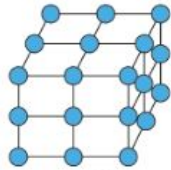
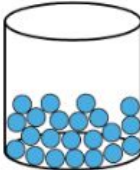
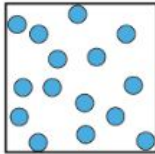


Handout - Answers

1. Draw the particles of the three different states of matter (solid, liquid, and gas).

Solid	Liquid	Gas
		

2. Provide an example of each state of matter discussed:

Solid: **Any solid (e.g. Chair)** Liquid: **Any liquid (e.g. juice)** Gas: **Any gas (e.g. Oxygen)**

3. At what temperature does water turn into a solid? **0°C**
4. At what temperature does water turn into a gas? **100°C**
5. Based on the experiments conducted do you think all liquids turn to solid at the same temperature? Do you think all liquids turn to gas at the same temperature? Explain.
(Based on any experiment) Different liquids turn to gas at different temperatures. An example would be that the sugar crystals turned back into a solid even though it was not 0°C or below.
6. Once something is a solid, does it stay that way forever? Explain.
 *Hint: Think about the ice cream experiment and use it as an example.
No, it can change back to being a liquid (and possibly a gas). For example, we made ice cream (a solid) out of liquid cream but when I left it out too long some of it started to melt and turn back into a liquid
7. Challenge Question: If sugar is a solid then why does it take the shape of the container it is put in? What about with salt or sand?
Sugar (as well as salt and sand) is still a solid. Each crystal has a fixed shape and volume, does not flow under shear stress, does not take the shape of its container, and is incompressible. Many small solids (grains) moving together can sometimes act like a liquid (called granular flow).