

A Tale of Two Scientists

Step 1. The Story

Here is a short story about two scientists and an argument they are having concerning the testing of a new drug, TSG. Read the story carefully; you need to understand it well to complete the rest of this task.

Glenn and Leslie work for the Cancer Research Institute. They have been working there for five years and are well respected by their peers. Glenn uses computer models to understand the difference between healthy and unhealthy (cancer) cells. Leslie works in the research lab testing new drugs for cancer prevention.

Last week Leslie and Glenn got into an argument at an after-work staff party. Glenn was shocked to learn that Leslie has just acquired 50 white rabbits to use in testing the new drug TSG for side effects. Leslie was furious with Glenn's lack of understanding, because this kind of scientific research could lead to saving many human lives. Unable to settle their differences at the party, they agreed to write to one another so that each could carefully consider the other's points.

Leslie's letter, written first, explained to Glenn that considerable success already had been achieved with this new drug in tests on beetles, but now it was necessary to see if the same results would be obtained with rabbits. Rabbits had to be used because they are physically closer to humans and therefore the results from the rabbits could better predict the safety of the drugs for humans. Leslie said it was too early to test the drug on humans directly, because no one was sure if it would cause permanent damage. Leslie thought it was better to take that risk with rabbits than with humans and told Glenn that the rabbits would be protected from any pain or suffering by using anesthesia and/or pain-killing drugs during the experiment. Finally, Leslie reminded Glenn that, if successful, TSG could save many human lives; Leslie's bottom line was that we should be willing to sacrifice animal lives if it means that human lives may be saved.

Glenn replied to Leslie's letter right away. Too much unnecessary research already has been performed on animals, the letter began, and we have no way of knowing for sure whether

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the animals are suffering. Furthermore, animals cannot give (or refuse) permission to be in an experiment in the first place. Glenn added that if we would not do it to humans, why do it to animals? Assuming that humans are superior to other animals ignores the important role of animals in our living world. The bottom line, Glenn wrote to Leslie, is that each animal has an equal right to live out its natural life without being forced to experience unnecessary pain or suffering. So Leslie should stop the experiments on rabbits, Glenn said, and seek another way to test the new drug that would not involve experimentation with animals.

Step 2. Small Group Discussion

Now that you've heard the story, form into groups of four students. Your task is to work out a plan for testing the new drug. Two of you will be assigned to develop a plan that Leslie would like and the other two will be asked to develop a plan from Glenn's point of view.

In your groups of four, sit facing each other and take turns outlining Leslie's and Glenn's plans. Listen carefully to the points your classmates make to you and answer them as directly as possible. Be sure not to interrupt each other. Continue talking about alternative testing plans for about 10-15 minutes.

After your discussion, work with your partner (in groups of two) to fill in the two lists below:

1. Three reasons why the plan *we* have developed is a good idea:

2. Three reasons why the plan *they* have developed is a good idea:

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Now rejoin your group of four and try to work out a compromise. Whatever you work out will reflect tradeoffs, because you will need to balance conflicting reasons for wanting one plan over another. For example, one plan may produce results faster, another may be less expensive, and a third may be more effective. All of these are good reasons. But which mix of good reasons do you choose for the final plan?

Talk through these tradeoffs to come up with a group plan that permits Leslie's research but also addresses Glenn's concerns. Working on your own, write your solution down. Make sure that you clearly describe all the main features of the proposed compromise plan.

Step 3. Class Discussion

Regroup for a discussion with the entire class. Share your compromise plans with your classmates and discuss the advantages and disadvantages of the various plans the class developed.

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Teaching Note: A Tale of Two Scientists

This is a story and an exercise that ask students to think about their values and tradeoffs in the context of scientific research.

Step 1. Story

Ask students to pay careful attention while reading the story; they have to play the roles of the scientists in the story.

Step 2. Small Group Discussion

Remind students that the argument between Leslie and Glenn is similar to many arguments in the world of science. With the students in groups of four (two representing Leslie and two representing Glenn), have them complete their discussions and writing tasks according to the instructions in their handouts. The task should help students to understand (a) what their own values are on this issue, and (b) when and where they are (or are not) willing to make tradeoffs between animal and human rights or lives.

Put the students back into their groups of four and have them come up with a compromise plan for testing the new drug. Encourage organized debate so that students can explore their own thoughts on this issue. You may want to prompt them with the following questions:

- ✓ Do they think it is right to do to an animal what they would not do to a human being?
- ✓ Do they think it is right to do experiments on chimpanzees, rats, beetles? Does it matter whether the animal was raised specifically for laboratory testing purposes? What about wild animals? Where do students draw the line?
- ✓ How do they feel about experimenting on an animal to save the life of someone they don't know? What about to save the life of a close friend or a family member?
- ✓ How about experiments with plants? Why is this different? (Or is it?)

Give these small groups ten to fifteen minutes to resolve their arguments and write down their solutions. Have each group appoint a spokesperson to report the group's compromise plan to the class.

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Step 3. Class Discussion

Re-group the students and have a class discussion. Give each small group a chance to present its plan, followed by comments and questions by the class. For an assignment, you can ask each student to write his or her description of the compromise and the negotiation process from which it arose.

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