#CRESTInnovator

CREST Science Olympiad (CSO)
Worksheet for
Class 7

Topic

Temperature and Effects of Heat

@crestolympiads info@crestolympiads.com +91-98182-94134

Worksheet on Temperature and Effects of Heat

1. **Veronica, who is visiting her relatives in the US, noticed that they use Fahrenheit to measure temperature. Today's temperature is 70 degrees Fahrenheit. Veronica wants to know the equivalent temperature in Celsius.**

   a. 21°C
   b. 25°C
   c. 31°C
   d. 35°C

2. **Which of the following statements accurately describes the difference between heat and temperature?**

   a. Heat is a measure of how hot or cold something is, while temperature is the transfer of thermal energy.
   b. Heat is the transfer of thermal energy, while temperature is a measure of how hot or cold something is.
   c. Heat and temperature are the same thing.
   d. Heat is a measure of energy, while temperature is a measure of mass.

3. **Paul's father mentioned that bridges have expansion joints. Can you identify the purpose served by these joints?**

   a. To provide structural support to the bridge.
   b. To prevent the bridge from expanding when heated.
   c. To allow for the expansion and contraction of bridge materials due to. temperature changes.
   d. To enhance the appearance of the bridge.

4. **What is an example of the practical application of bimetallic strips?**

   a. Cooking utensils
   b. Thermostats
   c. Electronic devices
   d. Transportation vehicles

5. **A metal rod at 50°C is placed in a container of water at 25°C. After some time, the temperature of the rod and water mixture is found to be 37°C. What can you conclude about the heat transfer?**

   a. Heat flows from the water to the rod.
   b. The temperature measurement is incorrect.
   c. No heat transfer occurs between the rod and the water.
   d. Heat flows from the rod to the water.

Answer Key

1. a - To convert Fahrenheit to Celsius, we can use the formula: °C = (°F - 32) x 5/9
   Putting in the given temperature of 70 degrees Fahrenheit:
   °C = (70 - 32) x 5/9
   °C = 38 x 5/9
   °C = 21.1

   Therefore, the equivalent temperature in Celsius is approximately 21.1°C.

2. b - Heat refers to the transfer of thermal energy from one object to another, while temperature measures the intensity of heat or the hotness/coldness of an object. In simpler terms, heat is about the movement of energy, while temperature is about the level of hotness or coldness.

3. c - Expansion joints are designed to accommodate the expansion and contraction of bridge materials caused by temperature variations due to weather. These joints help prevent the bridge from buckling or cracking, ensuring its structural integrity and safety.

4. b - Bimetallic strips are commonly used in thermostats. When the temperature changes, the bimetallic strip bends due to the different expansion rates of the metals. This bending action is utilised in thermostats to control temperature-sensitive systems such as heating and cooling systems, ovens, and refrigerators.

5. d - In this scenario, the initial temperature of the metal rod is higher than that of the water. After some time, the temperature of the mixture reaches an equilibrium at 37°C, which is between the initial temperatures of the rod and the water. This indicates that heat has transferred from the hotter object (the rod) to the cooler object (the water) until they reach a common temperature.

More Questions Coming Soon – Keep Learning!

Difference between Ordinary & Extra-Ordinary is that "Little Extra"

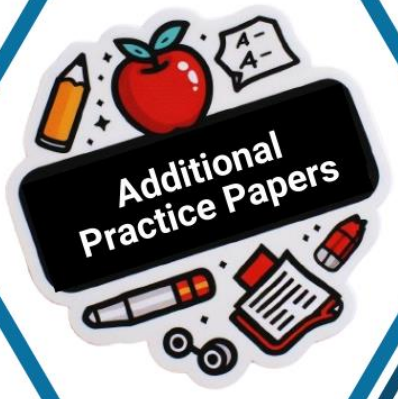
Discover Our Ultimate Prep Kits!

Buy Previous Years Papers

1. Login at www.crestolympiads.com/login
2. Go to Dashboard -> Additional Practice -> Buy

Buy Physical & Digital Workbooks at

https://www.crestolympiads.com/olympiad-books



Buy Additional Practice

1. Login at www.crestolympiads.com/login
2. After login, go to Dashboard -> Additional Practice -> Buy

@crestolympiads info@crestolympiads.com +91-98182-94134