Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_

**Kinetic Theory: *In the Real World***

**Overview:**

Now that you have a solid understanding of the kinetic theory and how it helps us explain the states of matter and ideal gas laws it’s time to apply that understanding to some real life situations. For this lesson you will create two images (pictures, cartoons, sketches, etc.) of something from real-life that can be explained by the kinetic theory. You will use your newly developed understanding of the kinetic theory to discuss in scientific terms what you observe taking place in each image.

**Standards:**

-SPS5. Students will compare and contrast the phases of matter as they relate to atomic and molecular motion.

a. Compare and contrast the atomic/molecular motion of solids, liquids, gases and plasmas.

-SPS7. Students will relate transformations and flow of energy within a system.

d. Explain the flow of energy in phase changes through the use of a phase diagram.

-SCSh6. Students will communicate scientific investigations and information clearly.

b. Write clear, coherent accounts of current scientific issues, including possible

alternative interpretations of the data. d. Participate in group discussions of scientific investigation and current scientific

issues.

-SCSh9. Students will enhance reading in all curriculum areas by:

c. Building vocabulary knowledge -Use content vocabulary in writing and speaking. d. Establishing context - Explore life experiences related to subject area content.

**The Task:**

1. **Create** (This means you must make them and they must not be from the book) three images that you think exemplify one of the gas laws we have discussed in class. (Each image must be an example of a different law.)
   1. Write an explanation of what relationship is being demonstrated in each picture. (i.e. the temperature is increasing and that makes the molecules move faster….you get the picture)

**Rubric:**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Exemplary | Proficient | Emerging |
| Your Images | Three different images were created. The images are appropriate and relevant to the kinetic theory of matter. | Three different images are created although they may not be original. The images can be made relevant to the kinetic theory of matter. | Three images are not created and/or the images you created were not relevant to the kinetic theory of mater. |
| Your explanation | Your explanation of the images you created is clear and coherent. You use correct content vocabulary to demonstrate a strong understanding of the kinetic theory of matter. | You explain the relevancy of your images with vocabulary that is mostly correct, clear, and coherent. Some understanding of the kinetic theory of matter is evident. | Your explanation of the image(s) is not clear. You misuse vocabulary and do not demonstrate an understanding of the kinetic theory of matter. |