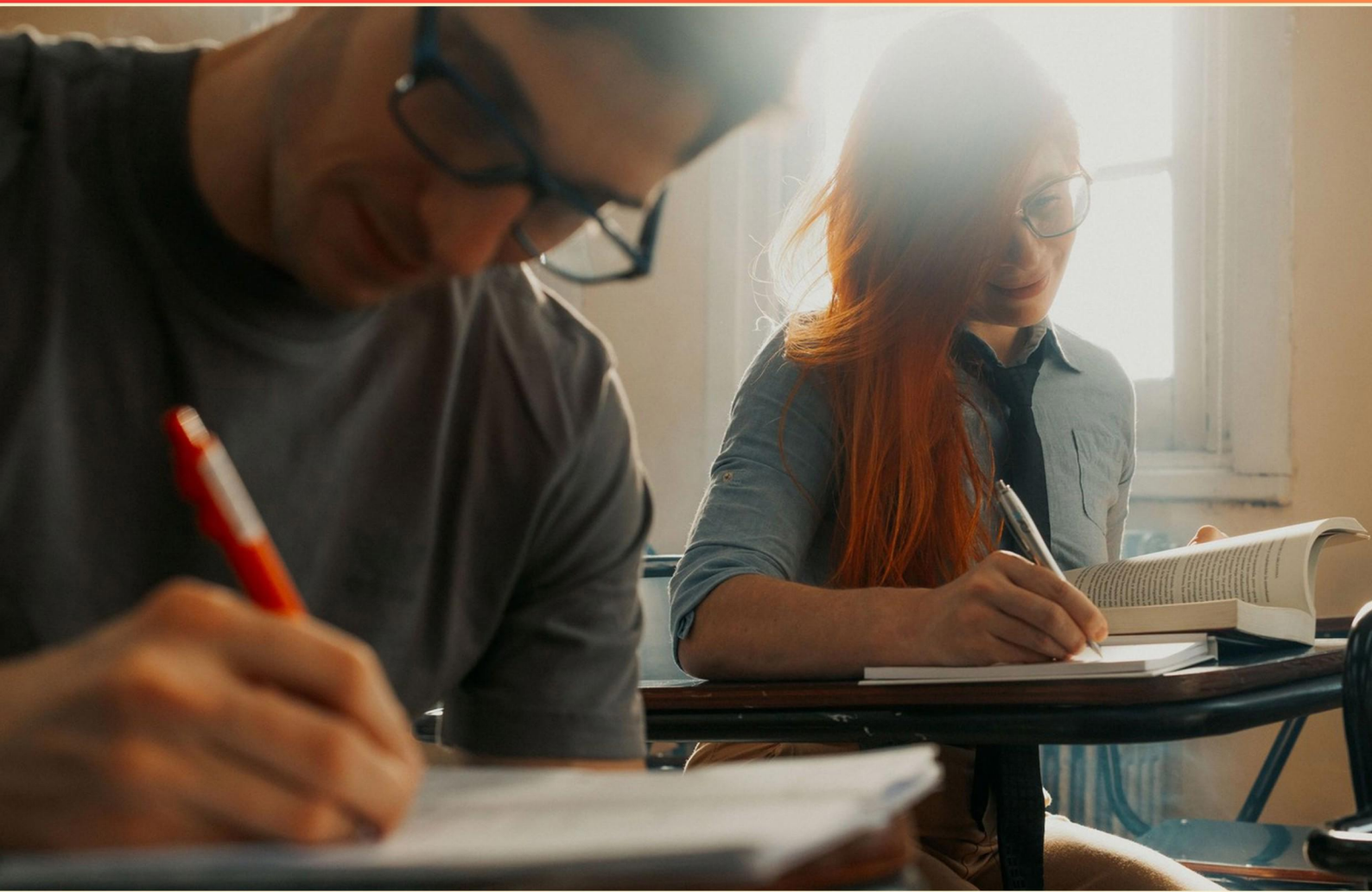


TERRANOVA SCIENCE PRACTICE TEST (SAMPLE)

STUDY GUIDE



SAMPLE STUDY GUIDE WITH LIMITED QUESTIONS

VISIT US ONLINE FOR
THE FULL VERSION STUDY GUIDE

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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. Which geological process reshapes Earth's surface through explosive events?**
 - A. Volcanic eruptions
 - B. Glacial erosion
 - C. Sedimentation
 - D. Continental crust

- 2. How does gravity affect motion on Earth when air resistance is negligible?**
 - A. Objects accelerate downward at the same rate regardless of mass.
 - B. Gravity only affects objects with mass.
 - C. Heavier objects fall faster than lighter ones.
 - D. Objects stop accelerating after a short time.

- 3. Why is it important to repeat tests in an experiment?**
 - A. To demonstrate that an initial result is wrong.
 - B. To prove the hypothesis.
 - C. To ensure results are reliable and not due to random error.
 - D. To waste time

- 4. Which instrument is used to measure wind speed?**
 - A. Anemometer
 - B. Thermometer
 - C. Pan Balance
 - D. Ruler

- 5. What is the correct sequence of steps in the water cycle?**
 - A. Evaporation, condensation, precipitation, collection/runoff
 - B. Condensation, evaporation, precipitation, collection
 - C. Precipitation, evaporation, collection, condensation
 - D. Evaporation, precipitation, condensation, collection

6. Which description defines a habitat?

- A. A synthetic environment created in labs.
- B. The natural environment where an organism lives, providing resources and conditions.
- C. The climate of a region.
- D. A place where only plants grow.

7. In what state of matter are particles most tightly packed?

- A. Liquid
- B. Gas
- C. Plasma
- D. Solid

8. Increase in atmospheric carbon dioxide levels is a factor in what broader phenomenon?

- A. Global warming cause
- B. Ozone depletion
- C. Acid rain
- D. Deforestation

9. Which process uses sunlight, water, and carbon dioxide to produce glucose in plants?

- A. Metabolism
- B. Photosynthesis
- C. Respiration
- D. Fermentation

10. An event occurs when Earth is between the Sun and Moon?

- A. Solar eclipse
- B. Lunar eclipse
- C. Solar Flare
- D. Moon phase

Answers

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

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Explanations

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1. Which geological process reshapes Earth's surface through explosive events?

- A. Volcanic eruptions**
- B. Glacial erosion
- C. Sedimentation
- D. Continental crust

Explosive volcanic activity reshapes Earth's surface by blasting rock, ejecting ash clouds, lava, and pumice, and depositing new volcanic material. When a volcanic eruption happens, violent explosions can blow away rock, create craters and calderas, and send lava flows that quickly build or modify landforms. The combination of destruction and rapid construction leaves a markedly different landscape, with features like layered volcanic deposits, pyroclastic flows, and new volcanic cones forming where there was none before. A real-world example is how eruptions can remove mountain summits and blanket large areas with ash, dramatically altering drainage and topography. Glacial erosion involves ice slowly carving and polishing rock as it moves, which changes the landscape but not through explosive events. Sedimentation adds layers by depositing material over time, shaping land gradually rather than by sudden explosions. Continental crust is a structural component of Earth, not a process that reshapes terrain explosively.

2. How does gravity affect motion on Earth when air resistance is negligible?

- A. Objects accelerate downward at the same rate regardless of mass.**
- B. Gravity only affects objects with mass.
- C. Heavier objects fall faster than lighter ones.
- D. Objects stop accelerating after a short time.

When air resistance is negligible, gravity pulls on all objects with the same acceleration because the force of gravity is proportional to mass, $F = m g$. Applying Newton's second law, $a = F/m$, you get $a = (m g)/m = g$. The mass cancels out, so the downward acceleration is the same for all objects, about 9.8 m/s^2 near Earth's surface. That's why, in a vacuum, a feather and a hammer fall at the same rate. The idea that heavier objects fall faster only holds when air resistance matters; without air, mass doesn't change the rate. Gravity acts on all objects with mass, but the acceleration it causes is independent of their mass. The notion that acceleration stops after a short time isn't correct because the gravitational pull keeps imparting the same acceleration until another force (like drag in air) acts.

3. Why is it important to repeat tests in an experiment?

- A. To demonstrate that an initial result is wrong.
- B. To prove the hypothesis.
- C. To ensure results are reliable and not due to random error.**
- D. To waste time

Repeating tests is about checking reliability and ruling out random error. Measurements can vary from trial to trial because of unpredictable fluctuations in the environment, instrument noise, or sampling variation. When you run the same test multiple times and get similar results, you gain confidence that the observed effect reflects a real pattern rather than a one-off blip. Repetition also lets you average results and assess how much they vary, which shows how precise the measurement is. If repeats show big differences, something in the procedure or conditions might be introducing extra randomness. So the reason this is important is that it helps ensure the findings are trustworthy and not just due to chance. It's not about proving the hypothesis on the first try, and it isn't about wasting time—replication is a core part of validating scientific results.

4. Which instrument is used to measure wind speed?

A. Anemometer

B. Thermometer

C. Pan Balance

D. Ruler

Wind speed is the rate at which air moves past a point, and an anemometer is built to measure that speed. In a typical design, wind causes cups or a vane to move, and the rotation or signal from that motion is converted into a wind-speed reading, usually in meters per second or kilometers per hour. The other tools measure things they're not designed for: a thermometer for temperature, a pan balance for mass, and a ruler for length. So the instrument used to measure wind speed is the anemometer.

5. What is the correct sequence of steps in the water cycle?

A. Evaporation, condensation, precipitation, collection/runoff

B. Condensation, evaporation, precipitation, collection

C. Precipitation, evaporation, collection, condensation

D. Evaporation, precipitation, condensation, collection

The water cycle starts with evaporation, where liquid water from oceans, rivers, and other surfaces turns into water vapor and rises into the air. As this vapor cools, it condenses into tiny droplets, forming clouds. When those droplets grow too large, they fall as precipitation—rain, snow, or other forms. After reaching the surface, water collects in bodies of water or runs off across the land into streams, continuing the cycle. So the correct sequence is evaporation, condensation, precipitation, then collection/runoff. The other sequences mix up the order by placing condensation before evaporation or precipitation before condensation, which doesn't fit how water vapor first becomes liquid and then falls as precipitation. Evaporation can also come from transpiration by plants, but the overall order remains the same.

6. Which description defines a habitat?

A. A synthetic environment created in labs.

B. The natural environment where an organism lives, providing resources and conditions.

C. The climate of a region.

D. A place where only plants grow.

A habitat is the natural place where an organism lives and has the resources and conditions it needs to survive. It includes the physical surroundings and elements like food, water, shelter, and the climate that support that organism over time. The description that fits this idea is the natural environment where an organism lives, providing resources and conditions. Artificial or lab-created environments aren't considered habitats in the typical sense because they're human-made, not the organism's natural living place. The climate of a region describes weather patterns, not the specific place where an organism resides. A habitat isn't limited to places where only plants grow; many habitats support animals, fungi, and other organisms as well.

7. In what state of matter are particles most tightly packed?

- A. Liquid
- B. Gas
- C. Plasma
- D. Solid**

Particles arrange themselves differently in each state of matter, and that arrangement determines how tightly they fit together. In a solid, particles sit in a fixed, orderly lattice and are held close by strong forces, so the spaces between them are the smallest and the density is highest. They mainly vibrate in place, which keeps the structure compact. In liquids, particles are less tightly bound and can slide past one another, creating more space. Gases spread far apart and move freely, with large gaps between particles, making them far less dense and not packed tightly. Plasmas behave similarly to gases but with many free charged particles and high energy, so they aren't densely packed either. So the state with particles most tightly packed is a solid.

8. Increase in atmospheric carbon dioxide levels is a factor in what broader phenomenon?

- A. Global warming cause**
- B. Ozone depletion
- C. Acid rain
- D. Deforestation

An increase in atmospheric carbon dioxide is a major driver of global warming because CO₂ is a greenhouse gas that traps heat in the lower atmosphere and the surface. When more CO₂ is present, the atmosphere becomes more effective at absorbing infrared radiation emitted by the Earth, which raises the planet's average temperature and sets off broader climate changes. Ozone depletion is caused mainly by substances like chlorofluorocarbons that break down the ozone layer, not by carbon dioxide. Acid rain results from sulfur dioxide and nitrogen oxides forming acidic compounds in precipitation. Deforestation can contribute to higher CO₂ levels by reducing the land's capacity to absorb CO₂, but the broader phenomenon driven by increased CO₂ is global warming.

9. Which process uses sunlight, water, and carbon dioxide to produce glucose in plants?

- A. Metabolism
- B. Photosynthesis**
- C. Respiration
- D. Fermentation

Plants use sunlight, water, and carbon dioxide to build glucose in a process called photosynthesis. In the chloroplasts of plant cells, chlorophyll captures light energy and powers reactions that convert water into oxygen and transfer energy to carriers like ATP and NADPH. Those energy-rich molecules drive the Calvin cycle, which fixes carbon dioxide into a sugar molecule that eventually becomes glucose. The overall result is stored energy in glucose, with oxygen released as a byproduct. Metabolism is a broad term for all chemical processes in a living thing, not a single building step. Respiration breaks down glucose to release usable energy, using oxygen and releasing carbon dioxide and water. Fermentation is an anaerobic pathway that maximizes energy yield only in the absence of oxygen, producing various byproducts like lactic acid or ethanol. None of these pathways build glucose from light and carbon dioxide; the one that does is photosynthesis.

10. An event occurs when Earth is between the Sun and Moon?

- A. Solar eclipse
- B. Lunar eclipse**
- C. Solar Flare
- D. Moon phase

An eclipse involves three bodies aligning in space. When Earth sits between the Sun and the Moon, the Moon moves into Earth's shadow, producing a lunar eclipse. This can only happen when the Moon is full, because that is when it is opposite the Sun from Earth's viewpoint. That's why the described event is a lunar eclipse. In contrast, a solar eclipse would occur if the Moon were between the Sun and Earth, a solar flare is an eruption on the Sun, and Moon phases describe how much of the Moon's face is illuminated from Earth, not an alignment causing an eclipse.

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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.

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

<https://terranovalscience.examzify.com>

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

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