

Using IT in... food

How much sleep do you get?

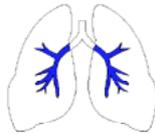
The children can do a survey to find out how much sleep people get. They might raise questions such as: do older people get less sleep, or do girls have earlier bedtimes than boys? Using these questions you choose the information you need to collect - for example, bedtimes, waking times, sex and age. You can then enter the results into a **database program** - a program which stores the data in a systematic way and allows the children to analyse their data. They might get the program to calculate the amount of sleep each person gets. Or they can draw a histogram or count graph showing how sleep varies across different age groups. And if they repeat this graph with just the girls' data and with just boys' data, they can compare the two graphs side by side - do girls have earlier bedtimes than boys?



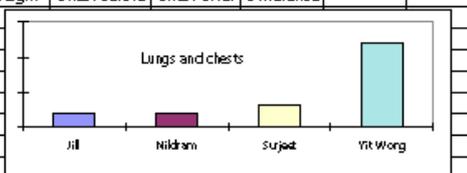
IT: Handling information

Do people with wider chests have bigger lungs?

Larger people need more lung capacity - if only because they have more flesh to feed with air. The children might suggest that taller people have bigger lungs. They might discuss how they can measure how big their lungs are. They could try two approaches - one is to measure their chest size before and after a big breath. Another is to blow into a tube inside a large upside-down container of water - and then measure the water displaced. They can record their results, such as height, chest size and lung size in a **database program**. This they can use to draw graphs. For example, they can sort the database on children's height and then plot a bar graph of lung size. A steady increase in the bars shows that your lung size does increase with your height. How then does your lung size change with your chest size?



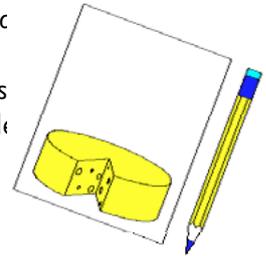
	A	B	C	D	E	F	G
1	Lungs and chests						
2	Name	Height	Chest before	Chest after	Difference		
3	Jill						
4	Nikhram						
5	Surjeet						
6	Yit Wong						
7							
8							
9							
10							



IT: Handling information

What foods will give us a good diet?

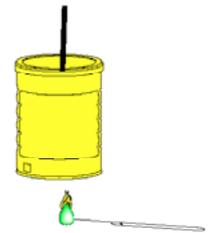
The children can research a food and use the **word processor** to produce an advertisement about it. They might cover cereals, bread, fruits, nutrients or additives and include pictures with their information. If they need to use photographs from packaging they can capture them for the computer using a hand **scanner**. The computer helps, not just in assembling the elements in the poster but in allowing them to prepare a first draft for market research.



IT: Communication

What do we mean by 'food gives us energy'?

Burning some food - a biscuit, a crisp or peanut is the classic way to illustrate that foods contain energy. You burn the food to heat up a container of water. By placing a **temperature sensor** in the water you can show the rise in temperature very graphically on the computer screen. You might ask: what does the graph 'do'? Why does it rise? Where does the energy come from? How do foods compare?



IT: Measuring

How long should we leave frozen food to thaw?

You can freeze the end of a **temperature probe** inside a sausage - and then take it out of the freezer to record the temperature as it thaws. The computer screen will show how long the food takes to thaw. Does the temperature go up steadily? Does it change all of a sudden? Why does food packaging tell us to defrost the product thoroughly before cooking? Is it possible to cook the food - in say, hot water and the inside remain cold? How could we show this?

IT: Measuring