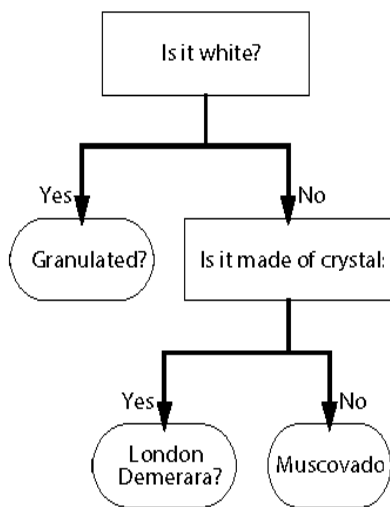


Using IT in... temperature and energy

Do we waste heat in school?

The children can do a survey of temperatures around the school. Are any rooms hotter than they need to be? Are any of the rooms rarely used but still heated? Does the school waste heat? The children can record their results in a **spreadsheet** program. The program provides a ready-made table for recording results. It can draw a bar graph, to compare the temperature differences around the school: which rooms are too warm? How could the school save heat and money?

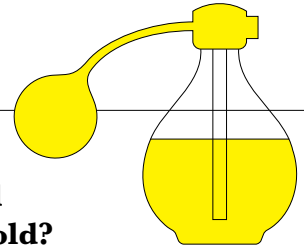


IT: Handling information

Is the school heating coming on and going off at the best times?

You can monitor the temperature of the room overnight using **temperature sensors**. Set up your system to record for as long as you need to and think about where to place your sensors. If you have two temperature sensors you could put one over the radiator and the other in the room. Get the children to look at the graph: when does the heating come on? When does the room reach a steady temperature? Should we switch the heating on a bit later? When does the heating go off? How long does it take for the room to cool down? Should we switch the heating off a bit earlier?

IT: Measuring



Does perfume make your skin cold or does it just feel cold?

Liquids cool the skin as they dry or evaporate. You can monitor this cooling with a **temperature sensor** - dripping some of the liquid onto the probe and seeing how the temperature drops over a minute. Which cools more, water or after-shave? What does the graph tell you: follow the graph line with your finger and say what is happening. Would blowing on the liquid (i.e. drying it faster) make the temperature go up or go down? How would you feel if you got out of a warm pool and the wind was blowing?

IT: Measuring

Why do your gloves feel so cold when they get wet? Do plastic covered gloves work any better?

When the wind blows over wet gloves, the water evaporates and cools them. You can place **temperature sensors** inside two gloves - one wet and one dry - and monitor the temperature change on the computer. How will you simulate the wind blowing? Which glove cools fastest? Did the wind make any difference? Are waterproof gloves any better? You might repeat the activity with two wet gloves, one in a polythene bag and one uncovered. Which glove stays at the same temperature? What has stopped it from cooling?

IT: Measuring

