Temperature Graphs

Summary

At first glance, this lesson doesn't seem dramatically different from traditional practice. However, it does contain several elegant and significant features which contrast somewhat with that traditional approach. Students in small groups are given a number of graphs representing the average temperatures of various cities over a one-year period. They are challenged as a group to match each graph to a city and to justify their choice. The lesson actively uses a relevant context (regional geography), problem solving and co-operative group work to develop graph reading skills. This approach directly contrasts with a traditional 'text-book' approach. Extensions using computer support allow the teacher and student to explore a range of similar challenges.

Lesson Stages

1. Introduction: A puzzle
2. Small group problem solving
3. Group reports
4. Conclusion: Reflective summary
5. Extensions: Computer support

Features

Discuss the part these features play in the lesson.

Are there other features important to you?

- Shift from closed to open
- Exposing the Working Mathematically process
- _____
- _____
- _____

Issues or Discussion Points

- How does the open approach compare with the typical text approach? What learning outcomes are evident or different in a comparison of the two approaches?
- Is the student whose scale reading abilities are not fully developed excluded from the activity?

Straw Vote

After teaching the lesson, please rate each of the following features (out of 10) as to its contribution to the overall quality of the learning experience. This exercise will provide a basis for staff discussion.

1. Connection with geography _____ ☐
2. Flexible open approach adaptable to mixed ability levels_____ ☐
3. The role of technology support _____ ☐
4. Co-operative group work _____ ☐
5. Communication skills _____ ☐
6. Algebra link _____ ☐