

Amoeba Sisters | Video Recap

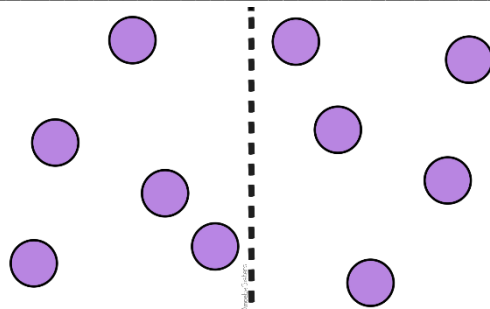
NAME: _____

Amoeba Sisters Video Recap: Diffusion

1. In diffusion, the **net** movement of a substance travels **down** its **concentration gradient**. Explain using the image below.



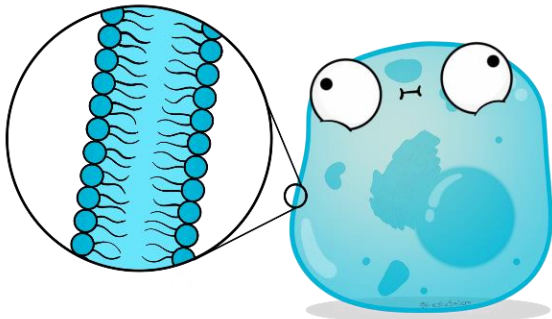
2. When diffusion has reached **equilibrium**, we say that the **net** movement of the molecules is zero. Does this mean these molecules below would stop moving? Explain using the image below.



3. **Simple diffusion** can occur through a **cell membrane**! According to the video, what are some cell membrane characteristics that can affect the diffusion rate?

4. Does **simple diffusion** require an input of energy?

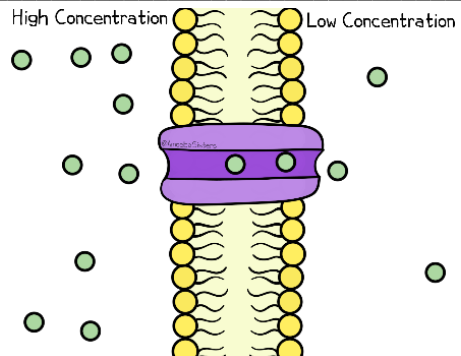
5. Is simple diffusion **passive** or **active transport**?



6. Sometimes, a substance can only travel across a cell membrane via facilitated diffusion. What is **facilitated diffusion**?

7. Does **facilitated diffusion** require an input of energy?

8. Is facilitated diffusion **passive** or **active transport**?





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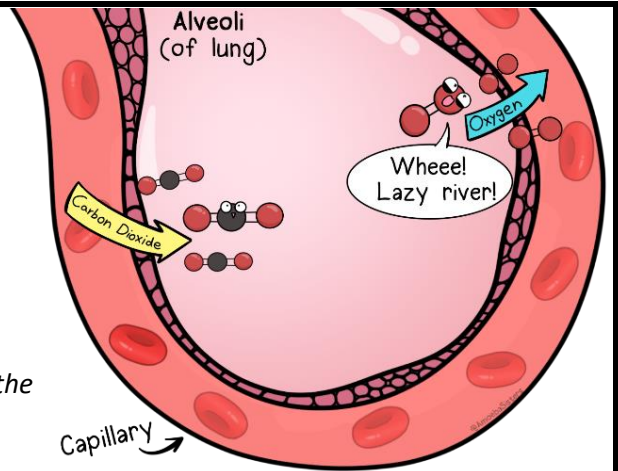
Amoeba Sisters Video Recap: Diffusion

Diffusion is a critical process required for oxygen to leave the alveoli of the lungs to *enter* the blood and for carbon dioxide (a waste gas) to *leave* the blood and enter the alveoli.

9. Knowing what you know about how a substance travels in diffusion, in order for oxygen to leave the alveoli and *enter the blood*, there would be a [**HIGHER or LOWER**] concentration of oxygen in the *alveoli* compared to the blood.

10. Knowing what you know about how a substance travels in diffusion, in order for carbon dioxide to leave the blood and *enter the alveoli*, there would be a [**HIGHER or LOWER**] concentration of carbon dioxide in the *alveoli* compared to the blood.

11. Explain your reasoning for questions #9 and #10.



There are many factors that can affect the rate of diffusion! The following are only a few examples from the video that can affect the rate of diffusion. Briefly explain how each factor listed below could affect the rate of diffusion.

<p>Distance</p>	<p>Temperature</p>	<p>Characteristics of Substance</p>	<p>Increasing Difference of Concentration</p>
12.	13.	14.	15.

