

Chapter C11 Practice: Energy in Bonds

Physics I

College of the Atlantic

1. If you climb up a 400 meter mountain, what is the minimum amount of food calories you need for this task?
2. In a workout you sweat and evaporate half a kilogram of water. What is the minimum amount of food calories you must have “burned”?
3. Imagine that you put a 60 gram ice cube at 0 C into a container holding 250 grams of water at 15 C. What is the water’s final temperature?
4. How much energy is needed to melt 3 kg of copper that is already at its melting point?
5. How much fuel will be needed to bring a Nalgene bottle full of water from 20°C to 100°C?