4) Questions

In this section we have placed transparencies that can be used to introduce participants to 4 types of questions:

1) questions that probe elements
2) questions that apply standards
3) questions distinguished by systems, 4) questions distinguished by domains.

As critical thinkers we must ask questions that enable us to take thinking apart, gain perspective on it, and assess it.

For every problem under the sun, there is a solution or there is none. If there be one, seek till you find it. If there be none, then never mind it.

- Mother Goose -

- What does this mean?
- What would my behavior be like if I lived in accordance with this?
- What would the thinking underlying this behavior be like?
- What would my behavior be like if I didn't live in accordance with this?
- What would the thinking underlying this behavior be like?


teaching &
learning
creativity
emotions
intuition
habits
Critical
Thinking
about
well-being
listening
medicine
writing
speaking
nursing
religion
politics
reading
problem-solving

The quality of our thinking is given in the quality of our questions.

The quality of my thinking is given in the quality of the questions I ask.

Four Ways to Generate Questions

Using your knowledge of structure of thought & logic of systems	Using your knowledge of systems	Using your knowledge of standards	Using your knowledge of disciplines & domains
To focus on questions based on the elements of thought: Purpose Question at issue Concepts Assumptions Information Interpretations Implications Point of view	To focus on 3 types of questions	To focus on questions based on standards: Clarity Accuracy Precision Relevance Depth Breadth Logicalness	To focus on questions specific to a discipline or domain: Scientific questions Mathematical questions Historical questions Literary questions etc.

Questions with one right answer
|
One system
|
Knowledge

Questions that are a matter of subjective preference
|
Opinion

Questions with better and worse answers
|
Competing Systems
|
Judgement

Elements:

- Purpose
- Question at issue
- Concepts
- Assumptions
- Information
- Interpretation
- Implications
- Point of view

Standards:

- Clarity
- Accuracy
- Relevance
- Depth
- Breadth
- Logicalness

Domain:

- Historical
- Geographical
- Economic
- Biological
- Psychological
- Philosophical

System:

One right answer

Subjective preference, mere opinion

Better and worse answers

Domains of Thinking

Q: What can be done to reduce the number of people who abuse illegal drugs?

Economic:

- What can be done to minimize the influence of money involved in drug sales? (bribes, vested interest)
- What economic forces support drug use?

Political:

- What possible solutions to drug abuse are politically unacceptable?
- Are there any realistic solutions that the power structure would accept?

Social:

- What social structures and practices support drug abuse?
- How does gang membership contribute to drug abuse?

Psychological:

- How do factors such as stress, individual differences, childhood traumas, genetics, support drug abuse?

Educational:

- What can educational institutions do to reduce the incidents of drug abuse?
- What role are they now playing in regard to the problem?

Religious:

- What can religious institutions do to reduce the incidents of drug abuse?
- What role are they now playing in regard to the problem?

Cultural:

- What cultural beliefs support the drug abuse problem?

Domains of Thinking

Q: What does it take to be a good parent?

Psychological:

- How do variables such as stress, personality, & childhood traumas influence parenting ability?

Social:

- What social structures and social practices support differing parenting abilities?
- What are socially accepted parenting practices?

Biological:

- What is the role of genetics in parenting?

Religion:

- How do our religious views influence parenting practices?

Economic:

- How do economic forces such as income influence parenting?

Educational:

- How does the educational achievement of a parent influence his/her parenting ability?
- What parenting practices are taught in schools?
- Should parenting practices be taught in schools?
- What educational tools can be developed to help people parent differently?

Think Tanks

1) Working in groups of 4, make a list of all the questions that the group has.

2) See if you can use your collective understanding & insight to answer the questions.

3) Be prepared to put one question to the seminar as a whole → as an important question that you were not able to answer.

Domains

- Think of a question in your content which is broad & complex in nature.
- Identify the domains inherent in the questions, then list questions within each domain.
- Stand up & find a partner.
- Domains may include:

  social . . . . . .political
  economic . . . .moral
  religious . . . . .cultural
  biological . . . .historical
  etc...

- The question determines the domains.

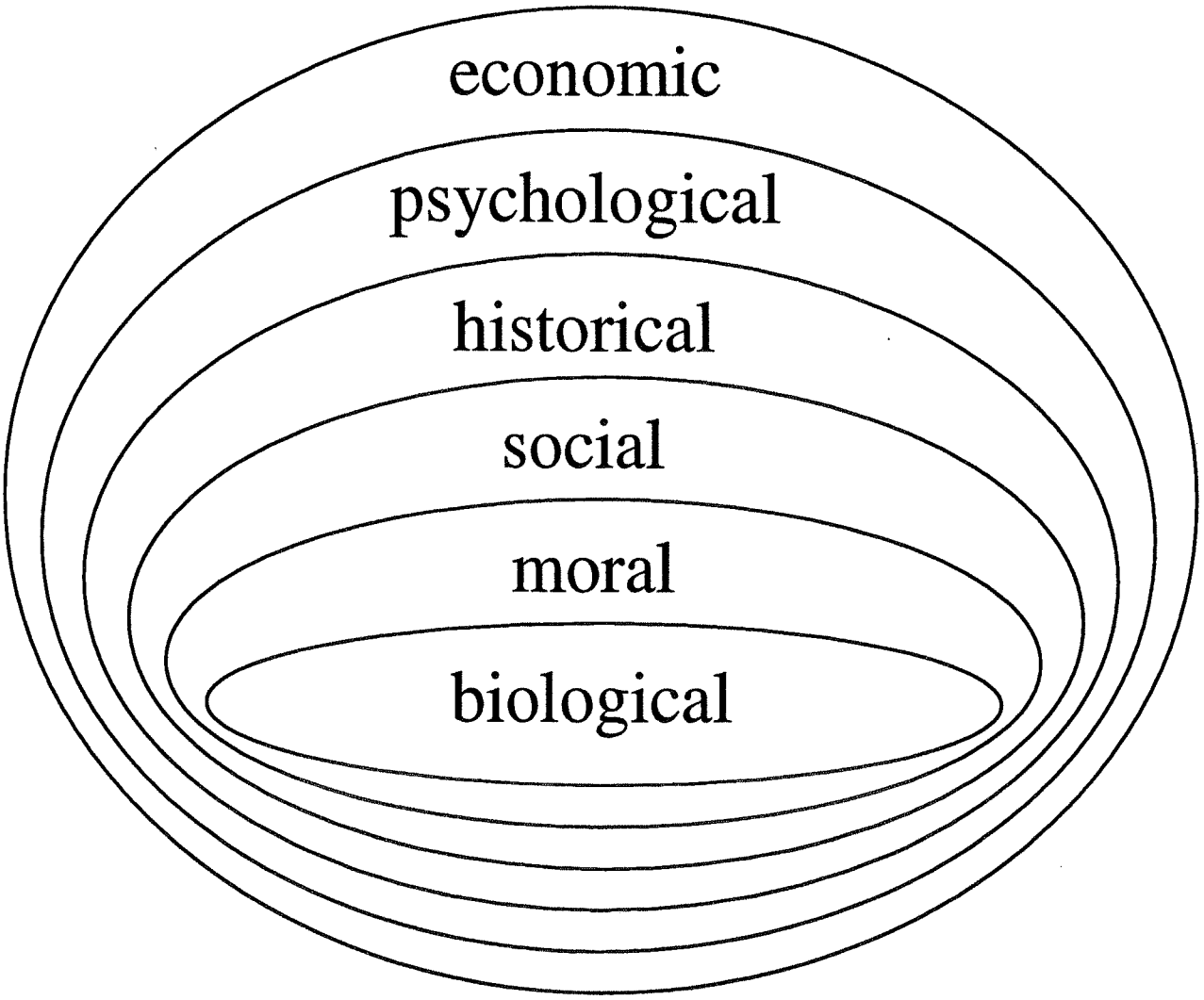
- Write a category three question which you could use in the classroom.

- Then list the category one questions you would need to answer before addressing the category three question.

- Stand up when finished.

- Find a partner and share.

Focusing on the problem of education, identify questions that focus on the dimensions of the problem that are:



Generate questions in each of these domains.

- What can be done about the problem of education in America?
- Work alone - Find a partner

Psychology Class

Category 3:

- What is the best way to treat depression?

Category 1:

- What is depression?
- In what settings would we be treating it?
- Are there various forms of depression?
- Is the depression of client X debilitating?
- What are some ways to treat it?

Nursing Class

Category 3:

- What is the most significant medical problem facing the country today?

Category 1:

- What are some of the significant medical problems?
- What does the data indicate about those problems?
- What are different ways of understanding what we mean by problem? (death rate, debilitation rate, etc.)

Three Kinds of Questions and Fairness in Grading

Category 1: <u>One right answer</u>

(one system to think in)

Category 2: <u>Many "right" answers</u>

(human preference the key)

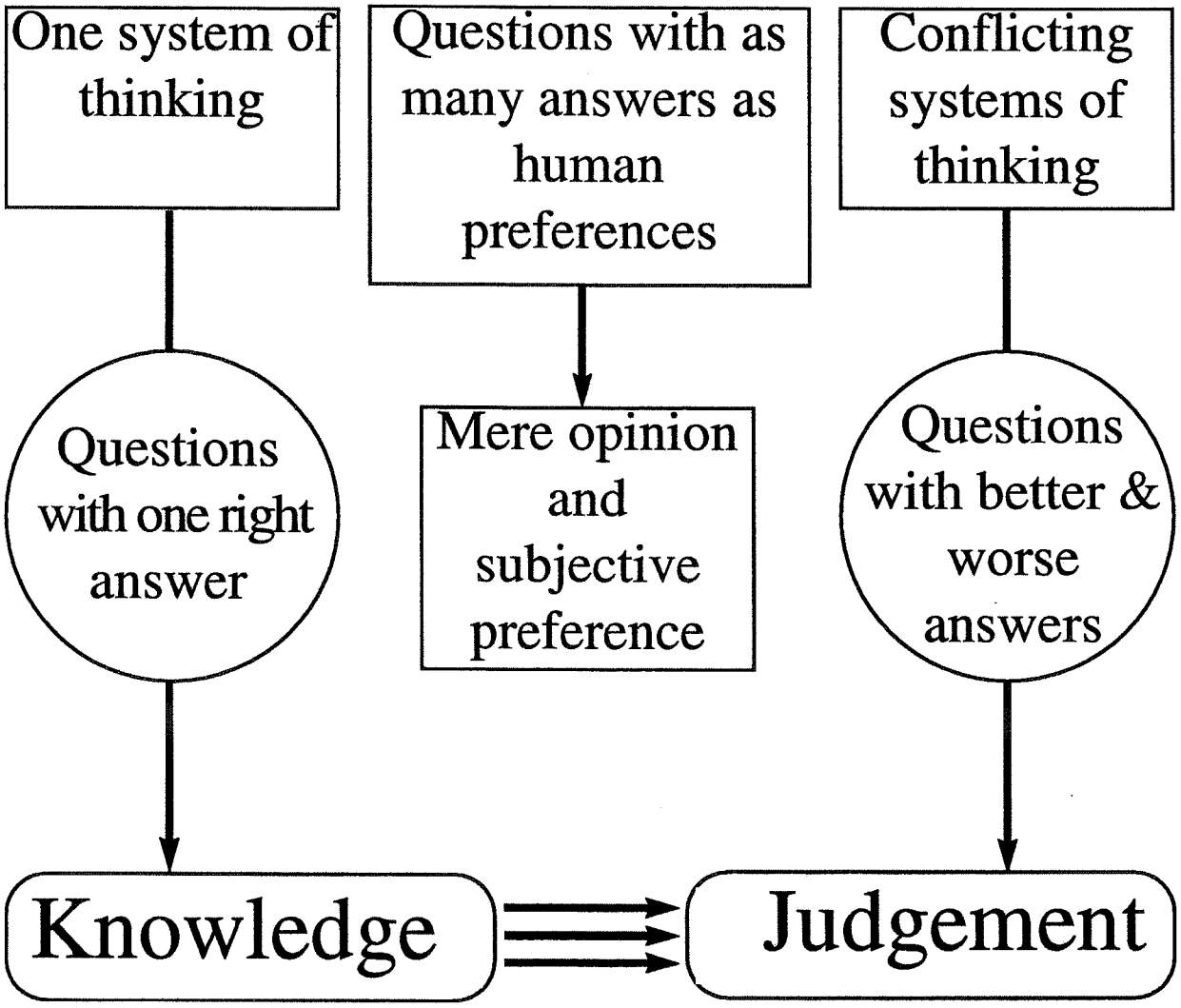
Category 3: <u>Better and worse answers</u>

(multiple systems to think in)

- **Knowledge**
- **Mere opinion**
- **Reasoned judgement**

- Fairness in grading requires that we help students to distinguish these categories and that we grade students accordingly.

Classification by System:



Questions drive thinking...

Write down the most important question you have right now.

1) Choose a basic question whose answer is of significance in your instruction.

2) Make a list of "logically prior" questions that would be integral to a Socratic discussion.

3) Plan out your discussion, thinking of possible problems, information students need to adequately address the question etc...

4) Stand up when you are ready pair up with another person to discuss your instructional plan.

Tactic

1) No questions means no understanding.

2) Questions drive thinking

So ask students:

What are your questions right now?

Not:

Do you have any questions?

(Students often think that if they have questions, there is something wrong with their thinking)

Three Categories of Questions: Crucial Distinctions

Many pseudo critical thinking approaches present all judgments as falling into two exclusive and exhaustive categories: fact and opinion. Actually, the kind of judgment most important to educated people and the kind we most want to foster falls into a third, very important, and now almost totally ignored category, that of reasoned judgment. A judge in a court of law is expected to engage in reasoned judgment; that is, the judge is expected not only to render a judgment, but also to base that judgment on sound, relevant evidence and valid legal reasoning. A judge is not expected to base his judgments on his subjective preferences, on his personal opinions, as such. You might put it this way, judgment based on sound reasoning goes beyond, and is never to be equated with, fact alone or mere opinion alone. Facts are typically used in reasoning, but good reasoning does more than state facts. Furthermore, a position that is well-reasoned is not to be described as simply "opinion." Of course, we sometimes call the judge's verdict an "opinion," but we not only expect, we demand that it be based on relevant and sound reasoning.

Here's a somewhat different way to put this same point. It is essential when thinking critically to clearly distinguish three different kinds of questions:

1) **Those with one right answer (factual questions fall into this category)**
   - What is the boiling point of lead?

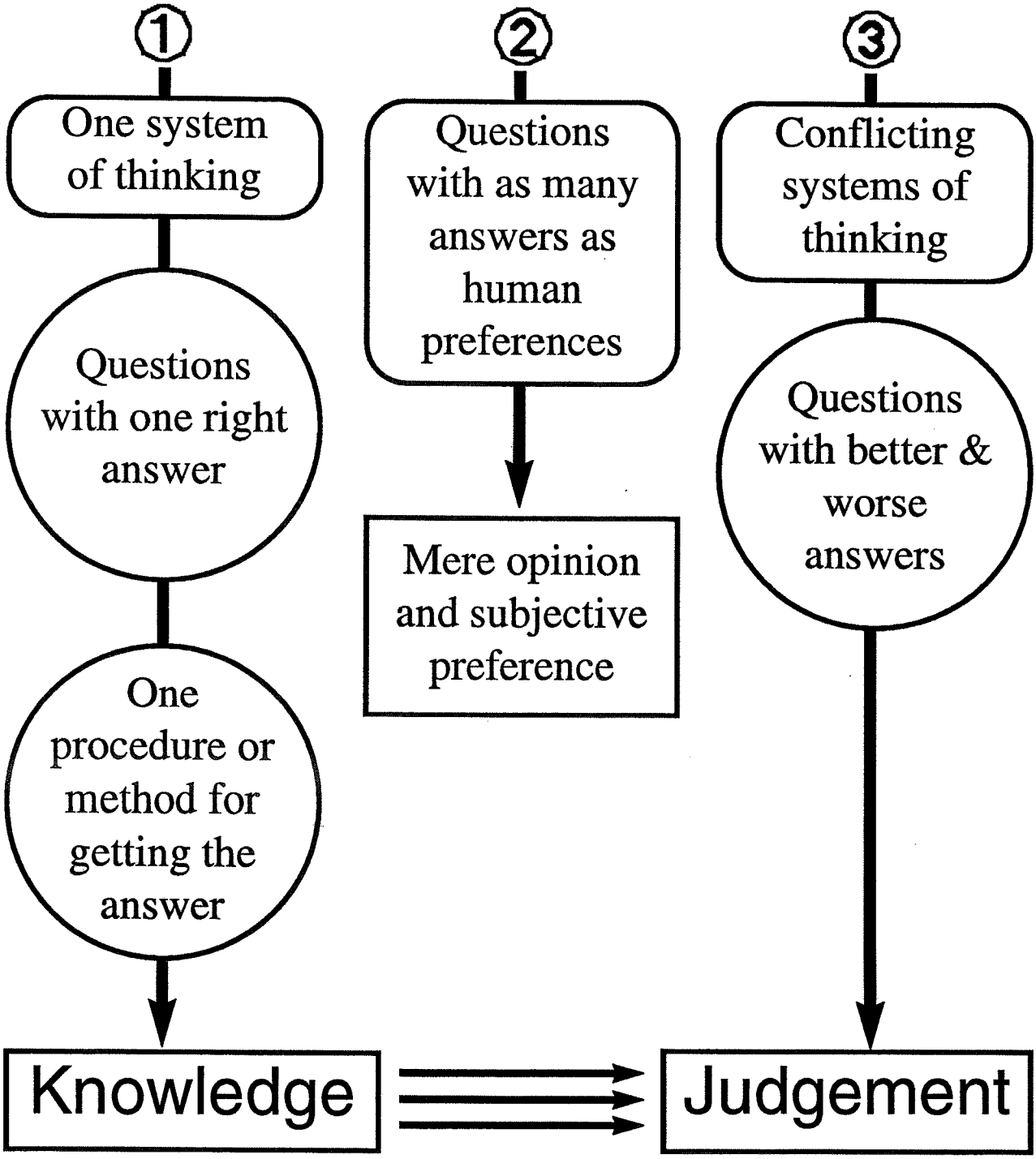
2) **Those with better or worse answers (well-reasoned or poorly reasoned answers)**
   - How can we best address the most basic and significant economic problems of the nation today?

3) **Those with as many answers as there are different human preferences (a category in which mere opinion does rule).**
   - Which would you prefer, a vacation in the mountains or one at the seashore?

Only the third kind of question is a matter of sheer opinion. The second kind is a matter of reasoned judgment — we can rationally evaluate answers to the question (using universal intellectual standards such as clarity, depth, consistency and so forth).

When questions that require better or worse answers are treated as matters of opinion, pseudo critical thinking occurs. Students come, then, to uncritically assume that everyone's "opinion" is of equal value. Their capacity to appreciate the importance of intellectual standards diminishes, and we can expect to hear questions such as these: What if I don't like these standards? Why shouldn't I use my own standards? Don't I have a right to my own opinion? What if I'm just an emotional person? What if I like to follow my intuition? What if I don't believe in being "rational?" They then fail to see the difference between offering legitimate reasons and evidence in support of a view and simply asserting the view as true. The failure to teach students to recognize, value, and respect good reasoning is one of the most significant failings of education today.

CLASSIFICATION BY SYSTEM



Dogmatist Relativist

Category One vs. Category Three Questions: A Classroom Model Using An Elementary Example

The following structure is designed to help students internalize the meaning of category one and three questions, as well as to practice addressing category three questions, using information yielded by category one questions. In working through questions such as these, students learn, not only the important distinction between questions of knowledge and questions of judgment, but perhaps more importantly to effectively address complex questions requiring reasoned judgment.

The model outlined here can be used and adapted with numerous category one/category three questions. Prior to using a structure such as this, teachers should spend time presenting to students category one, two and three questions as basic concepts.

Category Three

What can I do to learn to think better?

Category One

What are some ways to be a better thinker?
What are some things I would be able to do if I were a "better thinker"?
What are some reasons why people should think well?
What are some bad things that can happen to me if I don't think well?
Who is responsible for how well or poorly I think?

Purpose:

To help students understand how to improve their thinking ability, and to figure out the implications for doing so versus failing to do so.

Basic guideline structure for focusing on category three questions in the elementary classroom:

1) Place students in groups of two, three, or four. Begin by giving them the purpose of the assignment, the category one and category three questions. Inform them that you want them to answer the category one questions, then give a report on their answers to the class. Tell them also that after their group reports they will write individual papers on the category three questions, so that they see the relevance of the reports to their ability to write an elaborated answer to the category three question.

Give them time to address and elaborate on the category one questions.

Have them write out answers, but tell them you will choose who will give the group report prior to reporting time.

2) Ask for group reports. Instruct other students to give feedback to each group focusing explicitly on these intellectual standards where appropriate: accuracy, relevance, significance, depth, breadth, logicalness, completeness.

3) Have students write individual answers to the category three question.

4) Place students in triads and have them read their answers to the question within their groups. Again have students give one another feedback focusing on the intellectual standards.

5) Have each group exchange papers with another group. Then each paper is read within each group, and written feedback given for each paper. The papers are then returned to the writers of each.

Questions of Fact or One System Questions

- Did it rain here yesterday?
- Is the sun shining?
- Is this a chair?
- How many eyes does an owl have?
- How does the motherboard on a computer operate?
- Is this red?
- Does this chair recline?
- Do we have any milk?
- Did you turn the light on?
- Is that a cow or a dog?
- What is an animal?

Questions of Preference

- Would you rather have short hair or long hair?
- Or would you prefer that your head be shaved, either completely or in some segments?
- Do you like to go to the opera?
- Do you like to watch football on TV?
- Do you prefer a flat pillow or a fluffy pillow?
- Do you want a ring or a necklace?
- Do you want to go outside now?

Questions Calling for Reasoned Judgement

- How can I best design this house so that I minimize costs while meeting the major needs and desires of all my family members?

- Since I know that the road that I usually travel to work is having major repairs done. Should I take another route or take a chance that the repair work won't impede my progress.

- Who is the best person to hire for this job out of these three candidates, each of whom seem highly capable of performing the job well?

- Should I keep my job, which I enjoy, or should I take this other job offer which may be even more satisfying?

- Should I agree to move with my husband, who wants to accept a job offer out of state, or should I try to convince him to stay since I really enjoy my job here?

Elementary Example

Category 3:

- What are the best ways to treat my classmates?

Category 1:

- What are some good ways to treat my classmates?
- What ways should clearly be avoided?
- What rights does each student have in relationship to other students?
- What basic responsibilities does each student have to other students?
- Are there some times when I should help my classmates?
- Are there some times when I should not help them?

1. How many people are in the room?

2. What is the chemical constitution of table salt?

3. Is abortion morally justified?

4. What is the most significant medical problem facing the country today?

5. What philosophy of nursing makes best sense, given the present conditions of nursing?

6. Are nursing students adequately prepared for practice?

7. Are we losing the war on cancer?

8. What is the unemployment rate now in Georgia?

9. What is the best way to live a healthy and fit life?

10. Is secondary smoke a health hazard?