Playing with Words
Critical Thinking and Problem Solving

Introduction
Critical thinking and scientific reasoning are used everyday to solve life’s puzzles. By engaging students in describing how they arrived at an answer to a word puzzle, they are able to see and share their thought processes.

Concepts
- Critical thinking
- Scientific reasoning
- Observation skills

Materials
Word puzzles on poster board, overheads or presentation software

Safety Precautions
This activity is considered safe.

Procedure
1. Show each word puzzle and allow students adequate time to think and solve each one.
2. Discuss the strategy used to decipher the word puzzle.

Disposal
The materials may be reused.

Discussion
The focus of this activity is to have students construct knowledge and meaning based upon their current knowledge base. After one student explains the method used to solve a problem, the remaining puzzles using the same technique become clear for all of the students. This is similar to what happens in chemistry class. Once the student figures out how to use a particular strategy, that strategy becomes one of a number of tools that the students can use throughout the course.

Connecting to the National Standards
This laboratory activity relates to the following National Science Education Standards (1996):

Unifying Concepts and Processes: Grades K–12
- Systems, order, and organization
- Evidence, models, and explanation

Content Standards: Grades 5–8
- Content Standard A: Science as Inquiry
- Content Standard G: History and Nature of Science, nature of science

Content Standards: Grades 9–12
- Content Standard A: Science as Inquiry
- Content Standard G: History and Nature of Science, nature of scientific knowledge
Flinn Scientific—Teaching Chemistry™ eLearning Video Series

A video of the Playing with Words activity, presented by Mike Roadruck, is available in Critical Thinking and Problem Solving and in Problem-Solving Teaching Strategies, part of the Flinn Scientific—Teaching Chemistry eLearning Video Series.

Slide 1

Head over heels in love

Slide 2

Singing in the rain

Slide 3

Adding insult to injury

Slide 4

Scrambled eggs

Slide 5

The good, the bad, and the ugly
Playing with Words continued

Slide 6
A step backwards

Slide 7
Cancelled check

Slide 8
Growing old

Slide 9
T for two

Slide 10
High IQ
Playing with Words continued

Slide 11
- Blood is thicker than water
- PLASMA
  \[H_2O\]

Slide 12
- Split second timing
- TIMING  TIM ING

Slide 13
- Fly by night
- night fly

Slide 14
- The odds are against you
- 1 3 5 7 9 11 vs. U

Slide 15
- Horse back riding
- esroh riding
Slide 16  
Jay walking

Slide 17  
Bridge over troubled water

Slide 18  
Down hill skiing

Slide 19  
Love at first sight

Slide 20  
Six of one, half a dozen of another
An A in chemistry

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