7DBl Homework Sheet 3

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A rough guide as to how the marks are given is as follows:

		Effort Grade		Achievement of task
A	Excellent	this effort grade will rarely be given – to get this mark the work must demonstrate great effort and real clarity	+	Excellent understanding of the work
B	Good	will be given e.g. when a lot of effort has obviously been put into the work or when the work is very clearly set out	=	Good understanding of the work
C	Average	will be given for work which is of a satisfactory, acceptable standard; if you get less than C you must improve the standard at once!	−	Poor understanding of the work
D	Poor			
E	Very Poor			

If a question has one or a number of * before it then it contains points which are inherently difficult and which will be met more generally in subsequent years.

Don't forget to do your homework in the **back** of your exercise book!

4 On making some observations at home

Carry out each of the activities below. For each explain what you did and write down clearly everything you **observed**.

a. Stir a teaspoon of sugar (as large granules as possible) into some water in a glass.

   *What do you see happening to the individual grains of sugar?

b. Put a small amount of baking powder in a cup and add some vinegar to it. You could use sodium bicarbonate instead of baking powder.

   *Why do you think the vinegar reacts with the baking powder?

c. Make a clean, still water surface e.g. in a well-rinsed washing up bowl. Dust the surface lightly with talc. Get the smallest possible drop of olive oil and put this on the surface.

   **What do you think is happening to the particles that made up the oil drop?

5 On solutes, solvents and solutions

a. Take a flat teaspoon of salt and stir it into a glass of water.

   Write down what you see happening as the salt dissolves.

   *If you could just look at a single crystal of the salt what do you think you would see as it dissolves? **Try to draw a diagram to show what is happening.

   Describe carefully how you would get *as much as possible* of the salt back from the solution. Why might you not get all the salt back?

b. Alcohol (methylated spirits) is a dangerous liquid as it is flammable and can easily burn out of control if not carefully used.

   Salt will not dissolve in alcohol but sugar will.

   Describe what you would see if

   i. salt was stirred into alcohol

   ii. sugar was stirred into alcohol.

c. From the experiments considered above, give two examples of a **solute**, a **solvent** and a **solution**. Give one example of a **suspension**.