

Solubility and Cumulative Transfer

Student Worksheet — g09_u09_w36

I can: interpret solubility data, classify solutions, and connect particles, concentration, and evidence.
Use paper curve/data cards only; models depend on stated temperature and conditions.

1. Define solubility.

2. Define saturated.

3. Define unsaturated.

4. Define supersaturated as a conditional claim.

5. Data: A dissolves 20 g/100 g water at 20 C. Find max in 200 g water.

6. At 20 C, 30 g A in 100 g water: classify.

7. At 20 C, 15 g A in 100 g water: classify.

8. Data: B 40 g/100 g at 60 C, 20 g/100 g at 20 C. Predict crystallized from 100 g water on cooling.

9. Explain particle model for crystallization.

10. Explain why a curve does not prove a classroom sample reached equilibrium.

11. Use 25 g/100 g data to find max for 400 g water.

12. A solution has 10 g solute/200 g water; express g/100 g water.

13. Compare concentration and solubility.

14. Data card shows cloudiness. Name two possible explanations.

15. Explain why stirring changes rate, not necessarily equilibrium solubility.

16. A curve applies to pure water. State a limitation for another solvent.

17. Mixed representation: 2.00 M solution diluted to half concentration. State volume factor and particle explanation.

18. Gas-variable transfer: Why must a gas-law ratio use K?

19. Conservation transfer: Why does dissolved solute not disappear?

20. Write a cautious conclusion from a curve/data card with stated T and observed crystals.
