

Questions



handmadescience.co.uk/

latent heat ice melting experiment

1. Play from 0:26 Why do I say "It's not important?"
2. What temperature does the ice water start at (0:33)?
3. At what time does the temperature begin to rise?
4. At around 44 mins the reading on the thermometer drops a bit, why do you think that is?
5. What mass of ice did I use?
6. The latent heat of fusion for water is 333KJ per Kg. How much energy would it take to melt the ice in this video if the ice's temperature is 0°C?

the frozen thermometer experiment

1. How long does it take the ice to heat up to 0°C?
2. At around 0:29 we can see condensation disappearing from the side of the test tube, why?
3. The temperature reading drops at one point in this video, too. What time (stopwatch or video) does this happen and why do you think it happens? (2:18:48 or 1:22)
4. The specific heat capacity of ice is 2.04KJ per Kg. Suppose we have 60g of water in this video. How much energy did it take to heat the ice up to 0°C?
5. How long did warming up take? And so how rapidly was heat flowing through the walls of the test tube during this time? Your answer should be in Watts.