



## UNIT 2 - INVESTIGATING PLANT GROWTH WHAT HAVE YOU LEARNT?

Name: \_\_\_\_\_

Grade 5/ Year 6: \_\_\_\_\_

**Q1.** Answer the questions below:

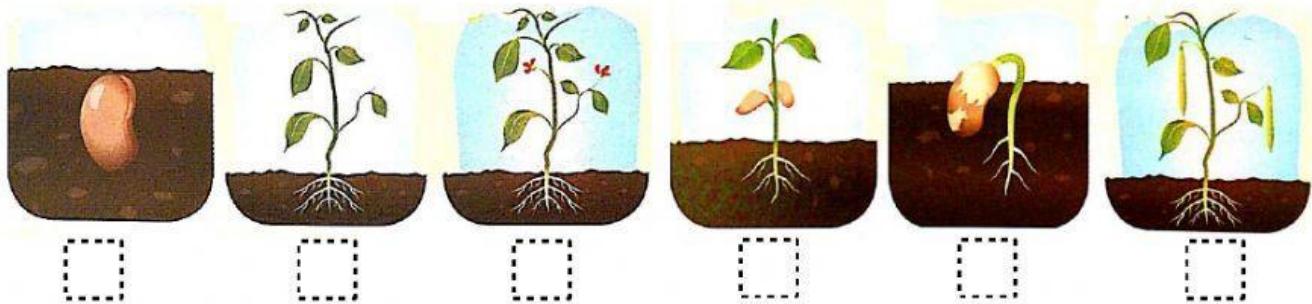
a. What is germination?

\_\_\_\_\_

b. What conditions are necessary for germination?

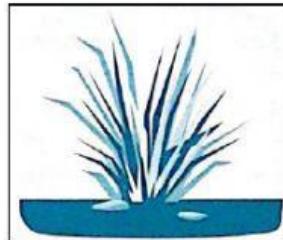
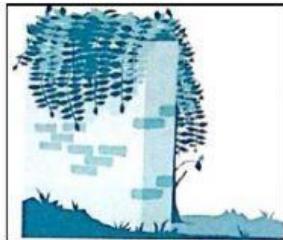
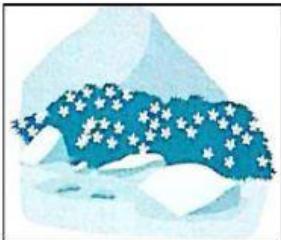
\_\_\_\_\_

**Q2.** Put the stages of growth of a bean plant in order:



**Q3.** The way a plant grows is called its growth habit.  
Write down the growth habit of the plants below:

Clumping   Climbing   Mat-forming



**Q4.** List three things a living plant can do that an artificial plant cannot do.

\_\_\_\_\_

**Q5.** Fill in the blanks with an appropriate word:

During the process of germination, first the \_\_\_\_\_ grows downwards.

Next the \_\_\_\_\_ grows upwards. Then the \_\_\_\_\_ unfold.

**Q6.** Year 5 learners planted some seeds. They gave each batch of seeds different volume of water. After ten days they measured the height of the seedlings and calculated the rate of germination. Here is the table of results:

Batch of seeds	A	B	C	D	E	F
Volume of water (ml)	0	50	100	200	400	800
Height of seedlings (mm)	0	36	58	45	13	0
Germination rate (%)	0	62	84	70	24	0

a. Which batch of seeds grew well? How can you tell?

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b. What was the rate of germination of the seeds in batch B?

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c. How tall did the seeds in batch E grow?

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d. In which batch did the seedlings grow to the height of 45?

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e. What are the factors that needs to be kept the same in the above experiment?

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**Q7.** This plant hasn't grown. Give two reasons why this might have happened.

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**Q8.** Why do plants produce seeds?

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**Q9.** Jack put some soil in a small pot. He planted the seeds and put the pot somewhere warm. The seeds did not grow. Why not?

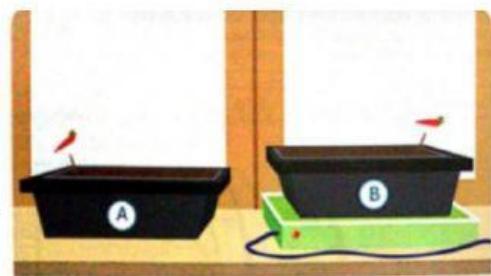
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**Q10.** Falah has planted two trays, A and B with seeds. He wanted to see how the temperature affects the way the seeds germinate. He puts both trays on a windowsill. He puts a heating pad beneath tray B.

a) Which tray of seeds will germinate faster and why?

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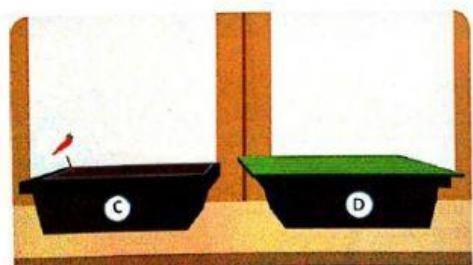


Falah planted another two trays, C and D, with seeds. He puts both trays on a windowsill. He covers tray D with a white sheet of cardboard.

b) Will there be a difference in how long the seeds in the two trays take to germinate? Explain your answer.

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**Q11.** Choose the right answer:

a. What are the products of photosynthesis?

Carbon dioxide, sunlight and water

Glucose and oxygen

b. What colour is chlorophyll?  Black

Blue

Green

c. Where does photosynthesis take place?

In the leaves

In the roots

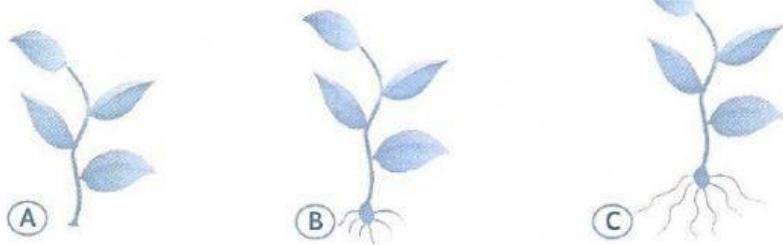
In the fruit

d. What are the materials necessary for photosynthesis?

Carbon dioxide, sunlight and water

Carbon dioxide and oxygen

**Q12.** Some stage 5 learners did an investigation. They found out how losing some or all of its roots affect the growth of a plant.



- They used three healthy plants of the same species and size.
- They labelled the plant A, B and C.
- They cut off all roots of plant A.
- They cut off half the roots of plant B.
- They did not cut off any of the roots of plant C.
- They put each in an identical pot with the same amount and type of soil.
- They put the plant next to each other on the windowsill.
- They gave each plant the same amount of water and observed them for 10 days.

a. What are the learners investigating?

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b. Did the students carry out fair investigation? \_\_\_\_\_

c. How long did they observe the plants? \_\_\_\_\_

d. On the tenth day the learners measured each plant. Match each measurement with the plant it is from:

40 cm \_\_\_\_\_ 47 cm \_\_\_\_\_ 32 cm \_\_\_\_\_

e. What did you conclude from this investigation?

I conclude that without a healthy root system:

- A plant is not stable and will likely be carried away by wind or other factors.
- Root system take in water and nutrients from the soil to help the plant to grow and reproduce.
- All the above.

**Q13.** Rearrange each set of letters to make a scientific word. Write the words in the provided space.

tentrui

stemragine

hengoesrue

siddslove

drainpegs

englides

epurematter

theylah

shonyshpotites

**Q14.** List the two ways in which soil temperature affects germination.

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**Q15.** Name the needed conditions for seedling to grow and make its own food.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_



GOOD LUCK

