Heat and Thermal energy

Joule (J) - metric unit for heat

Calorie
- amount of energy needed to increase the temperature of 1g of water by 1°C

Kilocalorie = 1,000 calories

\[ \text{this is what you see on packages indicated as calories} \]

1 calorie = 4.186 Joules

Rice Krispie Treat 170 calories (food calories)

170 kilocalories = 170,000 calories

\[ 170,000 \text{ calories} \times 4.186 \text{ J} = \]

\[ = 711,620 \text{ J} \]

\[ \rightarrow \text{ total amt. of energy in a Rice Krispie Bar} \]

BTU - British Thermal Unit

Btu
- amount of energy needed to heat 1 pound of water 1°F

1 Btu = 1055 J

1 Btu = 252 calories