

In this task, you will listen to an academic talk. You will then read four questions and choose the correct answer.

### Talk 1: Geology

What is the main topic of the talk?

- How mountains form under different geologic conditions.
- How the movement of Earth's plates shapes geological features
- The history of geological research in the 20th century
- The causes of volcanic eruptions

According to the speaker, what happens at a convergent boundary when an oceanic plate meets a continental plate?

- The oceanic plate is pushed beneath the continental plate.
- The two plates slide past each other.
- New crust is formed from rising magma.
- Both plates buckle upward to form mountains.

Why does the speaker mention the Himalayas?

- To explain why mountains are highest near the equator
- To give an example of a divergent boundary
- To describe how subduction can lead to mountain ranges
- To illustrate what happens when two continental plates collide

What can be inferred about the Ring of Fire?

- It experiences frequent geological activity.
- It is located along a divergent plate boundary.
- It was formed primarily by transform boundaries.
- It has led to the formation of numerous island chains.

### Talk 2: Psychology

What is the main topic of the talk?

- The history of factory working conditions in the 20th century
- How observation can influence the behavior of research participants
- The development of double-blind studies in medicine
- The relationship between productivity and working conditions

According to the speaker, what did researchers initially aim to study at the Hawthorne Works?

- The psychological effects of workplace supervision
- Whether physical working conditions influenced productivity
- How workers responded to changes in their daily routines
- The relationship between pay and worker performance

Why does the speaker mention double-blind studies?

- To argue that the Hawthorne Effect has been misunderstood
- To explain how placebos work in medical trials
- To suggest that observation always improves performance
- To describe a research method designed to reduce observation effects

What does the speaker imply about the current status of the Hawthorne Effect?

- It has been completely discredited by modern researchers.
- It is no longer relevant to scientific research.
- It remains an important concept despite some challenges to the original findings.
- It is only applicable to studies conducted in workplace settings.

## Talk 1: Plate Tectonics

*Listen to a talk in a geology class.*

The Earth's outer shell, called the lithosphere, is not one solid piece. It is broken into large sections called tectonic plates, which float on a layer of semi-molten rock known as the mantle. These plates are constantly moving, though very slowly — just a few centimeters per year. The theory of plate tectonics, which became widely accepted in the 1960s, explains this movement and its consequences.

There are three types of plate boundaries. At divergent boundaries, plates move apart. As they separate, magma rises from below, creating new crust. The Mid-Atlantic Ridge is a well-known example of this process. At convergent boundaries, plates collide. When an oceanic plate meets a continental plate, the denser oceanic plate is forced underneath in a process called subduction. This can form deep ocean trenches and volcanic mountain ranges. The Himalayas, however, formed when two continental plates collided — neither subducted, so the crust buckled upward. At transform boundaries, plates slide past each other horizontally. The San Andreas Fault in California is a classic example. This lateral movement builds up enormous stress, which is released suddenly as earthquakes.

Plate tectonics also explains the distribution of volcanoes and earthquakes around the world. Most occur along plate boundaries, particularly around the Pacific Ocean in a zone known as the Ring of Fire. Understanding plate tectonics has been essential for predicting geological hazards and understanding the long-term evolution of Earth's surface.

## Talk 2: The Hawthorne Effect

*Listen to a talk in a psychology class.*

In the 1920s and 1930s, a series of studies were conducted at the Hawthorne Works, a factory near Chicago. Researchers were initially trying to determine whether changes in physical working conditions — such as lighting levels — would affect worker productivity. What they found was unexpected. Productivity improved almost regardless of what changes were made, and even when conditions were returned to their original state. The researchers concluded that workers were performing better simply because they knew they were being observed. This phenomenon became known as the Hawthorne Effect.

The Hawthorne Effect has had a lasting influence on research methodology, particularly in the social sciences and medicine. It highlights a fundamental challenge: the act of observing people can itself change their behavior, potentially distorting the results of a study. If participants know they are being watched or evaluated, they may work harder, behave more carefully, or give answers they believe the researcher wants to hear.

This is one reason why double-blind experimental designs are considered the gold standard in medical research. In a double-blind study, neither the participants nor the researchers administering the treatment know who is receiving the real treatment and who is receiving a placebo. This design minimizes the influence of observation and expectation on the results.

It is worth noting that some later researchers have questioned the original Hawthorne studies, arguing that the evidence for the effect was less clear than originally reported. Nevertheless, the concept remains highly influential, and awareness of observation effects is considered essential in designing rigorous research across many fields.

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