

REMEMBER THAT:

$$\frac{1 \text{ cal}}{g^{\circ}C} = \frac{4.186 \text{ J}}{g^{\circ}C}$$

Which means that: **1 cal = 4.186J** and this can be used to convert calories to joules or joules to calories.

Even though there are $\frac{4.186 \text{ J}}{g^{\circ}C}$ for water, because it is also equal to

$\frac{1 \text{ cal}}{g^{\circ}C}$ it can be used as a conversion factor for other materials.

Look at Aluminum with a specific heat capacity of $\frac{.900 \text{ J}}{g^{\circ}C}$

$$\frac{.900 \text{ J}}{g^{\circ}C} \times \frac{1 \text{ cal}}{4.186 \text{ J}} = \frac{.215 \text{ cal}}{g^{\circ}C} \text{ for Aluminum}$$

CHECK THE CHART ON PAGE 413 AND SEE IF YOU CAN CONVERT THE JOULES TO CALORIES AND GET THE SAME ANSWERS AS THE CHART BY CONVERTING JOULES TO CALORIES.