

Science and Its Evolving Nature

Chapter 1: The Ever-Evolving World of Science · Topic 1

Key Concept

Historical examples show this clearly: for centuries, people believed diseases were caused by 'bad air,' until the discovery of microorganisms (germ theory) completely changed medicine. Even today, scientific understanding of things like nutrition, space, and genetics continues to be refined as new research emerges. This is why science relies on peer review — other scientists checking and testing each other's work — to ensure only well-supported ideas become widely accepted.

Quick Revision Notes

- Science evolves as new evidence and better tools become available.
- The heliocentric (Sun-centred) model replaced the earlier Earth-centred model of the solar system.
- Germ theory replaced the earlier 'bad air' theory of disease.
- Peer review helps ensure only well-tested scientific ideas are widely accepted.

Practice Questions

- 1 Give an example of a scientific idea that changed over time.
- 2 Why is it a strength, not a weakness, that science can change its conclusions?
- 3 Explain briefly what peer review means in science.