

Candidate Index Number: \_\_\_\_\_

## Biology, Case 3

Topic: Asbestos

Marks: 60

### Credits

Our appreciation to **Joy M. Branlund**, Department of Physical Science, Southwestern Illinois College, Granite City, IL, the author of this case study. For summarized writing, some revisions **may** have been made to the original text.

### Abstract

Most students are aware that asbestos is a health hazard but don't know that "asbestos" refers to a variety of minerals with both useful and harmful properties. In this case study, students will answer questions they have about asbestos in the context of a personal injury lawsuit. They will learn about different asbestos types and uses, as well as how people are exposed to and harmed by asbestos. Students will apply what they learn to the lawsuit presented in the case as well as in a follow-up activity in which they weigh the risks of leaving asbestos in public buildings against the risks of removing it.

### Objectives

- Distinguish between asbestiform minerals, non-asbestiform fibers, and asbestos as defined by laws and regulatory agencies.
- Compare and contrast the five different varieties of amphibole and one type of serpentine that are regulated as asbestos. Comment specifically on each mineral's structure, how the mineral forms fibers and the qualities of each mineral's fibers.
- Identify the properties that make asbestos useful and the properties that make it harmful.
- Discuss how specific mineral properties lead both to the usefulness and harmfulness of asbestos.
- Describe (in general) how asbestos enters the body and causes harm. Summarize the conditions under which asbestos exposure most likely will lead to disease.

### The Case

Cheri worked in the law office of Brown during her summer vacation. Two of the lawyers at the firm worked on various types of litigation. Rex Brown, however, worked only on behalf of mesothelioma patients.

Rex asked Cheri to help prepare a case that was being tried in Madison County court later that week. He gave her a short summary of the case and scheduled an appointment to talk with her the following day about it. This is the summary that Cheri read:

*"Adelaide Martin, now 80 years old, suffers from mesothelioma. She claims that her husband, who worked as a dry wall installer, was exposed to the asbestos used in a binder compound made by the Bind-It-Right Company. The Bind-It-Right compound, which was manufactured between 1965 and 1974, contained chrysotile asbestos. Mrs. Martin claims that the asbestos stuck to her husband's clothes, and that when she loaded his clothes into the washing machine, she inhaled the asbestos."*

That evening, Cheri went out with friends. During their conversation, Cheri told her friends that she would be working on a mesothelioma case and asked them what they knew about asbestos. Following the discussion, Cheri found that she had even more questions than before about asbestos and the case taken on by her boss.

### Questions

1. What questions do you think Cheri might have about asbestos? List them.
2. What specific questions must be answered in order to determine the potential liability of the Bind-It-Right company?