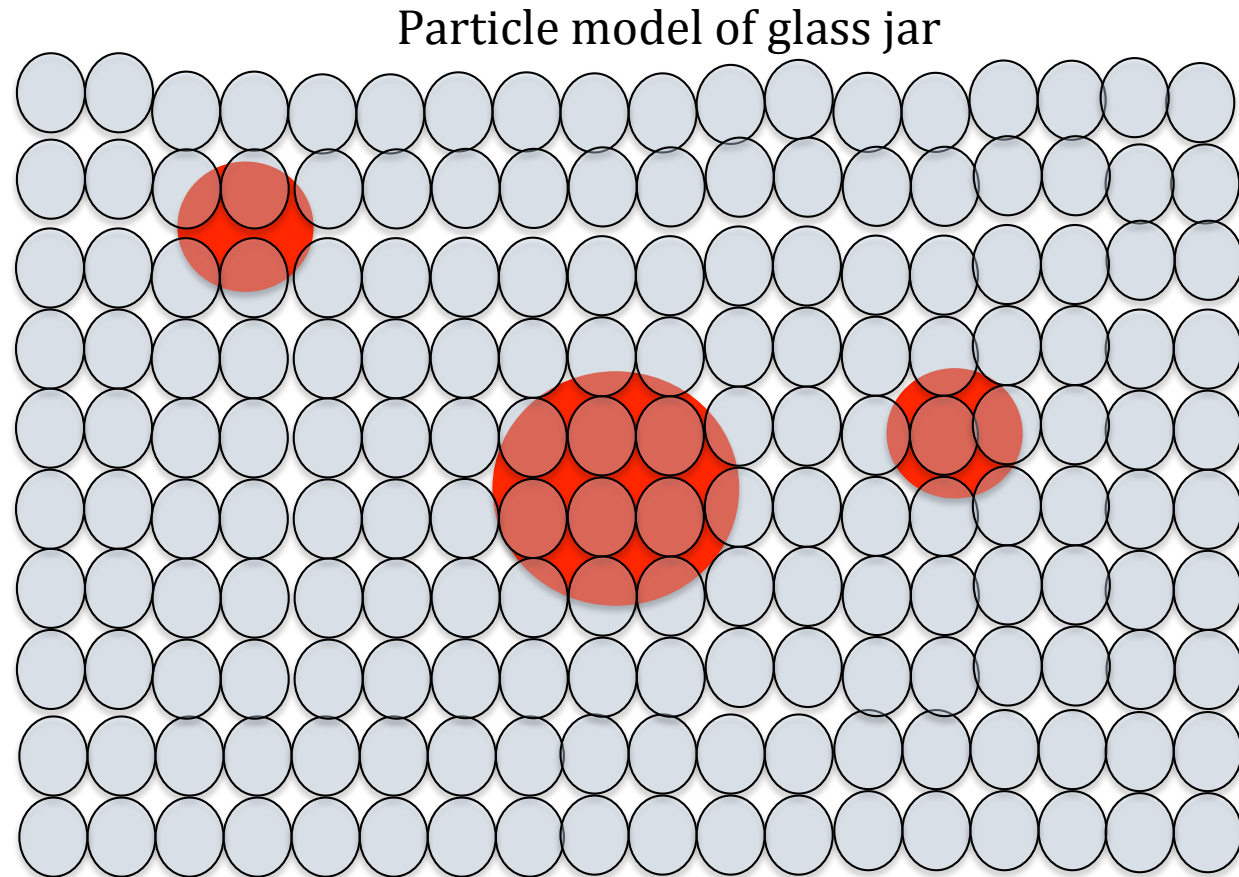


Topic	Particle pictures and states of matter	Level	Key Stage 3 (or any course for students aged 11-16)
Outcomes	<ol style="list-style-type: none"> 1. To think deeply about what exists between particles in particle pictures 2. To understand that different substances have different boiling points and this affects their state at room temperature 		
Information for teachers	<ul style="list-style-type: none"> • This activity is diagnostic. It has been designed to probe student thinking around the particle model. It should be used once the particle model has been introduced to diagnose specific misconceptions e.g. air exists between particles, gases have higher temperatures than solids and all particles are the same size. 		

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A glass jar contains three gas particles. The gas particles are trapped and cannot get out.



1. Look at the picture. What is there between the gas particles inside the jar?
2. Look at the picture. How do we know that the jar contains at least two substances?
3. The jar is at room temperature. Do the gases have a lower, higher or the same temperature as the glass?
4. Why is glass a solid at room temperature if the other substances are a gas?