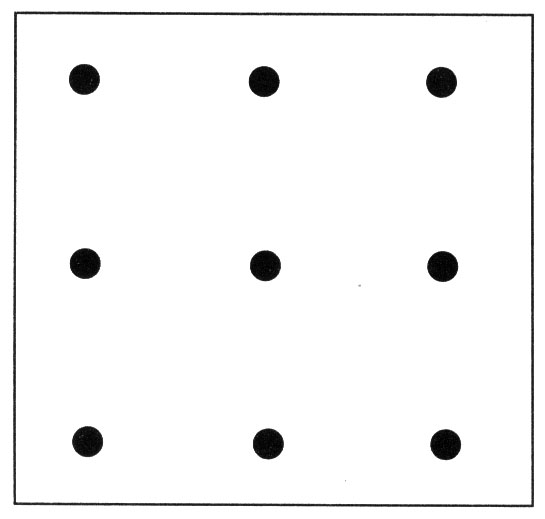
**Class Activities**

Chapter 11: Problem Solving

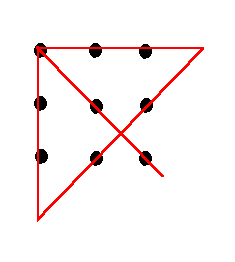
**Activity #1: Insight**

This is a great way to start on the topic of problem solving and insight in particular. Show the class the following image (the problem is called the 9-dot problem) and ask them to connect all the dots together using 4 four connected straight lines without lifting the pencil.



You can have students working in pairs. Once a group is done, tell them to keep the solution secret. This activity may take up to 5 min.

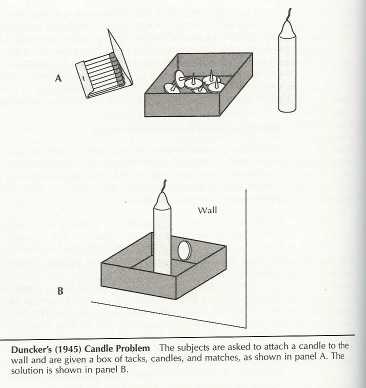
The solution is as follows:



**Activity #2: Functional fixedness**

In this activity, you can split the students in pairs or groups of 3-4 students. Print out the following image, provide students with part A (cut out part B), and ask them to solve the following problem: Try to attach the candle to the wall using the tools you have (matches, a box of tacks, and candles).

Give students approximately 5 minutes to solve the problem.



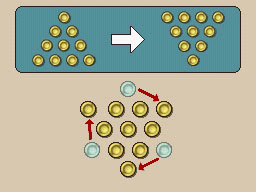
Discuss other examples of functional fixedness. Open up a discussion on how they tried to solve the problem, what helped them, and what troubles they had.

**Activity #3: Verbalization and problem solving**

For this assignment, students are asked to solve the following problem (working in pairs is best) with the following instructions: By moving just three coins, make the triangle point down.



Here is the solution:



Give the students approximately 90 seconds, and if they have not solved the problem ask them to verbalize it to their partner in as much detail as possible. Surprisingly, students usually do much worse afterward doing so. Some of the questions you can ask them:

Do you think describing your efforts so far helped you? If so, how? Why do you think verbalizing might have helped solve the problem or made it easier/more difficult? Why do you think verbalizing hinders problem solving?