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January 1998

Regulars

Editorial



What's in a name?

In October of last year Tony Blair unveiled the government's main initiative for connecting up the educational infrastructure of the UK: the National Grid for Learning. The consultation phase is now over and the government's target date of 2002 is rapidly approaching.

At BETT'98 last week David Blunkett, secretary of state for education made the first major announcement of the programme. NCET, the National Council for Educational Technology is to be renamed BECTA, the British Educational Communications and Technology Agency.

The task ahead is huge. All schools, colleges, universities and libraries are to be connected to the Grid. Information and Communication Technology (ICT) training will play a vital role: 75% of teachers and 50% of students are to use their own email accounts by 2002. Meeting these targets will require more than just name changes at a time when teachers are only just beginning to breath again after the curriculum changes introduced by the last government.

BECTA's task will be to develop and run the National Grid for Learning. The government has pledged £100m to kick-start the Grid as part of a package of measures which includes £230m from the National Lottery to support the training of all 450,000 teachers in the curriculum use of ICT.

This source of funding could pose a dilemma for mathematics teachers. Equipped with a better understanding of probability theory the public might not be quite as generous.

Further reading:

- [BETT'98](#)
- [Connecting the Learning Society](#)
– the National Grid for Learning consultation paper.
- [The National Grid for Learning](#)

Disaster

PASS Maths was created to increase public awareness of the importance of mathematics in everyday life. We were therefore pleased to see this theme being chosen for this year's Royal Institution Christmas lectures, given by Professor Ian Stewart.

Ian Stewart's analogy of mathematics as a maze is a good one. Mathematical problem solving involves going down lots of blind alleys, experimenting with different directions until the solution is found. Mathematical intuition plays an important role in this process but learning when to trust our intuition is an important skill for everyone. This issue of PASS Maths highlights the subject of probability theory, an area of mathematics in which our natural intuition tends to let us down.

On a cold morning in January 1986 the space shuttle Challenger exploded in a fireball killing all 7 astronauts on board. The resulting investigation pointed the finger of blame at one of a number of rubber sealing rings in the rocket boosters. Damage to these rings had been observed in previous shuttle launches and the potential failure was discussed by one of NASA's contractors before the launch.

The BBC has recently recreated these discussions for television as part of their *Disaster* series. At the heart of the discussion was a disagreement over the effect of temperature on the reliability of the seal. The decision to launch was based on there being no correlation between temperature and damage to the seals, an assumption which was made on the basis that some damage had been observed during warm weather launches as well as cold.

In Ian Stewart's third lecture he demonstrated how the simple procedure of fitting a line to a set of data points could have been used to test this assumption. This simple analysis reveals the high risk associated with the cold weather launch. Had it been done before the accident it would have been a powerful argument for postponing the launch and could have prevented the accident from happening.

Interpreting random events is not just the domain of the engineer. Poor public understanding of probability and a failure to interpret statistics can lead to massive *over* reactions too, something with which the food and health industries are all too familiar.

You can read more about the BBC's *Disaster* series from:

- [Disaster home page](#)
- [The Challenger Shuttle Disaster](#)



Plus is part of the family of activities in the Millennium Mathematics Project, which also includes the [NRICH](#) and [MOTIVATE](#) sites.