

# TerraNova Science Practice Test (Sample)

## Study Guide



**Everything you need from our exam experts!**

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# Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

**Remember:** successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

# How to Use This Guide

**This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:**

## **1. Start with a Diagnostic Review**

**Skim through the questions to get a sense of what you know and what you need to focus on. Your goal is to identify knowledge gaps early.**

## **2. Study in Short, Focused Sessions**

**Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations.**

## **3. Learn from the Explanations**

**After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.**

## **4. Track Your Progress**

**Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.**

## **5. Simulate the Real Exam**

**Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.**

## **6. Repeat and Review**

**Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning. Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.**

**There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly, adapt the tips above to fit your pace and learning style. You've got this!**

## Questions

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- 1. The natural phenomenon described by the gravitational interaction between Earth and Moon is what?**
  - A. Eclipses**
  - B. Tides**
  - C. Moon Phases**
  - D. Currents**
  
- 2. The movement of fluid due to temperature differences is called?**
  - A. Convection currents**
  - B. Conduction**
  - C. Radiation**
  - D. Evaporation**
  
- 3. The process that forms deposits of sediment carried by rivers is known as:**
  - A. River deposition**
  - B. Glacial scraping**
  - C. Wind deposition**
  - D. Chemical sedimentation**
  
- 4. The continuous movement of water in various forms is called?**
  - A. Water cycle**
  - B. Hydrologic cycle**
  - C. Weather system**
  - D. Ocean current**
  
- 5. Which instrument is a container for mixing or heating liquids?**
  - A. Beaker**
  - B. Ruler**
  - C. Microscope**
  - D. Anemometer**

- 6. Which term describes the movement of fluids driven by temperature differences, such as in the atmosphere and Earth's mantle?**
- A. Convection currents**
  - B. Conduction**
  - C. Radiation**
  - D. Advection**
- 7. The boundary between contrasting air masses is known as what?**
- A. Weather front**
  - B. Jet stream**
  - C. Thunderstorm**
  - D. Cyclone**
- 8. What term describes long-term atmospheric conditions in a region?**
- A. Weather**
  - B. Climate**
  - C. Front**
  - D. Circulation**
- 9. During which cell division do two genetically identical daughter cells form for growth and tissue repair?**
- A. Meiosis**
  - B. Mitosis**
  - C. Cytokinesis**
  - D. Karyokinesis**
- 10. What is the boundary between different air masses called?**
- A. Weather front**
  - B. Climate**
  - C. Jet stream**
  - D. Trade wind**

## **Answers**

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1. B
2. A
3. A
4. A
5. A
6. A
7. A
8. B
9. B
10. A

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## **Explanations**

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**1. The natural phenomenon described by the gravitational interaction between Earth and Moon is what?**

**A. Eclipses**

**B. Tides**

**C. Moon Phases**

**D. Currents**

Tides are caused by the Moon's gravity tugging on Earth's oceans. The side of Earth that faces the Moon is pulled a bit more strongly, creating a bulge toward the Moon, while the opposite side bulges due to inertia. As Earth rotates, coastlines move through these bulges, producing the regular rise and fall of sea levels we feel as high and low tides. The Sun also pulls on Earth's oceans, but because it's much farther away, its effect is smaller; the Moon's gravity is the main driver. When the Sun, Moon, and Earth align, their gravitational forces combine to create higher high tides and lower low tides—spring tides. When the Sun and Moon are at right angles relative to Earth, their effects partially cancel, leading to lower high tides and higher low tides—neap tides. Other options don't describe the gravitational effect between Earth and Moon. Eclipses involve shadows from alignments, not direct gravity. Moon phases describe how the Moon's appearance changes due to its position relative to the Sun. Currents are large-scale ocean movements driven by winds and other forces, not specifically the Moon's gravity.

**2. The movement of fluid due to temperature differences is called?**

**A. Convection currents**

**B. Conduction**

**C. Radiation**

**D. Evaporation**

When fluids move because of temperature differences, heat is transferred by convection. Warm regions become less dense and rise, while cooler regions are denser and sink, creating a circulating flow called a convection current. This is how heat moves through water in a pot or air in a room heated by a radiator. Conduction would be heat transfer through direct contact with no large-scale fluid motion. Radiation is heat transfer by electromagnetic waves and doesn't require a medium. Evaporation involves a surface phase change and isn't about bulk fluid movement due to temperature-induced density differences.

**3. The process that forms deposits of sediment carried by rivers is known as:**

- A. River deposition**
- B. Glacial scraping**
- C. Wind deposition**
- D. Chemical sedimentation**

Sediment transport by a river ends in deposition when the river loses energy. As water slows, its capacity to carry sediment decreases, so particles settle out and accumulate on the riverbed, floodplains, or at the mouth, forming river deposits. Heavier grains drop first, with lighter material settling farther downstream. This buildup creates features like river bars, levees, and deltas and over long times can become sedimentary rocks. The term for this process is river deposition, the laying down of sediment carried by flowing water. Glacial scraping describes erosion by ice, wind deposition is sediment laid down by wind, and chemical sedimentation involves minerals precipitating from solution, not settling from a river, so they don't describe how river-carried sediment forms deposits.

**4. The continuous movement of water in various forms is called?**

- A. Water cycle**
- B. Hydrologic cycle**
- C. Weather system**
- D. Ocean current**

The continuous movement of water through different forms and places is called the water cycle. This concept describes how water moves between the atmosphere, land, and oceans, changing forms along the way—from evaporation and transpiration into vapor, to condensation into clouds, to precipitation as rain or snow, and then to runoff, infiltration, and collection in bodies of water. It's the framework that shows how water circulates through air, soil, rivers, lakes, and oceans, powering weather, supporting life, and shaping landscapes. Weather system refers to atmospheric conditions and patterns at a given time, not the entire movement of water across Earth. Ocean current describes horizontal movement of seawater within the oceans. The hydrologic cycle is a term often used interchangeably with the water cycle, but the everyday phrase most students encounter for this global circulation is the water cycle.

**5. Which instrument is a container for mixing or heating liquids?**

- A. Beaker**
- B. Ruler**
- C. Microscope**
- D. Anemometer**

In a science setting, a beaker is the container designed for holding, mixing, and often heating liquids. Its wide mouth makes stirring and pouring liquids straightforward, and it's made to withstand heat when placed on a hot plate or over a flame (when glass). The other tools have different functions: a ruler measures length, a microscope lets you view tiny objects, and an anemometer measures wind speed. So, the beaker is the container intended for mixing or heating liquids.

**6. Which term describes the movement of fluids driven by temperature differences, such as in the atmosphere and Earth's mantle?**

**A. Convection currents**

**B. Conduction**

**C. Radiation**

**D. Advection**

Convection is the movement of fluids driven by temperature differences that create density differences. When part of a fluid is heated, it becomes lighter and rises, while cooler, denser parts sink, establishing a circulating flow. In the atmosphere, this buoyancy-driven motion powers vertical air currents, clouds, and storms. In Earth's mantle, hot mantle material rises while cooler material sinks, slowly driving the convection that moves tectonic plates. Conduction is heat transfer by direct contact without bulk motion, radiation is heat transfer by electromagnetic waves, and advection is the transport of properties by the bulk flow of the fluid—convection specifically emphasizes the buoyancy-driven circulation caused by temperature-induced density changes.

**7. The boundary between contrasting air masses is known as what?**

**A. Weather front**

**B. Jet stream**

**C. Thunderstorm**

**D. Cyclone**

When two air masses with different temperatures and humidity meet, the boundary where their properties shift is called a weather front. This boundary causes the air to rise and cool, leading to cloud formation and often precipitation, which is why fronts are tied to changes in weather. The jet stream is a high-altitude, fast-moving wind belt, not the boundary between air masses. A thunderstorm is a weather event that can occur along fronts, but it's not the boundary itself. A cyclone is a large low-pressure system, again not the boundary between contrasting air masses.

**8. What term describes long-term atmospheric conditions in a region?**

**A. Weather**

**B. Climate**

**C. Front**

**D. Circulation**

Long-term patterns in the atmosphere over a region are described by climate. Weather covers day-to-day conditions—what it's like outside today or this week—while climate looks at averages and typical ranges over many years, giving a sense of what to expect in the long run. A front is a boundary between air masses and drives weather changes, not a description of long-term behavior. Circulation refers to the large-scale movement of air shaping patterns, but it's the averaging over time that defines climate. So, the term that best fits long-term atmospheric conditions in a region is climate.

**9. During which cell division do two genetically identical daughter cells form for growth and tissue repair?**

**A. Meiosis**

**B. Mitosis**

**C. Cytokinesis**

**D. Karyokinesis**

Two genetically identical daughter cells form during mitosis, the process that preserves the genetic material while the cell divides. In mitosis the nucleus splits so the two daughter nuclei have identical chromosome sets, and then cytokinesis divides the cytoplasm to produce two separate, genetically identical cells. This is essential for growth and tissue repair because it replaces damaged or lost cells with exact genetic copies. Meiosis, by contrast, creates gametes with half the chromosome number and introduces variation; cytokinesis alone doesn't guarantee genetic identity since it's just the cytoplasmic split, and karyokinesis refers to nuclear division itself without completing the formation of two separate cells. So mitosis is the right process.

**10. What is the boundary between different air masses called?**

**A. Weather front**

**B. Climate**

**C. Jet stream**

**D. Trade wind**

When two large bodies of air with different temperatures and humidity meet, their boundary is called a weather front. This boundary marks where the air masses interact, and that interaction often causes changes in weather—lifting of air, cloud formation, and precipitation as one mass forces the other to rise and condense. Fronts come in several types: a cold front occurs when cold air advances and pushes under warmer air, often bringing thunderstorms or heavy rain; a warm front forms when warmer air overrides cooler air, leading to more gradual, widespread precipitation; a stationary front sits still and can cause prolonged rain; and an occluded front develops in a cyclone when a cold front catches up to a warm front. The other options describe different things: climate is the long-term pattern of weather in a region; the jet stream is a fast-moving, high-altitude river of air; trade winds are steady winds near the equator.

## Next Steps

**Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.**

**As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.**

**If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at [hello@examzify.com](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://terranovascience.examzify.com>**

**We wish you the very best on your exam journey. You've got this!**

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