

Diffusion

Learning objectives

- 1 Define diffusion.
- 2 Explain how and why different factors affect the rate of diffusion.
- 3 Draw and interpret particle diagrams of the diffusion process.
- 4 Write independently about diffusion.

Introduction

Diffusion occurs in many areas of everyday life. We depend on it for making a cup of tea and exploit it to make ourselves smell nice with perfumes. Crucially, diffusion is how substances move in and out of our cells and so is essential to life.

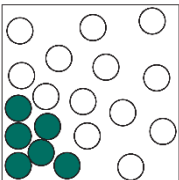
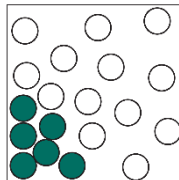
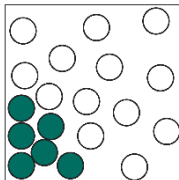
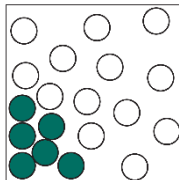
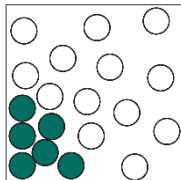
Instructions

1. Stick the structure strip in the margin of your exercise book/paper.
2. Reflect on what you already know about diffusion and where you have seen the key words before. Follow the prompts and use your knowledge to write a summary of diffusion. If you'd like more support, what other sources could you use to find the information, e.g. a textbook, online?
3. Answer the extension question to apply your knowledge of diffusion to a new context.

Key words

Use these key words in your responses:

- diffusion • solid • liquid • gas • concentration

Structure strip diffusion	Structure strip diffusion	Structure strip diffusion	Structure strip diffusion	Structure strip diffusion
Define the term diffusion and state which states of matter it occurs in.	Define the term diffusion and state which states of matter it occurs in.	Define the term diffusion and state which states of matter it occurs in.	Define the term diffusion and state which states of matter it occurs in.	Define the term diffusion and state which states of matter it occurs in.
Briefly explain what is happening to the particles when a substance diffuses.	Briefly explain what is happening to the particles when a substance diffuses.	Briefly explain what is happening to the particles when a substance diffuses.	Briefly explain what is happening to the particles when a substance diffuses.	Briefly explain what is happening to the particles when a substance diffuses.
 <p>Use diagrams to show how diffusion would progress in this sample.</p>	 <p>Use diagrams to show how diffusion would progress in this sample.</p>	 <p>Use diagrams to show how diffusion would progress in this sample.</p>	 <p>Use diagrams to show how diffusion would progress in this sample.</p>	 <p>Use diagrams to show how diffusion would progress in this sample.</p>
<p>Explain how and why the following factors affect the rate of diffusion:</p> <ul style="list-style-type: none"> the state of matter of the substance the temperature. 	<p>Explain how and why the following factors affect the rate of diffusion:</p> <ul style="list-style-type: none"> the state of matter of the substance the temperature. 	<p>Explain how and why the following factors affect the rate of diffusion:</p> <ul style="list-style-type: none"> the state of matter of the substance the temperature. 	<p>Explain how and why the following factors affect the rate of diffusion:</p> <ul style="list-style-type: none"> the state of matter of the substance the temperature. 	<p>Explain how and why the following factors affect the rate of diffusion:</p> <ul style="list-style-type: none"> the state of matter of the substance the temperature.
Some particles are heavier than others. Suggest how this might affect diffusion.	Some particles are heavier than others. Suggest how this might affect diffusion.	Some particles are heavier than others. Suggest how this might affect diffusion.	Some particles are heavier than others. Suggest how this might affect diffusion.	Some particles are heavier than others. Suggest how this might affect diffusion.

Extension question

Jack is sat at the back of the classroom and sprays his body spray. He thinks the teacher who is by the board at the front of the class won't notice.

Write a note in bullet points to explain to Jack why the teacher will eventually smell his body spray but might not know that it was him who sprayed something.