

Answer Key

1. c

2. g

3. g

4. Sand in water, mud

5. Salt water, lemonade

6. b,d

7. Molecule is two or more atoms joined together chemically. Compound is a molecule that contains at least two different elements. (All compounds are molecules but not all molecules are compounds).

8. a

9. b

10. b

11. b

12. a

13. a and b

14. a

15. b

16. e

17. d

18. 1;4;1;2;2

19. 4;7;2;4

20. d

21. f

22. a

23. c

24. b

25. g

26. e

27. *Podophyllum peltatum*

28. *Urtica ferox*

29. *Datura stramonium*

30. *Toxicodendron diversilobum*

31. *Amanita phalloides*

32. *Toxicodendron radicans*

33. Poison ivy (*Toxicodendron radicans*)

34. Mayapple (*Podophyllum peltatum*)

35. Fattail scorpion (*Androctonus australis*)

36. a

37. a) $(.125 * .0204) = .00255$ moles (amt of solute); $(.300 * .0204) = .00612$ moles (solute); $.00612 / .00255 = 2.4x$ orig. Solute amount needed, $2.4 - 1 = 1.4$, Add 1.4 times as much salt (solute) to the solution

b) Boiling method: Boil out solvent until final volume of solution is $1/2.4$ of original volume (final volume is 8.5 mL); $(.3 / 2.4) = (.125 / x)$ so $x = 8.5$ mL as final volume

38. Lethal dose (LD50) is the amount of an ingested substance that kills 50 percent of a test sample. It is expressed in mg/kg, or milligrams of substance per kilogram of body weight.

Common name. Toxin. Lethal doses.

39. a

40. NOEL stands for No Observable Effect Level (toxicology); greatest concentration or amount of a substance, found by experiment or observation, that causes no alteration of morphology, functional capacity, growth, development, or lifespan of the target organism distinguishable from those observed in normal (control) organisms of the same species and strain under the same defined conditions of exposure.

41. b