

## Steps of Effective Problem Solving

### Understand the Problem

#### Read the problem - 3 Times

1. What is this problem about? What seems to be going on?
  - a. What do you notice in this question?
2. What are you trying to solve?  
"I need to..." "The question is..."
3. What information do you have? What do you need to know?

### Think of Your Plan

4. Make a Connection -
  - a. How does this connect to something you have done in the past?
5. Can you draw, organize or represent what is going on?
6. Create a Plan - What strategies can you use?  
"My strategy is..." or "I will..." or "My plan is..."

### Solve the Problem

7. Make an attempt to solve the problem.
  - a. Revisit the problem and check your understanding if needed.
  - b. Revise your strategy if needed.

### Present Your Solution

8. Present your solution to the problem and explain it clearly and completely.
9. Justify that your solution makes sense for this problem.

## Organizational Strategies for Problem Solving

- Logical Reasoning
- Look for a pattern
- Work Backwards
- Consider special cases
- Solve problem with simpler numbers
- Organize the data
- Use a table or a chart
- Draw a picture / diagram
- Use a graph
- Use manipulatives
- Guess and Check
- Make connections with previous experience
- Act it out
- Use a model
- Eliminate Possibilities
- Use a formula
- Brainstorm with a partner
- Solve an equation
- Be ingenious
- Read the Task Again