



Name: _____

Date: _____

Purifying Plants

During the 1970s, as oil prices rose rapidly, the United States, like many other countries, had trouble producing energy cheaply. As the price of fuel rose, people looked for ways to reduce the amount of energy they used on heating and cooling buildings. One way to do this was to make buildings that let very little air in or out. In winter, these buildings keep the warm air from heaters inside for longer, and in summer, they do the same with the cool air from air conditioners. This greatly reduces the amount of money people spend on fuel.

Unfortunately, though, these new buildings had an unexpected side effect. Many modern materials, such as plastic, release small amounts of poisonous chemicals into the air. When air remains inside the buildings, the amount of these poisons gradually increases, and people who work or live in them begin to feel ill. This problem is known as sick building syndrome. One solution to this problem, however, came from a surprising area - space research.

NASA, the U.S. space agency, employed a scientist named Bill Wolverton to study ways to keep the air clean inside spaceships. Spaceships, of course, cannot get air from outside because there is no air in space. In order to study ways to keep the air in spaceships free from poisons released by modern materials. Wolverton created the BioHome, a completely closed building made entirely of artificial materials. When people entered the building, they would suffer from sore eyes and find it difficult to breathe. To solve this problem, Wolverton tried introducing various kinds of plants into the BioHome. He found that most of them were effective at helping to clean the air.

According to Wolverton's research, a plant can absorb chemicals through its leaves and then use them to feed itself. He wrote a number of books explaining which plants are most effective against the various chemicals found in the air inside buildings. He also developed a new kind of container for plants that makes them even more effective in removing poisons. Thanks to Wolverton's research, many buildings can save energy and keep their air clean by using plants.



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1. Why did people start making buildings differently in the 1970s?
 - a. They were trying to reduce the amount of energy that was being used.
 - b. They were trying to make buildings that could have air conditioners in them.
 - c. They wanted to increase the amount of air getting in and out of the buildings.
 - d. They wanted to make homes warmer and more comfortable in the winter.
2. Sick buildings syndrome is caused by
 - a. modern materials on which bacteria and other unhealthy things can grow.
 - b. materials releasing poisonous chemicals that get trapped in buildings.
 - c. a reduction in the amount of air available for people living in the building.
 - d. an increased number of people living and working together in the same space.
3. Why did Bill Wolverton create the BioHome?
 - a. To provide a place for NASA to keep the plants that it will send to space.
 - b. To discover what types of poisons are created by artificial materials.
 - c. To learn more about the types of plants that can be grown in space.
 - d. To find ways to make the air in spaceships safe and clean.
4. What was one result of Wolverton's research?
 - a. wolverton reduced pollution by teaching people to use energy efficiently.
 - b. Wolverton developed plants that are more effective at removing poisons from the air.
 - c. Wolverton wrote a book that recommends the safest building materials to use.
 - d. Wolverton created a container that helps plants reduce dangerous chemicals in buildings.
5. Which of the following statements is true?
 - a. Many buildings made of artificial materials have been rebuilt to prevent illness.
 - b. Plants are able to clean the air with their leaves while getting food for themselves.
 - c. The United States made a lot of money as a result of rising oil prices in the 1970s.
 - d. People doing space research commonly suffer from sore eyes and breathing problems.