

ASKING QUESTIONS BEFORE ATTACKING A SCIENTIFIC ISSUE

1. What is goal? Is it really important? Twenty years from now will you think this was necessary?
2. What are the major issues in this field?
3. What are the anomalies everyone is overlooking?
4. What is an area that others are not investigating?
5. Can the problem be defined as part of a bigger problem?
6. How are other fields dealing with this problem?
7. Are there multiple possible solutions? What are the relative advantages and disadvantages of each?
8. Is this really the problem you are interested in?
9. Is there something about the solution you are afraid of?
10. What solutions don't you like and why?
11. How will others misinterpret your solution?
12. What will be major criticisms; i.e., pretend you are a reviewer.
13. What are the consequences (political, treatment, focus of the field) of a solution?
15. Could some of the assumptions in the field be incorrect?
16. What would convince the skeptics; i.e., what is definition of success?
17. Have you read exhaustively? Read other fields' approaches?
19. What non-experts can you ask about problem?
20. Can the problem be subdivided?
21. Why does the problem exist?
22. How have others solved similar problems?
23. Can you use metaphors?
24. What is acceptable evidence?
27. Are construct names misleading?
28. What are you afraid might be true?
29. List alternate explanations?
30. What types of evidence influences target group?