

Name \_\_\_\_\_  
Date \_\_\_\_\_ Per. \_\_\_\_\_

## Speed of Diffusion

Diffusion: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

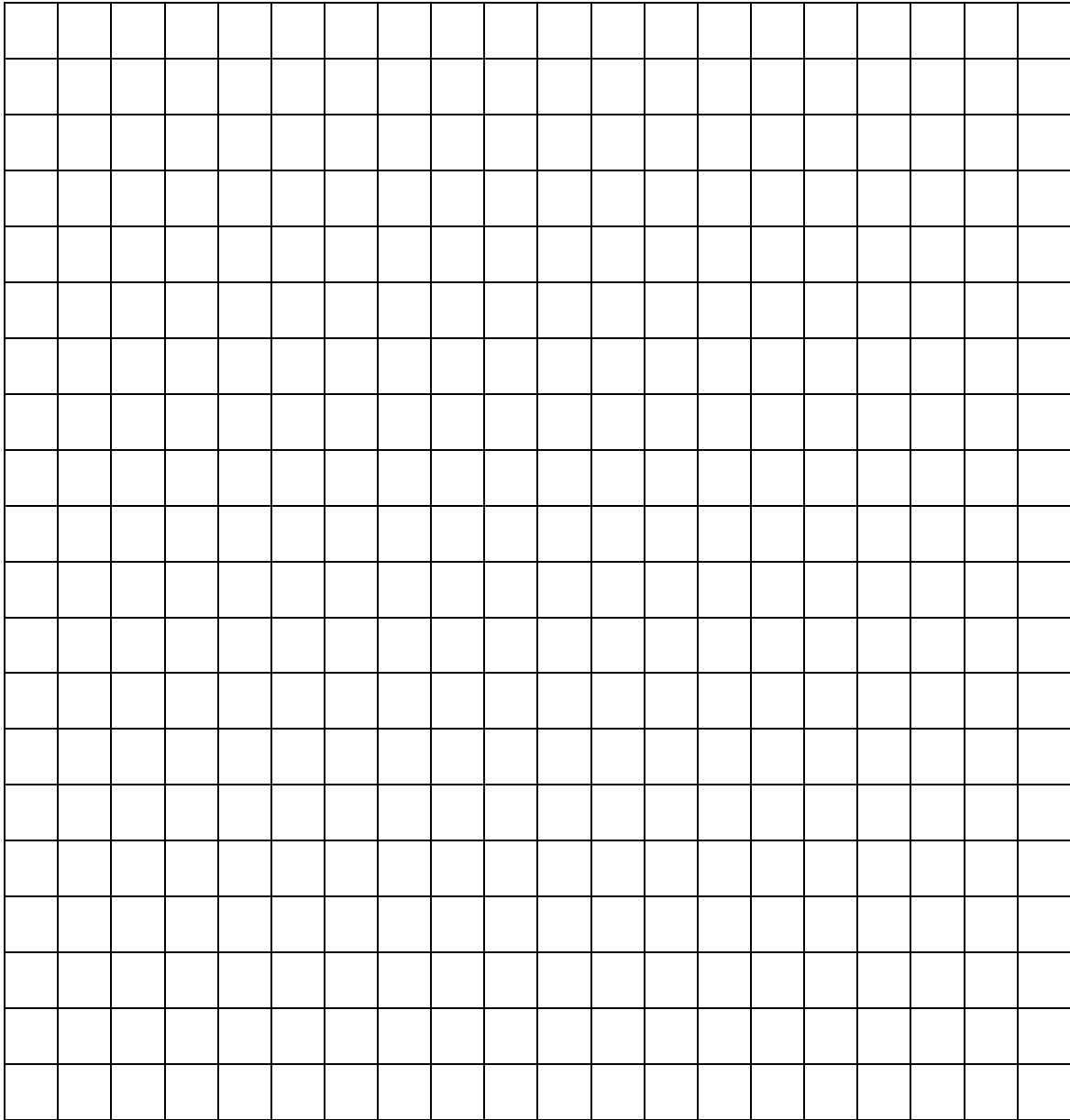
Question: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Hypothesis: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Record the time it takes to smell the heated substance at each distance in the table below.  
Convert time in minutes to seconds. Calculate the speed of diffusion for each distance.

| Distance (cm) | Time (minutes) | Time (seconds) | Speed (cm/s) |
|---------------|----------------|----------------|--------------|
| 60            |                |                |              |
| 120           |                |                |              |
| 180           |                |                |              |
| 240           |                |                |              |
| 300           |                |                |              |
| 360           |                |                |              |
| 420           |                |                |              |
| 480           |                |                |              |
| 540           |                |                |              |
| 600           |                |                |              |
| 660           |                |                |              |
| 720           |                |                |              |
| 780           |                |                |              |
| 840           |                |                |              |
| 900           |                |                |              |
| 960           |                |                |              |
| 1020          |                |                |              |
| 1080          |                |                |              |
| 1140          |                |                |              |
| 1200          |                |                |              |

Use your data to make a distance-speed graph (in seconds) of diffusion. Use the words distance, speed, heated substance and diffusion in your title.



Conclusion:

1. What can you conclude about the distance and speed of diffusion of a heated substance?

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2. Using quantitative data, give two distances and speeds that support your conclusion. Don't forget units.

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