

Bill Nye Heat Video worksheet

1. Heat is \_\_\_\_\_ and can do \_\_\_\_\_.
2. What are the three ways heat is transferred through the universe?  
\_\_\_\_\_
3. How is heat transferred from the sun? \_\_\_\_\_
4. What kind of heat transfer goes on when warm air rises? \_\_\_\_\_
5. What is it called when heat is transferred directly from one object to another? \_\_\_\_\_
6. Predict: Which sugar cube will be dropped into the water first? \_\_\_\_\_  
Why? \_\_\_\_\_  
\_\_\_\_\_  
Were you correct in your reasoning? Make any corrections here: \_\_\_\_\_  
\_\_\_\_\_
7. Do cold things have heat? \_\_\_\_\_ Why? \_\_\_\_\_  
\_\_\_\_\_  
Were you correct in your reasoning? Make any corrections here: \_\_\_\_\_  
\_\_\_\_\_
8. Summarize: More \_\_\_\_\_ = \_\_\_\_\_  
Recall: Gases and liquids are fluids. They flow and take the shape of their containers.
9. When a fluid becomes hot, it \_\_\_\_\_ and becomes \_\_\_\_\_ than the cool fluid on top. As the cooler fluid moves \_\_\_\_\_, the warmer fluid \_\_\_\_\_. Heat transfer by these currents is called \_\_\_\_\_.
10. Natural convection example: The \_\_\_\_\_ warms the \_\_\_\_\_ and it heats the air right above it. The air molecules move \_\_\_\_\_ and get (closer together/farther apart). The cool air moves \_\_\_\_\_ and pushes the warm air \_\_\_\_\_.
11. Even cold things \_\_\_\_\_.
12. What kind of transfer happens in a vacuum? \_\_\_\_\_
13. Heat radiation is a \_\_\_\_\_.
-  14. The hotter something is \_\_\_\_\_
15. Why is the boy kneeling on a pad in the snow cave? \_\_\_\_\_
16. Why is air a poor conductor? \_\_\_\_\_
17. What kind of heat transfer requires object to touch each other? \_\_\_\_\_
18. **Your turn:** In the video you saw a “lava lamp”. On the back, explain how a lava lamp works. (You will need to discuss all three kinds of heat transfer to get the whole story!)