

Temperature Quiz Answer Key PDF

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Which device is commonly used to measure body temperature?

- A. Barometer
- B. Thermometer ✓**
- C. Hygrometer
- D. Anemometer

At what temperature does water freeze on the Celsius scale?

- A. 0°C ✓**
- B. 32°C
- C. 100°C
- D. -273.15°C

What is the lowest possible temperature called?

- A. Absolute zero ✓**
- B. Freezing point
- C. Boiling point
- D. Room temperature

What is the primary unit of temperature in the metric system?

- A. Fahrenheit
- B. Celsius ✓**
- C. Kelvin
- D. Rankine

Explain the difference between heat and temperature.

Heat refers to the energy that flows from one body to another due to a temperature difference, whereas temperature is a measure of how hot or cold an object is, reflecting the average kinetic energy of its particles.

Which of the following are units of temperature? (Select all that apply)

- A. Celsius ✓**
- B. Joule
- C. Kelvin ✓**
- D. Fahrenheit ✓**

Which devices are used to measure temperature? (Select all that apply)

- A. Thermometer ✓**
- B. Thermocouple ✓**
- C. Barometer
- D. Pyrometer ✓**

What is the boiling point of water on the Kelvin scale?

- A. 100 K
- B. 273 K
- C. 373 K ✓**
- D. 473 K

Which temperature scales are used in scientific research? (Select all that apply)

- A. Celsius ✓**
- B. Fahrenheit
- C. Kelvin ✓**
- D. Rankine

Which of the following is a liquid-in-glass thermometer typically filled with?

- A. Water
- B. Mercury ✓**
- C. Alcohol

D. Oil

Describe how the Kelvin scale is different from the Celsius scale.

The Kelvin scale differs from the Celsius scale in that it starts at absolute zero (0 K), which is equivalent to -273.15°C , and it does not use negative numbers, whereas the Celsius scale is based on the properties of water and includes negative values.

Why is absolute zero considered an important concept in physics?

Absolute zero is considered an important concept in physics because it is the theoretical temperature at which all thermal motion of particles stops, serving as a critical benchmark for understanding thermodynamic principles and the behavior of matter.

Which statements about heat and temperature are true? (Select all that apply)

- A. Heat is a form of energy. ✓
- B. Temperature measures the average kinetic energy of particles. ✓
- C. Heat and temperature are the same.
- D. Temperature can be measured in joules.

Which law of thermodynamics states that energy cannot be created or destroyed?

- A. Zeroth Law
- B. First Law ✓
- C. Second Law
- D. Third Law

Which factors contribute to global warming? (Select all that apply)

- A. Greenhouse gases ✓
- B. Solar flares
- C. Deforestation ✓
- D. Ocean currents

Describe the role of thermometers in everyday life and scientific research.

Thermometers are used in everyday life to check body temperature, monitor cooking temperatures, and control climate in homes, while in scientific research, they are vital for conducting experiments, ensuring accurate data collection, and maintaining proper conditions in laboratories.

How does the Second Law of Thermodynamics relate to the concept of entropy?

The Second Law of Thermodynamics relates to entropy by stating that the entropy of an isolated system will always increase or remain constant, reflecting the tendency of systems to evolve towards thermodynamic equilibrium and greater disorder.

Which of the following are laws of thermodynamics? (Select all that apply)

- A. Zeroth Law ✓**
- B. First Law ✓**
- C. Newton's Law
- D. Second Law ✓**

Who developed the Fahrenheit temperature scale?

- A. Anders Celsius
- B. Lord Kelvin
- C. Daniel Fahrenheit ✓**
- D. Isaac Newton

Discuss the impact of temperature changes on ecosystems.

Temperature changes can lead to shifts in species habitats, affect reproductive cycles, and alter the timing of biological events, ultimately impacting ecosystem stability and health.