

PM SHRI KENDRIYA VIDYALAYA NO.1 AF'S GORAKHPUR
WINTER BREAK HOLIDAY HOMEWORK
CLASS IX

Survey on Local Farming Practices (In project file)

1. Interview local farmers or research the agricultural methods used in their area.

And analyze the use of fertilizers, pesticides, irrigation techniques, and crop rotation. (student will also make a short video of this survey.)

COMPETENCY BASED QUESTIONS

Q1. A few drops of perfume are sprayed in one corner of a room. After some time, the fragrance spreads throughout the room.

- A) Explain this observation using the concept of diffusion.
- b) How does temperature affect the rate of diffusion?

Q2. If you place a solid piece of camphor in a closed jar. A potted plant was kept in a dark room for a week, and its leaves turned yellow. Explain the reason and suggest what can be done to restore the green color.

Q3. Ramesh added salt to water and stirred it until it dissolved. Later, he added chalk powder to water, but it settled at the bottom.

- A) Identify and differentiate the type of mixtures formed in each case.
- b) Suggest a method to separate chalk powder from water.

Q4. Why do astronauts appear weightless in space? How does this relate to the concept of free fall?

Q5. A factory releases untreated waste into a nearby river.

- a) How will this affect the aquatic ecosystem?
- b) Suggest two measures to prevent such pollution

Q6) a. Rita made a lemon juice and added some ice cubes into it. She observed that ice floated in the juice. Give the reason for this

b. Plants use carbon dioxide for photosynthesis. Mention its natural state. How is it different from dry ice?

Q7

a) Differentiate between a true solution and a colloid.

b) Distinguish between compounds and mixtures.

Pritya Rawat
(TGT Science)
23/12/24

Q.8a. Following the rules of distribution of electrons show the formula and calculate the number of electrons that an atom can accommodate in the fifth energy level.

b. An element has atomic number 8. Identify the element, its Valency and valence electrons.

Q9) a. Explain Rutherford's alpha scattering experiment. Draw the diagram if the experiment

c. Mention his observations.

d. On the basis of that explain the nuclear model of an atom.

Q10) Reetu has got cancer. Where will you find more number of ribosomes-in Her body, in her cancer cells or in fat cells?

b) If you are cooking vegetable curry today, after adding salt into the vegetables, you see that it released water. Why?