

+ energy = more heat  
 - energy = less heat

Name (KEY) Date \_\_\_\_\_ Period \_\_\_\_\_

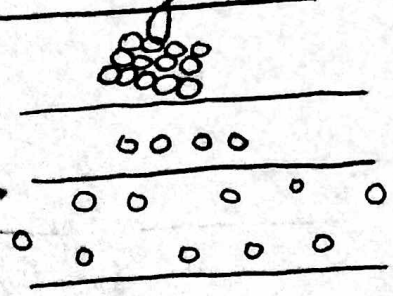
## Video Worksheet-Bill Nye "States of Matter"

The questions follow along with the video. Answer as many of the questions as possible.

Solid =  
 move slow  
 liquid =  
 move faster

→ how atoms move

- 1.) The universe is made of matter.
- 2.) The only difference between molten (liquid) steel and solid steel is the amount of energy in it.
- 3.) Solid, liquid, gas are all phases of matter.
- 4.) For matter to "change phase" we must add or take away energy.
- 5.) A freezer acts like a heat pump to remove the energy from inside the freezer to outside the freezer.
- 6.) The temperature of liquid nitrogen is -196° degrees Celcius. 78% air is nitrogen
- 7.) When you put cool something in liquid nitrogen the molecules slow down and get closer together.
- 8.) The temperature gauge like a thermometer reads a lower temperature when the molecules of the liquid or gas are moving slow.
- 9.) TRUE or FALSE At absolute zero there is absolutely no motion of the molecules that make up the matter.
- 10.) TRUE OR FALSE It is possible to reach the temperature of absolute zero.
- 11.) The gas in a can of soda is Carbon dioxide.
- 12.) TRUE or FALSE You can "weigh" a gas.
- 13.) Glowing gas because it is charged with electricity is called a plasma (Hint: the fourth state of matter)
- 14.) A liquid and a gas take the shape of their container but a solid holds its shape.
- 15.) Did you like this video? \_\_\_\_\_ Why or why not? \_\_\_\_\_  
opinion

<p><u>Arrangement</u>:</p> 	<p><u>Speed of molecules</u>:</p> <p>Solid = low          liquid = medium          gas = high          plasma = highest</p>	<p><u>Example</u>:</p> <p>Ice Cube          Bottle Water          Steam          Lightning</p>
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