IDEA 93

WEATHER PAGE

Making use of a daily newspaper weather page is an excellent resource for teaching mathematics and was suggested to me by Anne Watson during an informal chat at an ATM conference. I have used this resource with great success in my teaching over the years and this was a fantastic example of teachers' sharing ideas and engaging in professional development.

These are some reasons for students to use the weather page:

- It contains a massive amount of 'real' and current information.
- It provides opportunities for students to work with a range of areas for *Handling Data*, again using 'real' information.
- It provides opportunities for cross-curricular work.

The first two ideas only require students to have access to one day's information. The last three require students to access a large number of different days' information so collecting the weather page over several weeks will be necessary for ideas 3, 4 and 5.

1. Draw a Centigrade to Fahrenheit conversion using the data from all over the world.
2. From the data of around Britain draw grouped frequency graphs for some of the following:
   - Number of sunshine hours.
   - Rainfall (in inches).
   - Highest temperature.
   - Lowest temperature.
   - Find the average highest and lowest temperatures.
   - Draw scattergraphs of highest against lowest temperatures.
3. Draw graphs of sunrise times for some of the places given (Belfast, Birmingham, etc). Why do different places have different amounts of daylight?
4. Draw graphs of moonset and moonrise
5. Graph high-tide times and low-tide times for various places around Britain.

IDEA 94

PROBABILITY FAIRGROUND 1

This idea was first introduced to me in 1975 by Eric Love, my first head of department. It is based upon setting out three or four 'different' experiments, according to class-size, using cards, coins, dice and cubes. Each experiment is set out twice around the classroom. All experiments have the same probability outcomes. In groups of fours, students move simultaneously from one experiment to the next every five or so minutes.

If there are 'spare' bodies, they can help with data collection or dealing cards (see below).

Each experiment will require:

- An explanation sheet.
- Necessary equipment.
- Recording sheets.

The recording sheets are axes drawn on 1 cm-squared paper; the *spaces* on the horizontal axis are marked out 0, 1, 2, 3 and 4 and the *lines* on the vertical axis are marked 0 to 25.

Each experiment requires several sheets. Students record the outcomes of experiments they do and fill in data sheets continuously from where the previous group left off.

A sheet is considered 'full' when one column reaches the top.

The experiments are:

1. Each person is dealt a card from a 'pack' containing just eight cards containing four aces. Record whether 0, 1, 2, 3 or 4 aces are dealt.
2. Each person has a coin and these are spun simultaneously. Record whether 0, 1, 2, 3 or 4 heads appear.
3. Each person has a dice and these are thrown simultaneously. Record whether 0, 1, 2, 3 or 4 even numbers appear.
4. Each person takes a cube from a bag containing a lot of cubes, half of which are Red. Record whether 0, 1, 2, 3 or 4 red cubes appear.

As recording sheets are completed they can be collected in and stored for the next lesson.