

## How fast are your reactions?

You can measure reaction time using a pair of switch-type sensors - light switches, **light gates**, pressure pads and crocodile connectors that you find in sensor kits. One person breaks a light beam or jumps on a pressure pad or bangs two pieces of metal together (using the connectors) and the other then has to break the light beam on another sensor. The software will show the reaction time. Can you get a consistent answer? Or does your reaction time improve after a few goes? Are your reactions better in the morning or in the afternoon? Do you react better to 'seeing' or 'hearing'? Can you suggest reasons for your findings?

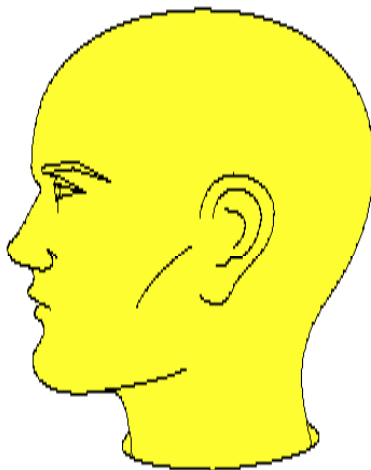


IT: Measuring

## How do the ear and eye work?

A **sound sensor** is a very good model of how the ear works. It is a microphone with a membrane that vibrates in a similar way to the ear drum. Likewise the **light sensor** is a good model of the eye: it has a lens to collect the light, a light sensitive part like the retina. Then, in both cases, there are wires (like nerves) to carry a message to the computer (or brain).

IT: Model



## Which flavours are easiest to taste?

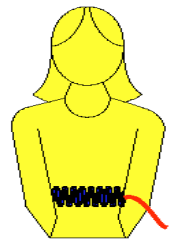
How could we show that our eyes affect our sense of taste? The children can try to identify different jelly flavours, with and without a blindfold, to see how important sight is. They might record their results in a **spreadsheet** program - and then make a bar chart. Which jelly is the easiest to identify? Do people make more mistakes when blindfolded? What clues do our eyes give us? Do you think smelling the jelly helps? Do you think smelling the jelly is more important than tasting it

	A	B	C	D	E
1	Jelly tasters				
2	Name	Raspberry	Orange	Strawberry	Lemon
3	Jill	Yes			
4	Yit Wong	Yes			
5	Surjeet	Yes			
6	Nikdram	Yes			

IT: Handling information

## Does your breathing and pulse change when you exercise?

When you exercise, your muscles need extra oxygen and sugar. Children can measure how many times they breathe in 30 seconds before, during and immediately after some exercise. What does exercise do to their breathing? How do their lungs help the muscles during exercise? Try measuring your pulse too - what does exercise do to your pulse? How does your heart help your muscles during exercise? You can record your heart sounds using a **sound sensor** pressed to your chest. Special **breathing** and **pulse sensors** can be connected to the computer too. Pulse reading wrist watches make an inexpensive alternative.



IT: Measuring