AP Physics 2 Review Questions

Integrating Content, Inquiry, and Reasoning

- 1. Describe the process of thermal conduction in metals.
- 2. Explain why some metals conduct heat slow and others conduct it fast.
- 3. Describe the process of heat transfer by conduction in the guided inquiry portion of the experiment, starting with the hot plate and ending with the wax.
- 4. Look at the thermal conductivity values for the three metals tested in this activity—the higher the number, the faster heat transfer will take place. Do your results agree with these values? If not, what are some possible sources of error?
- 5. If an iron strip had been tested, when would you expect the wax to melt from the iron compared to the other metals used? Explain your prediction.
- 6. In chemistry labs, flammable chemicals such as acetone and methanol are commonly stored together in metal cabinets. Tests have shown that the internal temperature of a metal cabinet can rise as much as 1,400 °F in a fire, whereas the internal temperature of a wooden cabinet rises only 8 °F. Explain.

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