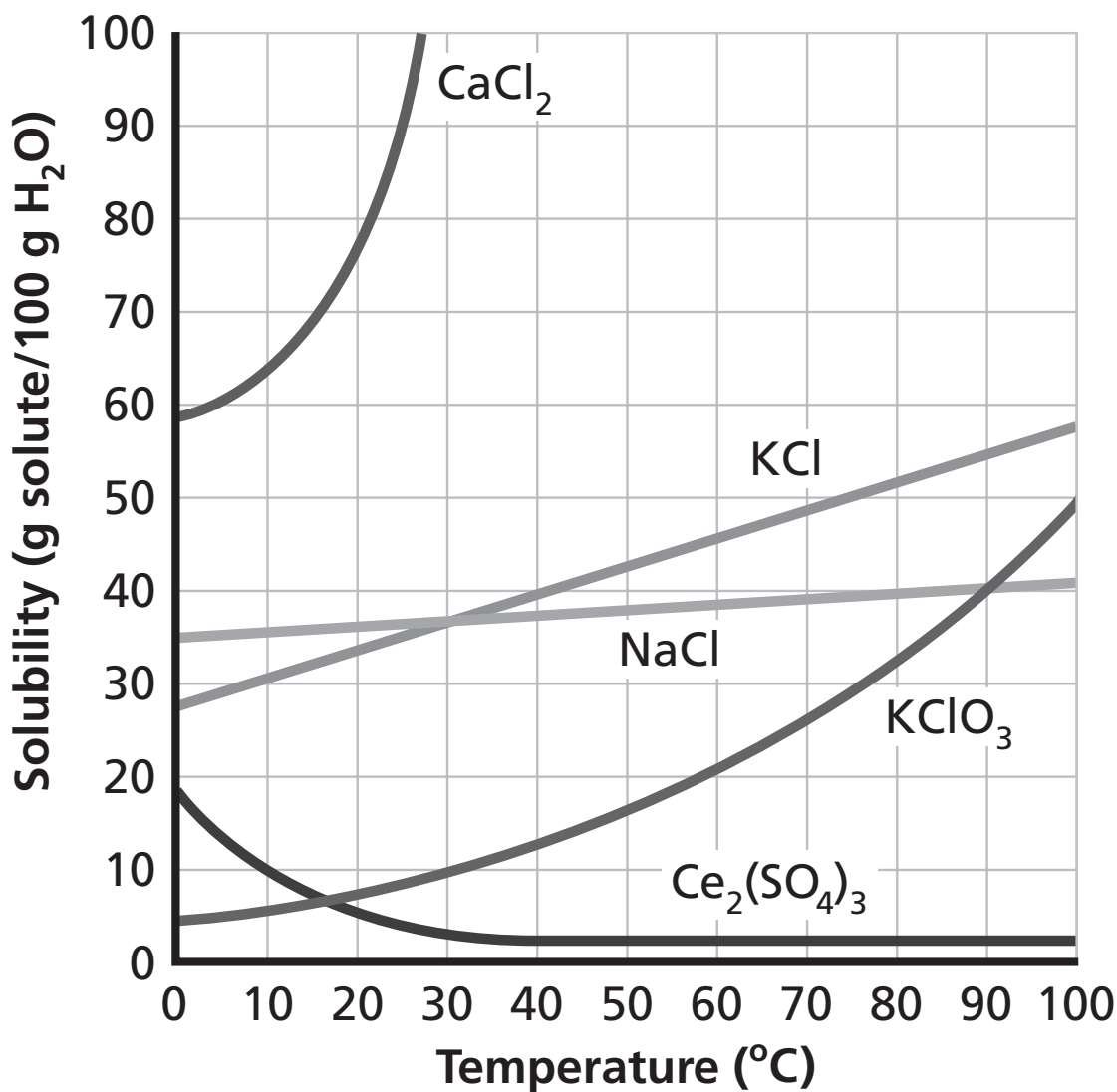


Solubility–Temperature Graphs

Use with Chapter 14,
Section 14.3

Solubilities as a Function of Temperature



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TEACHING TRANSPARENCY WORKSHEET

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Solubility–Temperature Graphs

Use with Chapter 14,
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1. What variables are plotted on the graph? _____
2. What is the unit of each variable?

3. Use the graph to complete the table below.

Substance	Solubility at 10°C
Calcium chloride (CaCl ₂)	
Cerium(III) sulfate (Ce ₂ (SO ₄) ₃)	
Potassium chloride (KCl)	
Potassium chlorate (KClO ₃)	
Sodium chloride (NaCl)	

4. At what temperature are sodium chloride and potassium chloride equally soluble in water? _____
5. How does the solubility of cerium(III) sulfate differ from the solubility of potassium chlorate over the temperature range 0°C–100°C?

6. How many grams of sodium chloride will dissolve in 1.0 kg of water at 20°C?

7. Explain whether increasing temperature has a greater effect on the solubility of KCl or on the solubility of NaCl.

8. Explain how you might make a solution containing 42 g KCl dissolved in 100 g H₂O at a temperature of 40°C. What term describes this type of solution?

