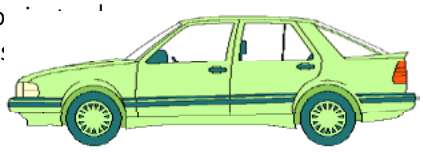
Using IT in... forces

Which car is the fastest?

It is very difficult to 'time' how long a toy car takes to move along the floor. Using **light gates** and light switches connected to your sensor box the task is easy, the results are reliable and a whole range of measuring activities open up. Children will learn about time and speed as they time their cars: which car is the fastest? What must you do to make the car move? When you test the cars will you push them o
them? Does the
your push make
a difference?
Can you make
sure that you push the same every time?



IT: Measuring

How big a crater would a falling meteor make?

The further a stone falls, the more energy it gives to the ground. The children can investigate this idea by dropping a round object and measuring the dent it makes in a tray of sand. They can record the heights and the dents in a **spreadsheet**, and then plot a scattergraph to see if there is a connection between the two. You might ask: what happens to the crater if you drop from higher up? Can you repeat your results and get the same answer? Another way to make a similar point is to drop a ball of Plasticene onto the floor from different

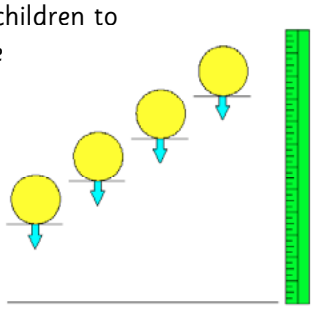
	A	B	C	D
1	Trapeze	How many swings		
2	Length	Try 1	Try 2	Try 3
3	20			
4	30			
5	40			

heights - but this time, the children measure the size of the 'flat' on the Plasticene. Either way, this is a good exercise in measuring and recording.

IT: Handling information

Which ball bounces highest?

A ball bouncing tells us that the ball has stored energy. You can get the children to drop a ball and try to me how high it bounces. Ask them if they can get the same answer each time. Then get them to test balls of different sizes and to enter how high they bounce into a **spreadsheet**. They can draw a bar graph and find out which ball bounces



	A	B	C
1	Making craters		
2	Height	Dent 1	Dent 2
3	20		
4	40		
5	60		

highest. They can also find out if large or small balls bounce best. Or you can get them to see why sports people keep the ball in the fridge.

IT: Handling information

Which magnet is the strongest?

The children can test a set of magnets to see which shows the greatest attraction force. They might do this by adding paper clips to a magnet and seeing how many it can pick up or how long a paper clip chain it can hold. Or they could tie a tack on a thread and move the magnet nearer - the stronger the magnet, the greater the distance it works over. They can use a **spreadsheet** to record their findings as well as display these as a graph. You might ask: which magnet is the strongest? How does the graph show this? Can you sort the magnets into two groups, strong and weak? Are pure metal magnets stronger or weaker than ceramic magnets?

IT: Handling information