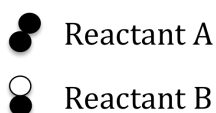


<b>Topic</b>	Collision theory	<b>Level</b>	GCSE
<b>Outcomes</b>	1. To draw particle pictures to explain why changing the temperature, pressure and concentration will change the rate of a reaction.		

### Collision theory and particle pictures



Complete the boxes below to show what would happen to the particles BEFORE they react.

	$\xleftarrow{\text{Decrease temp}}$		$\xrightarrow{\text{Increase temp.}}$	
	$\xleftarrow{\text{Decrease pressure}}$		$\xrightarrow{\text{Increase pressure}}$	
	$\xleftarrow{\text{Decrease Conc.}}$		$\xrightarrow{\text{Increase conc..}}$	

Using your understanding of rates of reaction can you explain the following?

1. Why does increasing the temperature of a reaction increases the rate of reaction?
2. Why does adding a catalyst increase the rate of reaction?
3. Why does increasing the concentration of a reactant increases the rate of a reaction?
4. Why does hitting your hand on the desk does not result in a reaction, despite particles colliding?

**Progress:** have a look at other activities that get students to understand rates of reaction

<http://www.thescienceteacher.co.uk/rates-of-reaction/>

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