

## ASKING QUESTIONS

Perhaps one of the biggest mistakes in Science or a career is asking a bad question. Here are some tips for thinking about whether to invest 2 years or 20 years into an area.

1. 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. Is this an overlooked area?
5. Is the problem 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. What will be major criticisms; i.e., pretend you are a reviewer.
13. Try using figures, graphs, equations to sharpen focus.
14. What are the consequences (political, treatment, focus of the field) of a solution?
15. Could some of the assumptions about the problem be incorrect?
16. What would convince the skeptics that problem is worthy of study?
17. What would be the definition of success?
17. Have you read exhaustively? Read other fields approaches?
19. Can the problem be subdivided?
21. Why does the problem exist?
22. How have others solved similar problems?
23. What is acceptable evidence?
25. Are construct names misleading?
28. What are you afraid might be true?
29. List alternate explanations and test them?