

Preflight 1 & 2

Suppose you have two insulated buckets containing the same amount of water at room temperature. You also happen to have two blocks of metal of the same mass, both at the same temperature, warmer than the water in the buckets. One block is made of aluminum and one is made of copper. You put the aluminum block into one bucket of water, and the copper block into the other. After waiting a while you measure the temperature of the water in both buckets. Which is warmer?

1. The water in the bucket containing the aluminum block ← Correct (52%)
2. The water in the bucket containing the copper block
3. The water in both buckets will be at the same temperature

| Substance | c (heat capacity) J/(kg-C) |
|-----------|-------------------------------|
| aluminum | 900 |
| copper | 387 |

Aluminum block has higher specific heat constant, so it will release more heat to the water.