Salts and Solubility Activity 4

The clicker questions do not directly address the goals because the are quantitative or have been well discussed by the group during the activities.

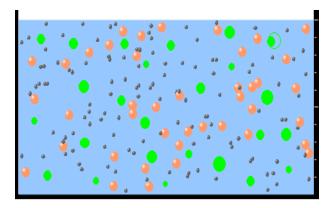**Learning Goals for 4: Students will be able to:**

•Calculate Q.

•Predict what would be observed on a macroscopic level to a solution by comparing Q to K_{sp}.

•Use microscopic illustrations, to help explain the predictions.

•Use LeChatelier's Principle to predict how changing the amount of water will affect the solution.

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Two salts, XB and AB, are dissolved in a beaker of water. There are equal number of moles. They have different solubility product constants.

XB: $K_{sp} = 1 \times 10^{-12}$ AB: $K_{sp} = 1 \times 10^{-8}$

1. If you added B^- ions which would precipitate first?

A. AB

B. XB

C. They behave the same

D. Not enough information

2. 0.010 moles of $MgCl_2$ and 0.020 moles of $CuCl_2$ are dissolved in 0.10 liters of water. A solution of NaOH is slowly stirred in. Which precipitate forms first ?

$Cu(OH)_2$ K_{sp} = 2.2×10^{-20}
$Mg(OH)_2$ K_{sp} = 6.3×10^{-10}

a. $MgCl_2$ b. $CuCl_2$ c. $Mg(OH)_2$ d. $Cu(OH)_2$