

1.2 Why do we study Biology?

Part Two

True/False Questions

1. Biology helps us understand how living things work and interact with their environment.
2. Fermentation is only used in wine-making and not in any other food production.
3. Penicillin is an antibiotic that was discovered from fungi.
4. The production of cheese depends on fermentation processes by microorganisms.
5. Citric acid and lactic acid can only be produced artificially in chemical factories, not by microorganisms.
6. Forensic biology uses DNA analysis to help solve crimes.
7. Biologists use the scientific method to study the natural world by asking questions and testing hypotheses.
8. Observations in science can only be made directly using our sense organs.
9. A hypothesis is a testable explanation for a scientific question.
10. If a hypothesis is not supported by experimental data, it must be kept unchanged.

11. Any valid scientific experiment must be repeatable by other scientists.
12. Biologists communicate their findings through scientific journals.
13. Global warming and environmental issues are unrelated to biology.
14. Fermentation is also used in baking bread.
15. A hypothesis that has been rejected can never be replaced with a new one.

Match the items in Column “A” with the correct answer in Column “B”. Put the correct number in the space provided.

Column A

1. Fermentation in wine-making
2. Bread baking
3. Cheese production
4. Penicillin
5. Citric acid production
6. Lactic acid production

Column B

- Mould fungi or bacteria
- Yeast and bacteria in food processing
- Yeast action in dough
- Helps societies evaluate environmental issues
- Step involving direct or indirect sensing of phenomena
- Proposed explanation for a question

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| 7. Sewage disposal | Testing the hypothesis through experiments |
| 8. Forensic biolog | Publishing results in journals |
| 9. DNA structure discovery | Yeasts or fungi used in dairy processing |
| 10. AIDS, tuberculosis, cancer
Treatment | Analysis of DNA from crime scenes |
| 11. Observation (in scientific method) | Scientists Watson & Crick's discovery |
| 12. Hypothesis | Bacteria used in filter beds |
| 13. Experimentation | Biological studies in medicine |
| 14. Communicating findings | Bacteria or fungi producing chemicals |
| 15. Global warming studies | Yeasts used in alcoholic drink production |