PM SHRI KV CRPF,GREATER NOIDA

CLASS-VIII (SCIENCE)

(2025-26)

Competency-Based Holiday Homework

Topic: Diversity in the Living World Diversity in the Living World

1. Conceptual Understanding (10 items)

1. Define biodiversity with examples.
2. List five characteristics of living organisms.
3. Differentiate between vertebrates and invertebrates.
4. Classify animals into herbivores, carnivores, and omnivores.
5. What are the main features of amphibians?
6. Describe how plants are grouped based on flowers and seeds.
7. Draw and label the parts of a flowering plant.
8. State two differences between monocot and dicot plants.

2. Application (10 items)

11. Classify the animals found in your neighborhood.
12. Identify and label any two local trees using leaf characteristics.
13. Collect and paste leaves of different shapes and classify them.
14. Compare the diversity of plants in two different areas (e.g., park vs. roadside).
15. Use a key to identify any 3 insects.
16. Prepare a table showing the animals found in desert, forest, and ocean.
17. Record plant types in your garden using classification rules.
18. Observe bird beaks and feet and infer their food habits.
19. Identify whether the mushrooms in your locality are plants or fungi.

3. Problem Solving & Reasoning (10 items)

21. Why do camels have long eyelashes and padded feet?
22. Predict what would happen if all decomposers disappeared.
23. Why are bats classified as mammals though they fly?
24. How do the roots of mangrove trees help them survive in marshy areas?
25. Why are earthworms called "farmer's friends"?
26. What features help polar bears survive in their habitat?
27. If a plant grows underwater, how might its leaves be different?
28. Why are fungi not placed under the plant kingdom?
29. Explain how adaptation helps in survival.
30. If you see an animal with feathers, what class would you place it in? Why?

4. Experimentation & Investigation (10 items)

31. Design a mini-project on "Plant Diversity in My Locality."
32. Investigate and record adaptations in desert plants.
33. Observe the structure of different seeds and group them.
34. Observe mold growing on bread and describe the conditions.
35. Compare the body coverings of a fish and a frog.
36. Study and record the stages of a butterfly or frog.
37. Investigate the feeding habits of earthworms using soil observation.

5. Data Handling & Representation

41. Collect data on flower colors from 20 local plants and tabulate it.
42. Use pictures to sort animals based on habitat.
43. Create a table of insects observed in the garden.
44. Represent seed dispersal methods through a diagrammatic chart.

6. Creativity & Communication (any Two).

47. Design a comic strip on plant and animal classification.
48. Write a short poem on "The Variety of Life."
49. Make a biodiversity scrapbook with cutouts and labels.
50. Write a story about a journey through a forest describing the living organisms.
51. Prepare a poster on endangered species in India.
52. Create an infographic on the importance of biodiversity.
53. Design flashcards for different types of animals and plants.
54. Make a biodiversity board game including classification tasks.

Competency-Based Holiday Homework Topic: Water

1. Knowledge & Recall (10 items)

1. Define water.
2. Name the three states of water.
3. Write the boiling point and freezing point of water.
4. What is condensation?
5. What is evaporation?
6. Write two sources of fresh water.
7. Name two uses of water in our daily life.
8. List any two properties of water.
9. What is the water cycle?
10. Name two processes in the water cycle.

2. Conceptual Understanding (10 items)

11. Explain the process of evaporation with an example.
12. Differentiate between melting and freezing.
13. Why does water change state on heating or cooling?
14. Explain condensation using a daily life situation.
15. Describe the role of the sun in the water cycle.
16. Why is water called a universal solvent?
17. What is the importance of groundwater?
18. Explain the interconversion of the three states of water.
19. Why do wet clothes dry faster on a sunny day?
20. How does water help in regulating body temperature?

3. Application (10 items)

21. Demonstrate evaporation using a bowl of water.
22. Show condensation using a cold bottle.
23. Record the temperature at which water boils in a thermometer.
24. Measure water used in a day at home.

25. Use a plastic bottle to make a mini water cycle model.
26. Make a bar graph showing monthly rainfall in your area.
27. Test solubility of salt and sugar in water.
28. Show which materials float/sink in water.
29. Use a filter to clean muddy water – note the result.
30. Observe water droplets on the outer surface of a cold glass and explain why they form.

4. Analysis & Reasoning (10 items)

31. Why do ice cubes melt faster in warm water?
32. Why is it important to drink clean water?
33. Analyze the effects of water scarcity.
34. How does pollution affect water bodies?
35. Why is rainwater harvesting important?
36. How does water help plants?
37. Compare hard water and soft water.
38. Explain why sea water is not fit for drinking.
39. Identify places in India that face droughts.
40. Why does water form droplets on leaves?

Creativity (Any two)

41. Create a poem on the journey of a water droplet.
    Make a poster on "Save Water".
    Draw a labeled diagram of the water cycle.
    Design a comic strip on water's three states.
    Create a brochure on methods of water conservation.
    Write a short story where water is the main character.
    Make a model of a water filter using home items.
    Prepare a role play script about the importance of water.
    Create a slogan for saving water.
    Make a collage on "Water in Our Lives".

6. Values & Awarenes

42. List 5 ways to save water at home.
43. How do festivals affect water consumption?
44. Interview your family members on how they use water.
45. Prepare a pledge for water conservation.
46. Watch a documentary on water and write a review.
47. Survey how your locality stores and uses water.
48. Find out how ancient Indians stored water.
49. Compare water use in rural and urban areas.
50. What is your responsibility as a student to save water?
51. Write a letter to the editor about water pollution.