

Name: \_\_\_\_\_ Date: \_\_\_\_\_

## Dissect the Scientific Intersections: A 7th Grade Multidisciplinary Quiz

Students analyze complex scenarios to identify overlapping scientific disciplines and evaluate how cross-cutting concepts solve real-world problems.

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**1. A team of researchers is using satellite telemetry to track the migration patterns of Blue Whales while simultaneously mapping changing ocean temperatures. Which two branches are most integrated in this study?**

- A. Geology and Chemistry
- B. Biology and Earth Science
- C. Physics and Astronomy
- D. Botany and Meteorology

**2. Biochemistry is a hybrid field that focuses exclusively on the physical forces, such as gravity and friction, acting upon sedentary rock formations.**

- A. True
- B. False

**3. When a forensic scientist analyzes the rate of heat loss in a room to determine a time of death, they are primarily applying the laws of \_\_\_ to a biological problem.**

- A. Botany
- B. Geology
- C. Physics
- D. Astronomy

**4. An engineer is designing a new solar panel that mimics the way a leaf captures sunlight. This work requires a deep synthesis of which two fields?**

- A. Biology and Physics
- B. Astronomy and Zoology
- C. Paleontology and Chemistry
- D. Geology and Ecology

**5. Oceanography is considered a branch of Earth Science because it investigates the physical and biological properties of the world's oceans.**

- A. True
- B. False

**6. A scientist investigating how the chemical composition of ancient ice cores reveals past global temperatures is working in the field of \_\_\_.**

- A. Astrophysics
- B. Microbiology

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- C. Geochemistry
- D. Theoretical Physics

**7. If you are analyzing the isotopic signature of meteorites to find clues about the early formation of our solar system, which specialized branch are you practicing?**

- A. Marine Biology
- B. Cosmochemistry
- C. Entomology
- D. Seismology

**8. The study of 'Thermodynamics' is a sub-discipline of Biology used to classify new species of tropical plants.**

- A. True
- B. False

**9. The study of the Earth's atmosphere and the processes that produce weather and climate is known as \_\_\_\_.**

- A. Meteorology
- B. Paleontology
- C. Cytology
- D. Acoustics

**10. Which scenario best illustrates an application of Biophysics?**

- A. Counting the number of stars in a galaxy
- B. Using mathematical laws to model how proteins fold in human cells
- C. Classifying different types of igneous rocks
- D. Surveying historical artifacts in an ancient city