**Practice Problems**

Q=mcΔT (q=energy, m=mass, ΔT= change in temperature, c= specific heat of water)

1. A. Determine the energy given off by the food in calories (chemistry calories).

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| Mass of water (g) | 10.35 g |
| Change in temperature of water (°C) | 35.0 °C |
| Specific Heat of Water (cal/g °C) | 1.00 cal/g °C |

B. Determine this amount of energy in food Calories (1000 chemistry calories= 1 food Calorie)

1. A. Determine the energy given off by the food in calories (chemistry calories).

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| Mass of water (g) | 20.75 g |
| Change in temperature of water (°C) | 3.0 °C |
| Specific Heat of Water (cal/g °C) | 1.00 cal/g °C |

Determine this amount of energy in food Calories (1000 chemistry calories= 1 food Calorie)

1. A. Determine the energy given off by the food in calories (chemistry calories).

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| Mass of water (g) | 150 g |
| Change in temperature of water (°C) | 1.5 °C |
| Specific Heat of Water (cal/g °C) | 1.00 cal/g °C |
| Change in mass of food | 3.5 g |

B. Determine this amount of energy in food Calories (1000 chemistry calories= 1 food Calorie)

C. Determine the Calories per gram (Calories/grams)

1. A. Determine the energy given off by the food in calories (chemistry calories).

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| Mass of water (g) | 73.5 g |
| Change in temperature of water (°C) | 17.1 °C |
| Specific Heat of Water (cal/g °C) | 1.00 cal/g °C |
| Change in mass of food | 4.78 g |

B. Determine this amount of energy in food Calories (1000 chemistry calories= 1 food Calorie)

C. Determine the Calories per gram (Calories/grams)

1. A. Determine the energy given off by the food in calories (chemistry calories).

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| Mass of water (g) | 15.7 g |
| Change in temperature of water (°C) | 23.6 °C |
| Specific Heat of Water (cal/g °C) | 1.00 cal/g °C |
| Change in mass of food | 10.4 g |

B. Determine this amount of energy in food Calories (1000 chemistry calories= 1 food Calorie)

C. Determine the Calories per gram (Calories/grams)

1. A. Determine the energy given off by the food in calories (chemistry calories).

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| Mass of water (g) | 19.3 g |
| Change in temperature of water (°C) | 8.3 °C |
| Specific Heat of Water (cal/g °C) | 1.00 cal/g °C |
| Change in mass of food | 4.6 g |

B. Determine this amount of energy in food Calories (1000 chemistry calories= 1 food Calorie)

C. Determine the Calories per gram (Calories/grams)