Due January 9, 2020

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| 1. Download the textbook at http://ahtt.mit.edu and answer the following questions:  (a) Who is pictured  on page 12?  **Baron Jean Baptiste Joseph Fourier (1768–1830**).  (b) What is the source of heat in the image on page 50?  **It is a candle** | page24image5925344 |

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| 2. Visit the Energy 2D site at http://energy.concord.org/energy2d.  Under the Examples  →  Heat and Temperature menu option, determine the equilibrium temperatures of the first 3 examples (identical, different specific heats, and different densities). Note: make sure they reach equilibrium. | Example 1:    Temp: 25C  Example 2:    Temp: 20C  Example 3:    Temp: 20C |

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| 3. Name and describe the three modes of heat transfer in your own words. What “Law” corresponds to each? | Conduction:  Heat transfer thought physical contact.  Fourier's Law    Convection:  Heat transfer through fluid via conduction and Advection which happens in the boundary layer  Newton's Law of Cooling    Radiation:  Heat transfer only through electromagnetic spectrum  It has nothing to do with interactions with molecules  It's the transfer of heat through a non-participating medium  Radiation is described by the Stefan-Boltzmann Law |