

Student Discussion Worksheet

Directions: Read the *Science News* article "[Humans may not be able to handle as much heat as scientists thought](#)" and answer the questions as instructed by your teacher.

Coming in hot

1. Think of a time when you were excessively hot. Where were you and what were you doing? What were the weather conditions?
2. What did you notice about your body? How did you feel physically and mentally?
3. What did you do to cool down? How long did it take for you to be comfortable again?

The science of heat

1. What is a system? What are two systems that interact in the *Science News* article?
2. What is thermal energy? What is heat? How are they related?
3. If two systems at different temperatures are brought together, in what direction will heat energy flow? For example, if hot coffee is poured into a room temperature mug, will heat energy flow from the coffee to the mug or from the mug to the coffee? Explain why.
4. What will happen to the temperature of the coffee (the warmer system) over time? What about the mug (the cooler system)?
5. Does a change in temperature always occur when heat energy flows in or out of a system? Explain.
6. What is evaporation and how does it involve heat? Explain.

Cool it

1. How does sweating cool the body? Diagram the process.
2. Brainstorm at least two examples of technology that help cool the human body. Explain why the technologies work.