

LO: Students will be able to calculate the energy associated with changing temperatures and states of matter.

DOL: Students will successfully calculate thermal chemistry problems at least 4/5 times.

Feb 8-9:17 AM

Determine how much energy is needed to raise the temperature of water from 2.0 °C to 78 °C

How much energy does it take to melt 36.5 g of water at 0°C?

Feb 8-9:45 AM

How much energy does it take to freeze 402 mol of water at 0 °C?

Feb 8-9:46 AM

Does it take more or less energy to turn 25 g of water into steam or turn 0.75 mol of ice into water?

Feb 8-9:47 AM

How much energy will it take to raise 26.4 g of water (l) 24 °C?

Feb 8-9:48 AM

A 15.75-g piece of iron absorbs 1086.75 joules of heat energy, and its temperature changes from 25°C to 175°C. Calculate the specific heat of iron.

297 J of heat are needed to raise the temperature of aluminum from 22°C to 55°C where the specific heat of aluminum is 0.90 J/g°C. What is the mass of the aluminum?

Steps for solving a COMPLETE thermo-chem question about water:

- heating solid** from $-X$ up to 0 (the melting point)
- melting the solid** already at 0
- heating the liquid** but not going over 100
- vaporizing the liquid** already at 100
- heating the gas** from 100 to X

How much energy does it take to turn 14.5 g of water (s) at -34 °C into water (g) at 121 °C?