

Quality Standards of Effective Problem Solving

Understands the Problem

- Identifies the goal and states essential questions that show consideration of the key elements of the problem
- Clearly articulates the problem
- Identifies and describes constraints or limiting conditions to solving the problem
- Explains how constraints or limiting conditions are obstacles to solving the problem

Plans to Solve the Problem

- Brainstorms strategies
- Evaluates options, taking into account the advantages and disadvantages of each based on constraints and limiting conditions
- Challenges self to try new and different solutions
- Determines information needed to solve the problem
- Develops a hypothesis

Carries out the Plan

- Actively seeks information needed to solve the problem
- Follows through on chosen strategy
- Monitors the implications of action taken.
- Revises strategy if the situation arises
- Shifts strategy or the analysis of the statement of the problem as new information becomes available

Evaluates the Results

- Analyses and interprets the information collected, drawing reasonable inferences based on data
- Modifies the hypothesis as necessary
- Designs criteria for and evaluates the effectiveness of the selected strategy
- Assesses the value of the solution and whether results are coherent, logical, realistic and practical

Communicates the Findings

- Communicates findings based on ConVal Quality Standards of Effective Communication