

Analyzing Problems

Identify some problem you need to reason through. Then complete the following:

What exactly is the problem? (Study the problem to make clear the kind of problem you are dealing with. Figure out, for example, what sorts of things you are going to have to do to solve it. Distinguish problems over which you have some control from problems over which you have no control. Pay special attention to controversial issues in which it is essential to consider multiple points of view.)

The key question that emerges from the problem is... (State the question as clearly and precisely as you can. Details are very important.)

My purpose in addressing the problem is... (Know exactly what you are after. Make sure you are not operating with a hidden agenda and that your announced and real purposes are the same.)

Actively seek the information most relevant to the question. (Include in that information options for action, both short-term and long-term. Recognize limitations in terms of money, time, and power.)

Some important assumptions I am using in my thinking are... (Figure out what you are taking for granted. Watch out for self-serving or unjustified assumptions.)

If we solve this problem, some important implications are... If we fail to solve this problem, some important implications are... (Evaluate options, taking into account the advantages and disadvantages of possible decisions before acting. What consequences are likely to follow from this or that decision?)

The most important concepts, theories, or ideas I need to use in my thinking are... (Figure out all significant ideas needed to understand and solve the problem. You may need to analyze these concepts. Use a good dictionary.)

The point(s) of view is/are as follows: (Know the point of view from which your thinking begins. Be especially careful to determine whether multiple points of view are relevant.)

After reasoning through the parts of thinking above, the best solution (conclusion) to the problem is... (If the problem involves multiple conflicting points of view, you will have to assess which solution is the best. If the problem is one-dimensional, there may be just one "correct" solution.)

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The Problem of Pollution as an Example¹

What is the problem? The problem is pollution and the fact that because people are not doing enough to reduce it, a host of negative consequences are occurring (e.g. increased medical problems, loss of animal and plant life, increased contamination of the earth's water sources).

Questions that emerge from the problem are... What can I personally do to reduce pollution? A related question is: What can we collectively do to reduce pollution?

My purpose in addressing the problem is to increase the things I do to contribute to a more healthy biosphere.

The important information relevant to the question is information about what I am currently doing to increase pollution (such as generating trash that could be recycled, driving a car, etc.), information about what I could do to reduce the amount of pollution I contribute to (such as locating recycling centers, pursuing alternative forms of transportation, etc.), information about environmental groups I might support, etc.

Some important assumptions I am using in my thinking are that pollution is causing significant damage to the biosphere, that everyone can help reduce pollution, that I, and everyone else, have an obligation to make a significant effort to help reduce pollution.

If many people were to reason well through this issue, some implications are that there would be a longer and higher quality of life for millions of people. Additionally, plant and animal species and ecosystems would be protected. A host of other positive implications would follow as well, implications for the atmosphere, the waterways, the forests, etc.

If I, and many others, fail to reason well through this issue, the implications are that we will unnecessarily contribute to pollution's many harmful effects.

The most important concepts, or ideas, I need to use in my thinking are the concepts of pollution, and that of a healthy biosphere. Each of these concepts leads to a host of further technical, ecological, and ethical concepts required to understand the multiple dimensions of pollution and the ethical responsibilities that knowledge of its many harmful effects entails.

My point of view is as follows: I am looking at pollution. I am seeing it as something I can help reduce through many means.

After reasoning through the parts of thinking above, the best solution (conclusion) to the problem will be to put into action the various options that my research has revealed.

¹ This problem is presented without details and is intended merely to exemplify how one might begin to reason through the logic of a complex question. When using this approach, the more details one includes, the deeper the analysis can be. Many layers of detail could then be specified based on research into all of these levels. For further background information on this particular problem, see the Logic of Ecology (p. 36).