

Passage 1

The Burden of Thirst

If the millions of women who haul water long distances had a faucet by their door, whole societies could be transformed.

A. Binayo dropped out of school when she was eight years old, in part because she had to help her mother fetch water from the Toiro River. The water is dirty and unsafe to drink; every year that the ongoing drought continues, the once mighty river grows more exhausted. But it is the only water Foro has ever had.

B. Nearly 900 million people in the world have no access to clean water. Furthermore, 2.5 billion people have no safe way to get rid of human waste. Polluted water and lack of proper hygiene cause disease and kill 3.3 million people around the world annually, most of them children.

C. Communities where clean water becomes accessible and plentiful are transformed. All the hours previously spent hauling water can be used to cultivate more crops, raise more animals or even start a business. Families spend less time sick or caring for family members who are unwell.

Complete the sentences. Write NO MORE THAN ONE WORD AND/OR A NUMBER for each answer.

1. The water levels in the Toiro River are falling because of
2. Globally, the number of people who die each year as a result of using dirty water is.....
3. When families have clean water, they can spend more time growing.....

Passage 2

The discovery of penicillin.

The discovery of penicillin is attributed to Scottish scientist Alexander Fleming. Fleming recounted that the date of his breakthrough was on the morning of September 28, 1928. It was a lucky accident in his laboratory in the basement of St. Mary's Hospital in London, Fleming noticed a petri dish containing Staphylococcus culture that he had mistakenly left open. The culture had become contaminated by blue-green mould, and there was a halo of inhibited bacterial growth around the mould. Fleming concluded that the mould was releasing a substance that was repressing the growth of the bacteria. He grew a pure culture and discovered that it was a Penicillium mould,

now known to be *Penicillium notatum*. Fleming coined the term "penicillin" to describe the filtrate of a broth culture of the *Penicillium* mould.

Choose ONE WORD ONLY from the passage for each answer.

Alexander Fleming discovered penicillin by (4).....on September 28, 1928. He found that the growth of bacteria on a petri dish was (5)by a blue-green mould that had contaminated the culture. He realised that the mould was producing a substance that was responsible for (6)..... bacterial growth.

Passage 3

Sleep helps reduce errors in memory

Study participants were 'trained' by being shown or listening to lists of words. Then, twelve hours later, they were shown individual words and asked to identify which words they had seen or heard in the earlier session. One group of students was trained at 10 a.m. and tested at 10 p.m. after the course of a normal sleepless day. Another group was trained at night and tested twelve hours later in the morning, after about six hours of sleep. Three experiments were conducted. In each experiment, the results showed that students who had slept did not have as many problems with false memory and chose fewer incorrect words.

Complete the summary using the list of words and phrases, A-J, below

Fenn's Memory Experiments The groups in the study saw or heard lists of words at (7).....times of the day. After (8).....hours, the groups tried to identify these words correctly in a test. Before the test, one group had (9).....sleep and chose the words in the evening. The other group has their test in the morning. In three experiments, the results were (10)..... the group that had slept during the experiment remembered (11).....Words correctly than the other groups.

- A. more
- B. complex
- C. 12
- D. six
- E. less
- F. ten
- G. different
- H. no I fewer
- J. the same

