



FEDERAL DIRECTORATE OF EDUCATION

Summer Vacation Task

General Science-----Class-VII

**SESSION
2023-24**



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Summer Vacation Homework

Class VII

General Science

Q.1. Complete the table using the phrases listed below:

Green plant cells	Chloroplast	Release energy from food
$\text{CO}_2 + \text{H}_2\text{O} + \text{ATP}$	Glucose + O_2	All cells
Mitochondria	Capture & Store energy	Glucose + O_2
$\text{CO}_2 + \text{H}_2\text{O} + \text{light}$		

	PHOTOSYNTHESIS	RESPIRATION
What is its purpose?		
What type of cells do this?		
What organelle in the cell does this		
Reactants		
Products		

Q.No-2 Ali has an aquarium with guppies. Guppies, like other living things, need oxygen to live. One way to supply oxygen to the guppies is to fit an air-pump in the aquarium.

- In stead of fitting an air pump, Ali places some water plants in the aquarium and the guppies survive. Explain why?
- Will the guppies still survive if Ali places the aquarium in a dark place throughout the day? Why?

Q.No-3 Describe the process of transpiration in plants and how it helps in the water cycle?

PROJECT 1

- Collect & paste 5 different leaves in your scrapbook and label the external structure of leaves.
- Collect a small plant, dry it and paste it in your scrapbook and label the root and shoot system of a that plant.

Q.no4..Describe the relation between respiratory system and circulatory system.

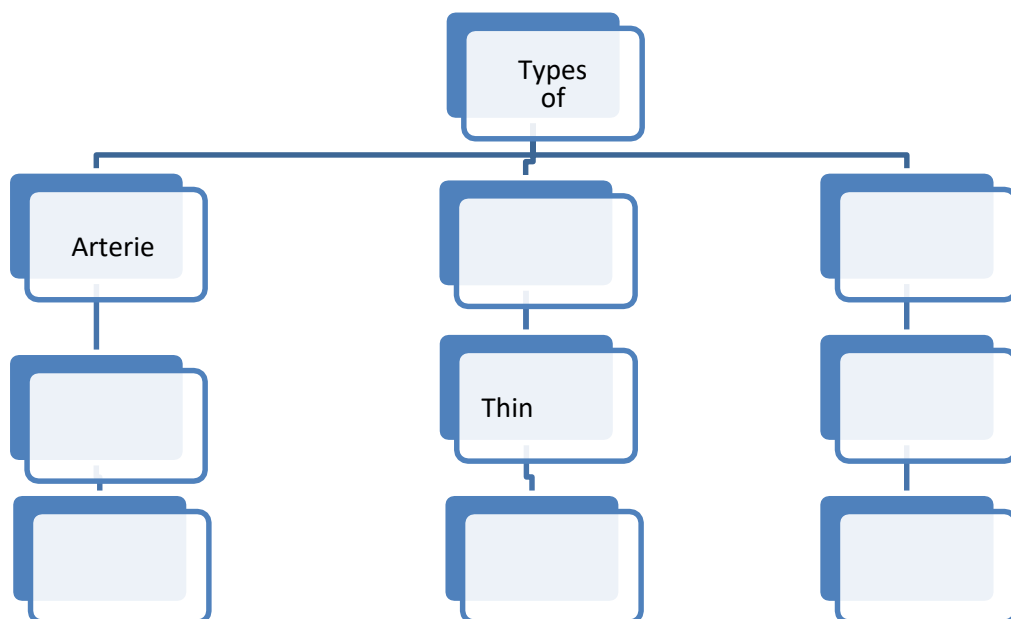
Q.No5. Complete the following table (Types of Blood Cells)

	Red blood cells	Platelets	White blood cells
Structure			
Function			
Example of			
deficiency diseases			

Q.No.6 Complete the flowing flowchart using the given words/ phrases.

Veins	Carry away blood from heart to the body cells	thick walled
Capillaries		
Site of diffusion of small molecules & gases		carry blood back to heart from the body cells
One celled thick wall		

PROJECT 2



With the help of recycle material make the model of the respiratory system.

Q.No-7 Describe the following terms.

- a. Pathogens
- b. Infectious disease
- c. Immune system

PROJECT 3

- a. Make a poster on “How to boost your immune system”.
- b. Make an infographic poster of dengue disease. Include the cause, symptoms, transmission and prevention of this disease.

Q.No-8 Differentiate between physical and chemical changes.

Q.No-9 What type of changes occur in the following process. Support your answer with the reasons.

- i. When a green powder heated it turns black and a gas is produced.
- ii. Dry ice is a carbon dioxide in solid state. When the dry ice is left in the air it changes into carbon dioxide gas.

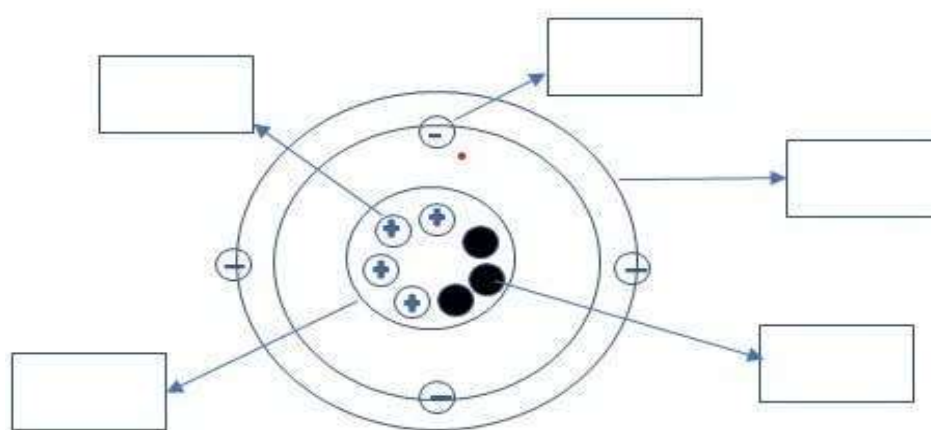
Q.No-10 Heat can bring about both physical change and a chemical change in a matter.

- a. Give an example of a physical change brought about by heat. Briefly describe how the change can be reversed.
- b. Give an example of a chemical change brought about by heat.

Q.11.The diagram represents the structure of an atom.

i. Use these words to label the diagram

Electron	Orbit	Nucleus	Neutron
Proton			



ii) Describe the difference between an electron and a proton.

iii) Neutrons are neutral. What does this mean?

iv) Which part of an atom move very fast?

PROJECT 4

Design and build a 3D model of a specific atom of your choice showing the atomic structure. (including protons, neutrons and electrons).the model must be free standing and creative.

PROJECT 5

Make a booklet and draw and label the following structures/ process in that.

- | | |
|---------------------------------|------------------|
| 1. Internal structure of a leaf | fig. 1.6 (pg-8) |
| 2. Aerobic respiration | fig. 2.2 (pg-20) |
| 3. Anaerobic respiration | fig. 2.3 (pg-20) |
| 4. Human heart | fig. 2.9 (pg-26) |
| 5. Malleability | fig. 4.9 (pg-53) |
| 6. Picture story of an atom | fig. 5.2 (pg-61) |