

Phase Change Worksheet

- 1) A 100.0 g. cup of water weighs about 100 grams. How many joules are released when a cupful of water is cooled from 20 degrees Celsius (room temperature) to 0 degrees Celsius (the temperature of a refrigerator). The heat capacity of liquid water is 4.18 J/g °C.
- 2) How many joules are required to heat 200 grams of liquid water that is 0° to 100° C?
- 3) How many joules are required to melt 100 grams of water? The heat of fusion of water is 333 J/g.
- 4) How many joules are required to heat 100 grams of water? The heat of vaporization of water is 2257 J/g.
- 5) How many joules are required to heat 200 grams of water from 20 °C to 100 °C? The heat capacity of steam is 1.88 J/g °C.