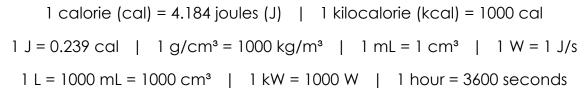
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# Science Lab Mix-Up

### Conversion Key (Use as Needed)



## A. Density Dilemmas

- 1. A sample of liquid mercury has a density of 13.6 g/cm³. Convert this to kg/m³.
- 2. A rock's density is **2.4 g/cm³**. Convert to **kg/m³**.
- 3. A block of metal has a volume of **250 cm³** and a mass of **1.975 kg.** What is its **density in g/cm³?**
- 4. A cube of ice has a density of **0.92 g/cm³**. What is this value in **kg/m³?** \_\_\_\_\_

### **B. Energy Equations**

- 5. A reaction releases **2500 cal.** Convert to **joules.**
- 6. A heater uses **4.5 kJ.** How many **calories** is that? \_\_\_\_\_
- 7. A food label lists **300 kcal**. Convert to **joules**.
- 8. A laser emits **900 J** of energy. How many **calories** is that?

#### C. Power & Rate Problems

- 9. A small motor outputs **750 W**. How many **kilowatts** is that? \_\_\_\_\_
- 10. A heater runs at 2.5 kW for 3 hours. How much energy (in joules) does it use?

#### **Bonus Challenge**

11. A lightbulb rated at 100 W runs for 10 hours.How many kilojoules (kJ) of energy does it consume? \_\_\_\_\_\_

