. a) Label the cells below and their organelles:



b) i) Outline TWO similarities between a plant cell and a bacterial cell.

ii) State THREE differences between a plant cell and an animal cell.

c) i) Describe the process of photosynthesis in plants including a balanced equation and name the organelle where this process occurs.

ii) Name FOUR important factors needed for photosynthesis to occur.

iii) Explain what happens in the light and dark reactions.

d) Compare the processes of osmosis, diffusion and active transport.

2. (a) Figure 1 below shows an investigation, into the properties of Visking tubing, carried out by Biology students. Examine the diagrams carefully and answer the questions that follow.

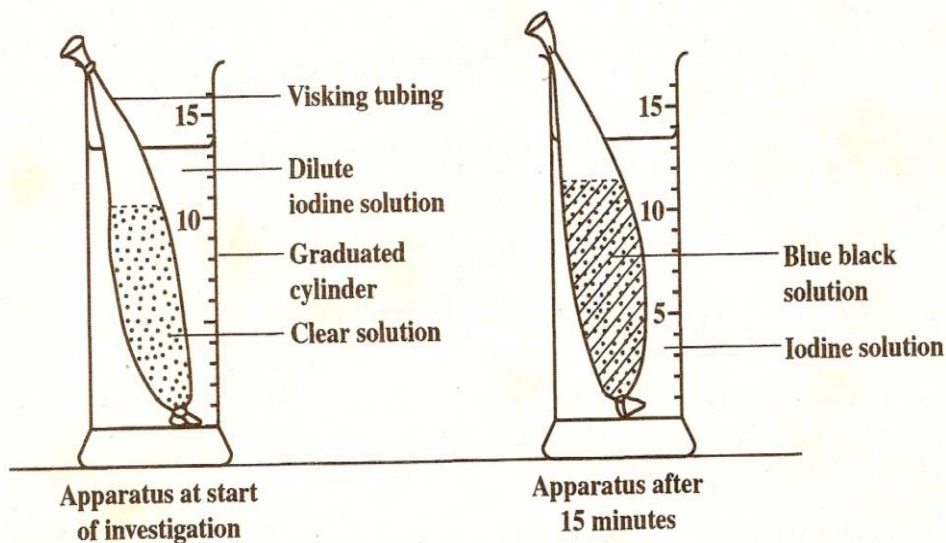


Figure 1. Investigation using Visking tubing

- (i) What substance was inside the tubing at the beginning of the investigation and what evidence is there of this?

(1 mark)

- (ii) Account for the difference between the volume of liquid in the Visking tubing before and after the investigation?

(2 marks)

- (iii) By what process did the iodine move from the cylinder into the tubing?

(1 mark)

3. Figure 4 shows a terrestrial food web.

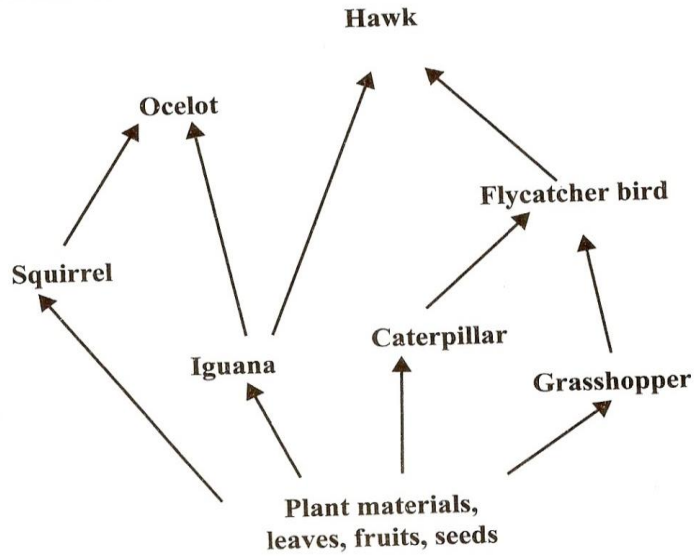


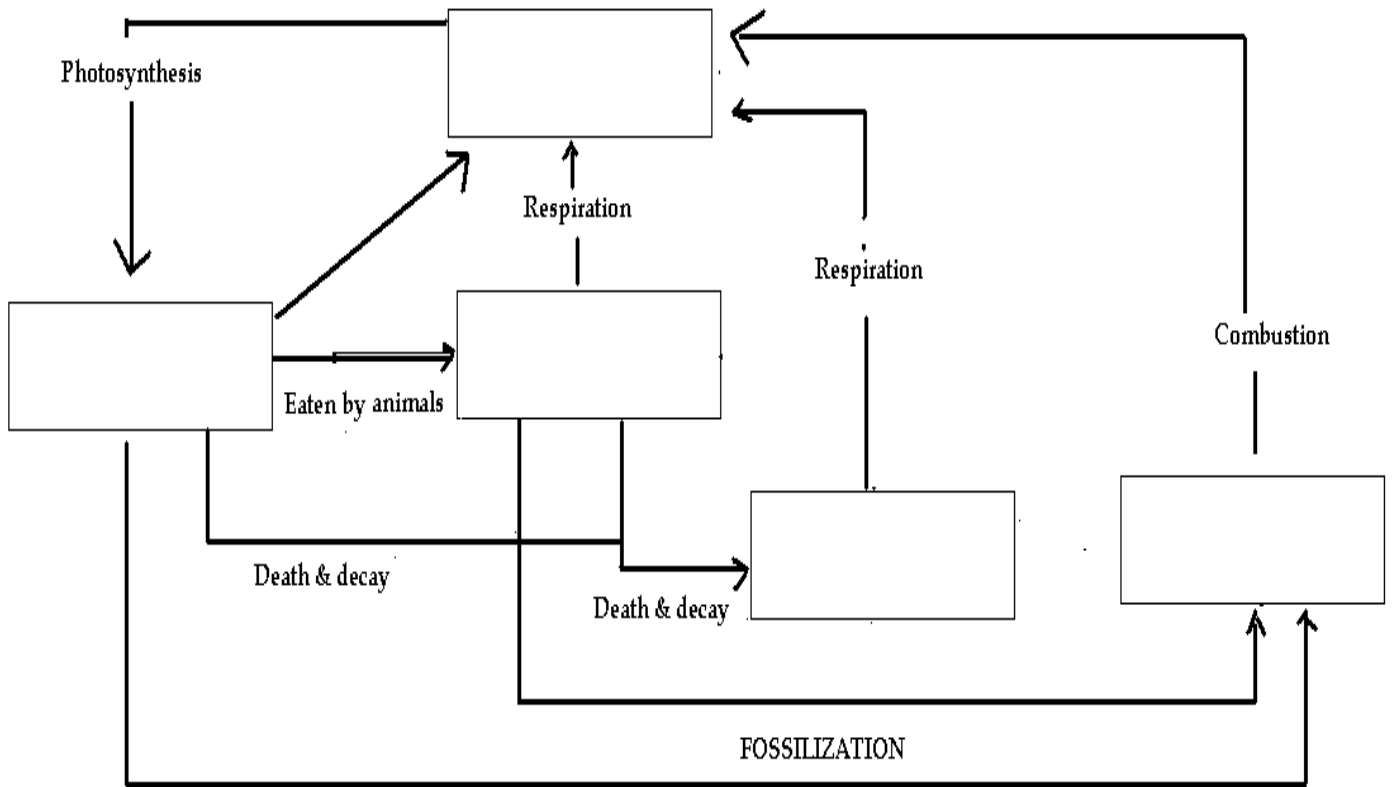
Figure 4. Terrestrial food web

(a) Identify, from the food web shown in Figure 4, a food chain with FOUR trophic levels. Draw the food chain in the space provided below.

b) From the food web above, place the organisms into the following categories:

PRODUCER	
PRIMARY CONSUMERS (herbivores)	
SECONDARY CONSUMERS (carnivores)	
TERTIARY CONSUMERS (carnivores)	

4 a) Complete the carbon cycle below to show how carbon is recycled in an ecosystem using the following words: plants, animals, carbon dioxide, fossil fuels, decomposers

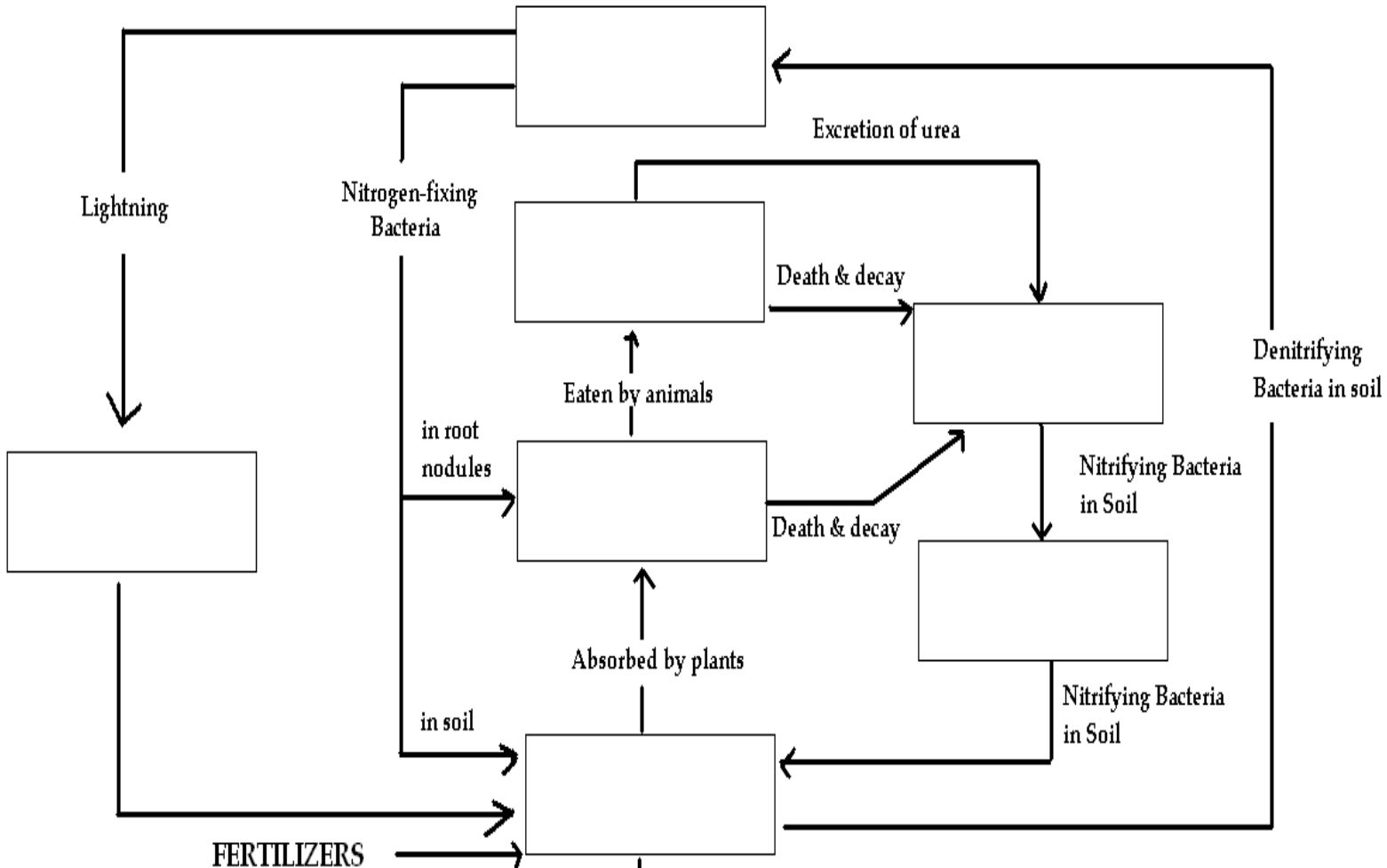


b)i) Identify the process that allows carbon to enter the ecosystem.

ii) Identify the TWO processes that release carbon back into the atmosphere.

5. Complete the nitrogen cycle below to show how nitrogen is recycled in an ecosystem using the following words:

nitrites, plants, nitrites, animals, nitrogen gas, ammonium compounds, nitric acid (in rain)



b) i) Which bacteria allow nitrogen gas in the air to be converted into a suitable form plants can use?

ii) Which bacteria convert nitrites into nitrates?

iii) Which bacteria are responsible for releasing nitrogen gas back into the atmosphere?

iv) Bacteria are _____ which feed on waste material like _____ and _____. They also feed on _____ organisms. Other organisms which play the same role as bacteria include _____ and _____.

THE END.