Physical Science Guided Reading

NAME DATE PERIOD

Section 6.1 – Temperature and Heat, pp. 158 – 163

1. Explain the differences between the terms heat, thermal energy, and temperature.
2. Of the terms heat, thermal energy, and temperature, which are most dependent on the mass of the substance, and why?
3. Which property of water makes it a good “heat mover”? Explain how sweating actually cools your body off on a hot day.
4. In the formula *Q*=m•*C*•ΔT, what does *Q* represent? In what units should *Q* be measured?
5. Expound how to calculate ΔT. Explain how ΔT can be negative.
6. Explain how at dawn the sand at the beach gets hot almost immediately but it takes hours for the water to get up to a comfortable temperature.
7. Using terms concerning mass and specific heat, explain how the foil around a baked potato cools off immediately even though the potato stays steamy-hot for several minutes afterwards.
8. Explain which do you think would make a bigger difference in the temperature of the foil in #7, above; a thicker sheet of foil, a different metal for the foil, or a hotter potato.