Chapter 6 Test Review Physical Science

Answer the following questions on a separate piece of paper. If you are working on a problem make sure to show your work to receive credit! If the answer requires units, make sure to include the unit.

1. What type of heat transfer is taking place below?
    a. Explain why.

2. What type of heat transfer is taking place below?
    a. Explain why.

3. What type of heat transfer is taking place below?
    a. Explain why.

4. Is this a conductor or insulator?
    a. Explain why.

5. Is this a conductor or insulator?
    a. Explain why.

6. Is glass a conductor or an insulator?
    a. So will it heat up slowly or quickly?
    b. So will it cool off slowly of quickly?
7. What type of heat energy transfer takes place only in liquids and gases?
8. What type of heat energy transfer can take place without matter?
9. What is the only type of heat transfer that can take place in solids?
10. What is the definition of specific heat?
11. Which direction do the windows face on a house that is built into a hillside?
    a. Why is this?
12. Do insulators have high specific heat or low specific heat?
    a. Does this mean that they will heat up slowly or heat up quickly?
13. When objects at different temperatures initially come in contact with each other, what will happen to the temperature of the different objects?
    a. What will eventually happen to the temperature of the objects if they are in contact long enough?
14. What happens to the size of matter when it gets heated?
    a. Why is this?
15. What is the equation used to convert Celsius to Kelvin?
16. If it is -4 degrees Celsius outside, what would the Kelvin temperature be?
17. What is the equation used to calculate heat?
18. Some cars have aluminum wheels. The specific heat of aluminum is 0.9 J/g x C. If the wheel starts out at 25 C in the garage and after you have driven the car for an hour the wheel is now 41 C, how much heat was generated in the wheel from it rolling down the road? (The mass of the wheel is 6500 g)
19. If the wheel mentioned above gained 12,200 J of heat, how much would the temperature have changed? (Assume the temperatures given above were not given, but the rest of the information given above is correct.)
20. Is conduction transferring heat by the overall movement of matter?
    a. Explain.
21. What is the definition of temperature?
    a. Is this the same definition for heat?
22. Give an example of something heating by convection.
23. Give an example of something heating by conduction.
24. Give an example of something heating by radiation.
25. What slows down the flow of energy/heat?
    a. Give two examples
26. What allows heat to pass easily?
    a. Give two examples.
27. What are three different units used for temperature?
    a. Which of these units is used by the weatherman here in the USA?

28. What is forced air heat?
29. What is solar heat?
30. What is the difference between active solar and passive solar energy?
31. How do radiators heat rooms?
32. How do electric hot water heaters work?
33. What is combustion?
    a. Give two examples of how combustion helps you in your daily life?