Stages of Problem Solving

Preparation:
A. Note things to do
B. Schedule time
C. Locate Process

1. Discovery - find for yourself cause or reason for something by experimenting or examining facts.
   a) State question
   b) Analyze situation
      * Ask "what," "where," "who," "to what extent"
      * Gather all relevant facts
   c) Generate hypotheses
      * Look for possible causes.
      * Ask "why."
   d) Test and verify

2. Creativity - thinking up new possibilities and choosing among them.
   a) Establish criteria
      * What results do you want to achieve?
      * A criterion = guiding idea.
   b) Think up possibilities
   c) Choose best possibility
      1) Compare each possibility to criteria.
      2) Eliminate those that do not meet minimum standard.
      3) Compare remaining possibilities with each other.
      4) Choose one that ranks highest according to criteria.

3. Planning - deciding how, when and where to do something and in what stages of time.
   a) Set up stages or successive steps. If necessary, divide into sub-stages.
   b) Test for flaws
   c) Control mishaps.
      * Alter or improve plan to nullify effects of potential problems.