

PLE INTEGRATED SCIENCE GUIDE 2024

SECTION B

1. Ventilated Improved Pit latrine// ECOSAN latrine// Ordinary(Conventional latrine)// Enviro-loo. (**Reject pit latrines// potty// toilets**)
2. One may be struck by lightning// Tall trees attract/conduct lightning charges that can strike people.
3. Diaphragm changes the volume of the chest cavity// contracts/ flattens to increase the volume of the chest cavity for the lungs to expand// relaxes/ forms dome shape to exert pressure on the lungs to excrete air.
4. Flowing water/water// wind// Animals. (**Reject Moving vehicles**)
5. Snail (**Accept** garden snail/ fresh water snail)
6. Molluscs/Mollusks/Mollusca
7. Keeping them in a refrigerator// water // cool places// pickling them (keeping them in vinegar)
8. Bacteria help in decomposition// break down organic matter to form humus
9. Bilharzia flukes/ blood flukes/ schistosomes suck blood from the body //damage walls of the urinary bladder causing loss of blood through urination// feed on digested food.
10. Constructing the hutch with a wire mesh// constructing the hutch in the direction of wind// providing proper ventilation
11. To reduce/ regulate/ lower body temperature// prevent heat loss from the body
12. Using them for seed/ liquid // planting crops// as planters// as animal feeders and drinkers// for fetching water// making crafts//play materials// used as building materials
13. For tying bandages// tying around the wound or cut// for reducing bleeding from a wound/ cut.
14. For brewing// making yoghurt/ cheese/ butter// making bread
15. A pulley uses less effort than a an inclined plane// effort moves through a shorter distance when using a pulley than using an inclined plane.
16. Kidney
17. Directs//allows// takes// drains urine to the urinary bladder.
18. Causing rotting// stunted growth// holes in stems, roots, leaves// withering// wilting// low yields// curling of leaves// discolouring of leaves
19. Causes poverty// reduces family labour//wastages of drugs// wastage of funds on treatment// spouse// child abuse
20. Most of workers are away looking for food// there is less disruption from bees// To reduce on damage to the brood// To reduce on honey contamination// It is easy to detect the combs with honey.
21. Dislocation

22. The density of a cubic unit of wool is less than that of a cubic unit of a stone//Cubic unit of wool has less mass than a cubic unit of a stone// cubic unit of wool has less molecules than a cubic unit of a stone
23. It starves pests to death. **(Reject starves pests only)**
24. Adds iron to the soil// reduces iron metal scraps from the environment// Improves soil fertility
25. Personal hygiene
26. Organising health parades// writing posters about health// organising school cleaning sessions// reciting poems// singing songs// dramatisation about health
27. Air exerts pressure// Air occupies space
28. Controls soil erosion// improves soil fertility
29. To kill// remove germs// To remove dirt
30. Both are used for feeling// Both are sense organs for feeling
31. It has no matter to transmit heat// has no molecules for heat transmission// has no medium for heat transmission
32. Row planting
33. Makes weeding// harvesting// splaying// fertiliser application easy// reduces overcrowding in the garden// improves crop yields
34. Adolescents for peer groups// get interested in members of opposite sex// become rebellious// want freedom// get angry(disappointed) quickly// get conflict with culture// increased sexual desire// get confused with their body changes// Never satisfied with their demands// want to be seen as mature
35. Polio
36. Due to reduction in speed of light rays// change in speed of light rays as they move from one medium to another.
37. Proper disposal of sewage// rubbish// avoid playing/ swimming in water sources// avoid dumping human wastes in water sources// desilting water bodies// fencing wells and water pumps **(Reject fencing water sources with no specification).**
38. To prevent bad breath/ bad smell in the mouth// To remove food particles from the tongue.
39. Insulating naked wires// use well insulated wires//avoid pushing metals into electric sockets// use experts to install electricity avoid overloading electric sockets
40. Seed dressing// proper storage// proper drying before storage// dusting the seeds

SECTION B

41. a) Proteins
 - b) High prices// wrong labelling// poor transport// food may have overstayed// food stuffs may be of low quality or quantity.
 - c) Proper sanitation in the market// Raising stalls above the ground// proper disposal of rubbish// provision of dustbin// proper sensitisation of sellers about hygiene.

42. Bacteria (**Reject vibrio cholerae**)

b) High population leads to poor sanitation which promotes breeding of houseflies and cockroaches that spread cholera.

Note:

The response should have the cause and effect of that cause in relation to the spread of cholera.

c) Washing hands after visiting latrines// boiling water for drinking// ensure proper food hygiene.

43. a) Trowel

b) There is low transpiration in the evening// To prevent seedlings from drying/ wilting// withering

c) To keep moisture in the soil// improve soil fertility// control the growth of weeds// control soil erosion

44. a) i) x- Liver. ii) w – Appendix

b) i) It is where food absorption takes place// helps in food digestion

ii) It is where absorption of water occurs

45. The table below shows some of the steps followed in the cleaning of clothes and the purpose for each step.

Step	Purpose
Sorting	Separating cloths according to washings needs
Soaking	Softening dirt// stains in clothes
Rinsing	Removing dirty soapy water from the clothes
Ironing	Killing germs// vectors// removing folds

46. a) Electromagnet is a temporary magnet made by passing electric charge through a solenoid around magnetic material.

b) 1. Wind/ wrap a copper wire around the iron nail.

2. Connect the ends of the copper wire to the terminals of the dry cell to enable the flow of electric current.

3. Bring some pins nearer to the iron nail to observe attraction

4. The pins will be attracted by the magnet.

47. a) Animal urine// cow dung// Human faeces// animal droppings// plant leaves// leftover food// peelings// sawdust

b) To prevent entry of oxygen// To prevent biogas from escaping

c) Discourages deforestation// does not pollute the environment// does not produce smoke// produces neat/ clean work

48. a) Face mask/ mask

b) COVID-19// Tuberculosis// Pneumonia// Whooping cough(pertussis)// Diphtheria// SARS// Meningitis// Influenza(flu)

c) Avoid sharing the item// Use proper technique of wearing it// Cleaning it regularly// Replacing it case it's old// Wash hands with water and soap before touching it.

49. a) i) guitar// bow harp (adungu)// lyre// zither// banjo// violin// viola// cello
 ii) drum// keyboard// thumb piano// cymbal// triangle// xylophone// bell// jingles
 b) Magnetic method// physical (mechanical) method// Electromagnetism
50. a) social insects
 b) Some provide honey// help in pollination// some are eaten as food// some provide silk for textiles
 c) Bush burning// Deforestation// Overgrazing// Spraying with insecticides// Catching and eating them// land clearing// Overgrazing
51. a) Cloudy weather
 b) It causes evaporation// transpiration to help in formation of D.
 c) Planting trees to act as wind breaks// Constructing houses with strong walls and roofs// Wearing spectacles
 d) It causes drought// desertification// lowers rain formation
52. a) Vaccine are medical drugs that are introduced in the body to make it produce antibodies against a given disease.
 b) Orally// By drops in the mouth.
 c) To prevent them from getting spoilt// contaminated// To keep their quality
 d) Sensitization of parents// Organising immunisation centres// writing posters about immunisation// Taking siblings for immunisation// dramatisation about immunisation
53. a) i) Freezing. ii) Condensation
 b) Causes soil exhaustion// water pollution// Flooding// creation of gullies// landslides// damages channels and roads.
54. a) Biceps// Triceps
 b) Help in movement// pumping blood// movement of food in the alimentary canal// Diaphragm aids breathing// Sphincter muscles control the flow of urine from the urinary bladder// protect internal organs
 c) Promotes proper growth of bones// promotes proper food digestion// prevents back and chest pain// prevents deformation of bones.
55. a) Mark correct diagram which is laterally inverted, erect and virtual
 - Ensure that there is distance of 30cm indicated.
- b) i) Reflected ray
 ii) Angle M and angle Y are equal.

END