

PROBLEM-SOLVING PROCESS (Scientific Method; Dewey, 1912; Phillips, Pedersen, and Wood, 1979)

The problem: Define the problem briefly: what’s going on that is an issue? It is economic, financial, social, political, educational, some or all of these? 1-2 sentences.

1. Understanding the Charge

What is the nature of the problem?	
Who is involved? (<i>who is impacted?</i>)	
What is at stake in the problem and solution? (<i>what are some of the benefits from the solution? What happens if we don't provide a solution?</i>)	
What resources (<i>financial, material, technological, human</i>) are currently available?	
What are the deadlines? (<i>by when is a solution needed?</i>)	

2. **Phrasing the Question** – Once you’ve outlined the problem in Step 1, phrase the problem/issues as questions – ***what are some questions you should now ask about the problem as defined above?***
Write down three:

1. _____
2. _____
3. _____

3. To answer those questions, you have to gather information. This is Fact-finding: background, current state of the problem, possible outcomes

Background <i>(What decisions were made, and by whom, that led to the current situation?)</i>	
Current State of the Problem <i>(Who are the people involved who have information about the problem?)</i>	
Possible outcomes <i>(What are customers' expectations? Organizations' expectations? Team's expectations?)</i>	

4. Establishing Criteria for a Solution (*solution that comes closest to meeting needs of all stakeholders; this is how you know you'll be successful; these are your "metrics" for success*)

→ Answer these questions:

1. What would ideal solution look like?
2. What might it include?
3. How would it impact the stakeholders?
4. What resources are necessary to implement the solution? (resources = meetings, phone calls, additional time, rescheduling meetings, etc.)

5. **Generate Alternative solutions – BRAINSTORM** (*write everything down; no criticism of others' ideas, keep going until team is out of ideas; once done, use clustering to group ideas together*) – **COME UP WITH AT LEAST 2 ALTERNATE SOLUTIONS, USING THE IDEAS YOU DISCUSSED ABOVE.**

6. **Test Each Solution from Step 5 Against the Criteria from Step 4 (see page 200)**

Solution	Criteria 1: (phrase as question)	Criteria 2: (Phrase as question)	Criteria 3: (Phrase as question)
Solution 1:			
Solution 2:			
Solution 3:			

7. **Formulate a Solution** – this is your final result and what you will present to your audience as “the solution”

8. **Present the solution** – provide a convincing argument (NOTE: you do not need to write anything here)