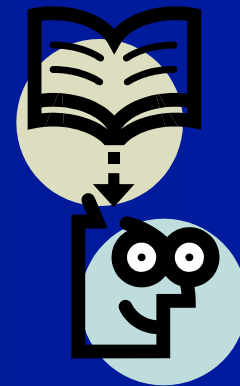# PROBLEM SOLVING STEPS

How do we go about solving a problem?

Step One : Identify the Problem

- This is an important step, you must know exactly what it is you are trying to solve before you can move forward

Step Two: Set Goals

- It is important to set realistic goals, you must remember to take into account the Technological Resources

Resources of Technology

Tools, Machines and Processes

Materials

People

Capital

Energy

Time

Information

Step Three: Research

Where do we get the necessary knowledge to solve our problem?
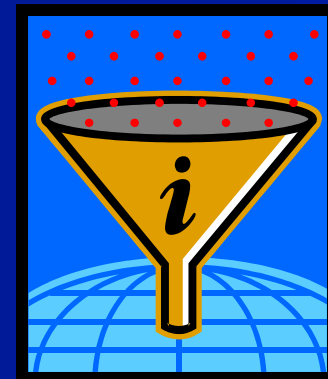
Prior Knowledge

Rule of thumb

Research

Step Four: Create Ideas

- Brainstorming

Step Five: Select the Best Idea

Once you have identified a number of solutions you need to select the one that best meets your goals

One way to select the best solution is to create a matrix

Design Matrix

5 - meets perfectly 4 - meets well 3 - meets somewhat 2 - meets minimally 1 - does not meet	Solution 1	Solution 2	Solution 3
meets organization guidelines?	4	5	3
meets organization guidelines?	5	3	5
safe?	4	4	2
convenient?	3	1	3
'Totals	16	13	13

Step Six: Implement or Build

- Now it's time to try your solution!

Step Seven: Test

Use real-life testing situations to evaluate the solution.

Step Eight: Feedback

Once you test you must compare your results with your goals.

If your design meets your goals you're done if not you must move back to the top and start over.

THE DESIGN LOOP