Mt-3 How People Use Technology to Solve Problems

<u>Problem Solving</u> - The process of Identifying, Selecting,Trying out, and evaluating alternative solutions that will fulfill a desired goal.

<u>Brainstorming</u> - A group idea-generation technique.

<u>Constraints</u> - (Limitations) imposed by scientific principles or limited resources, or resulting from people's values and attitudes.

<u>Criterion</u> - A standard, rule, or test by which a judgment of something can be made.

<u>Optimization</u> - The process of obtaining the solution that best satisfies all the criteria within the established constraints or limitations.

<u>Problem</u> - A question posed for consideration or in need of a solution.

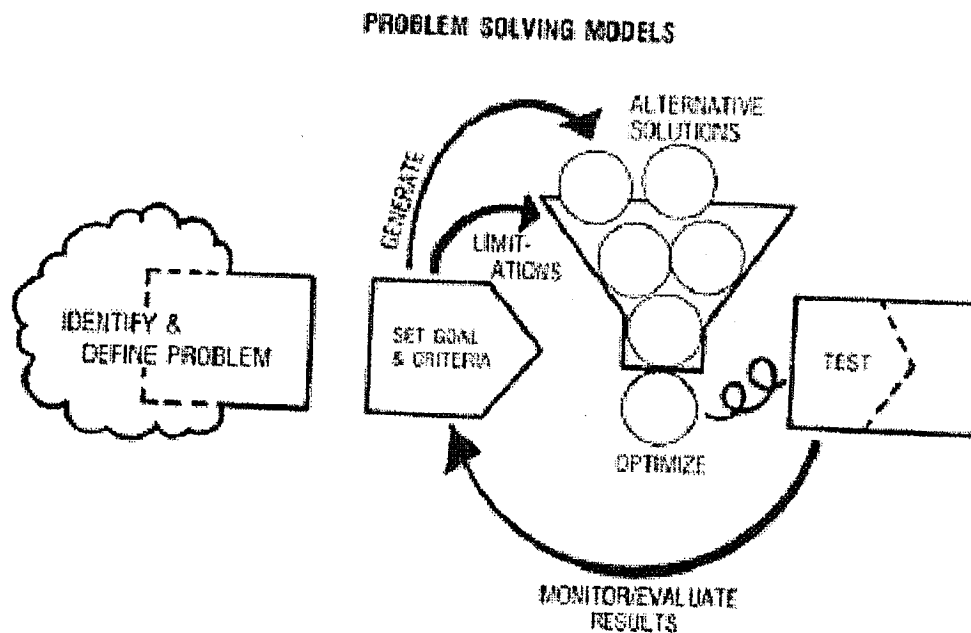<u>Implement</u> - Actually building or creating the proposed solution.

<u>6 Problem Solving Steps</u>

1. Identify and define the problem.

2. Set goals and Identify criteria

3. Generate alternatives and consider limitations.

4. Select the optimal solution.

5. Implement the solution.

6. Evaluate the results and make modifications, if necessary.

Simplify the steps in your own words.

PROBLEM SOLVING MODELS

6 Problem-Solving Steps

1. Identify and define the problem.

2. Set goals and identify criteria.

3. Generate alternatives and consider limitations.

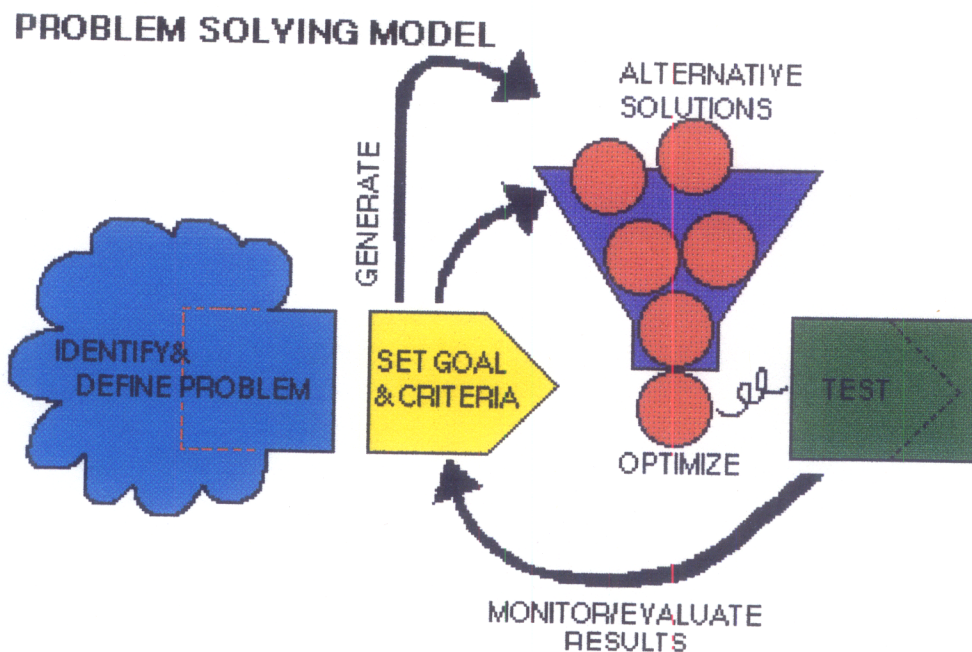4. Select the optimal solution.

5. Implement the solution.

6. Evaluate the results and make modifications, if necessary.

PROBLEM SOLVING MODEL

GENERATE

ALTERNATIVE
SOLUTIONS

IDENTIFY&
DEFINE PROBLEM

SET GOAL
& CRITERIA

TEST

OPTIMIZE

MONITOR/EVALUATE
RESULTS

Simplified Problem Solving Steps:

1. What is the problem?

2. What are the desired results and how will these be judged?

3. Brainstorm solutions and consider limitations.

4. Select the best solution.

5. Build or implement this solution.

6. Test the solution and make any necessary changes.