|  |  |  |
| --- | --- | --- |
| how temperature of a gas affects its pressure  CλeMis+ry: http://genest.weebly.com  Stop in for help every day at lunch and Tues, Weds., &Thurs after school!  After-hours question? Email me at home: [eagenest@madison.k12.wi.us](mailto:eagenest@madison.k12.wi.us) |  | Name\_\_\_\_\_\_\_\_\_  Period\_\_\_\_\_\_\_\_ |

1. If a tuna fish can is initially at 364 kelvins and initial pressure is 1.1 atm, what will the new pressure be if it is cooled to 300. kelvins?
2. If you have a can that is at 2.0 atm and 293 kelvins, what temperature would make the pressure in the can be 1.0 atm?

|  |  |  |  |
| --- | --- | --- | --- |
| More gas |  | Less Gas | 1. Total wall hits for   More gas: \_\_\_\_\_\_ Less Gas: \_\_\_\_\_\_  Compare the pressure in the two boxes using words like double, half, etc.:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Instructions: Draw 4 tiny particles. Using a ruler make each particle travel 30 cm |  | Instructions: Draw 2 tiny particles. Using a ruler make each particle travel 30 cm |
|  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| More temperature |  | Less temperature | 1. Total wall hits for   High temperature: \_\_\_\_\_\_ Lower temperature: \_\_\_\_\_\_  Compare the pressure in the two boxes using words like double, half, etc.:  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Instructions: Draw 4 tiny particles. Using a ruler make each particle travel 30 cm |  | Instructions: Draw 4 tiny particles. Using a ruler make each particle travel 15 cm |
|  |  |  |

1. When number of gas atoms increases, pressure will:
2. When temperature of a gas increases, pressure will:
3. When volume of a gas increases, pressure will:

|  |  |
| --- | --- |
| 1. Label the X axis number of molecules and the Y axis pressure. Make a **crude** graph, without units. 2. Based on the graph, pressure and molecule number are (directly / inversely) proportional. |  |

|  |  |
| --- | --- |
| 1. Label the X axis temperature and the Y axis pressure. Make a crude graph, without units. 2. Based on the graph, pressure and temperature are (directly / inversely) proportional. |  |

1. Looking at the can in Problem #2 on the front of the sheet, calculate what the pressure would be if you reduced the temperature to “absolute zero”.