Using IT in... forces

What floats and what sinks?

Test some things to see if they float or sink. Use a forcemeter to measure their weight in air and their weight in water - the floaters should weigh nothing in water. Record the results in a **spreadsheet** table - do not graph the weights.

IT: Handling information

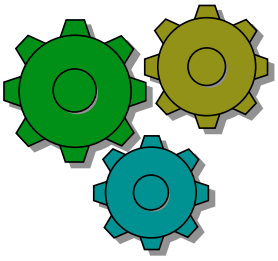
How does the pressure change when you squash things?

You can show how pressure changes when balloons are squashed with the help of a **pressure sensor**. You attach this, quite costly, sensor to a balloon and then squash the balloon. The computer screen will show you the effect as a bar gauge on the screen. It should show how squashing and pressure are connected.

Using the same set-up you can show how pressure changes with the depth of water - an important point for divers and submarines, because the deeper they go the stronger their equipment must be. Older pupils may be able to measure the depth, record the pressure and see if there is a pattern between them.

IT: Measuring

A **control box** allows children to make machines that work automatically. It gives them an insight into how things work. They can build a fork-lift truck, a buggy, a conveyor belt, a car park barrier, drilling machine or a railway crossing. They can build the system using glue, card, wood, wires, bulbs, motors, switches and sensors. Control technology is an excellent context for children to think about energy, gears, structures and using information technology.



IT: Control

Explore the different types of machines using the Internet. Record your findings in a table on your **word processor**. The word processor helps by allowing the children to work as a team and by allowing them to edit their writing as their ideas develop.

IT: Communicating