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## The Splashy Spectrum Worksheet

## Discussion Questions

1. Describe what happened in this demonstration.
2. In this reaction, hydroxide ions replace chlorine ions in 2-chloro, 2-methylpropane $\left(\mathrm{CH}_{3} \mathrm{CClCH}_{3} \mathrm{CH}_{3}\right)$.
a. Write a chemical equation showing this replacement.
b. Does this reaction make the solution more acidic or more basic? Why?
c.Write a chemical equation in which hydroxide ions replace bromine ions in 2-bromo, 2-methylpropane $\left(\mathrm{CH}_{3} \mathrm{CBrCH}_{3} \mathrm{CH}_{3}\right)$.
3. In this demonstration, the solution experienced changes in pH . When it was acidic, the pH was approximately 3-4. When it was basic, the pH was approximately 11 . What color is universal indicator solution at $\mathrm{pH} 3-4$ ? What color is it at pH 11 ?
