

The theme of this issue continues the focus on language and communication begun in *PSR* 83. There the emphasis was on questions and dialogue, the oral communication that has such a central role in the classroom. Here we have several articles concerned with communication in science in other forms, including reading, writing and drama. Communication is so much a feature of classrooms that it seems unnecessary to ask why it is important. But if we have a good answer to this question, then it helps to make the communication more effective for learning.

It all comes down to the notion of 'active learning'. Learners 'do' their own learning, for no one else can bring about the changes in brain cell organisation that are associated with learning. But it is the environment with which the learner interacts that provokes activity leading to learning. Creating active learners is a key aim of education today since it lays the foundation for continued learning throughout life. Active learners seek to understand things around them and are better prepared for transferring what they know to new experiences.

So why is communication so important? In science education we value first-hand experience, but we know that this alone is not sufficient for developing scientific understanding. Children need to talk about their ideas, as all learners do, and compare their ideas with those of others, using first-hand experience to provide evidence to test ideas. In this way, thinking leads to action that modifies thinking. So active learning involves children in using others' ideas to develop their own. Classroom discussion is one way of gaining access to others' ideas; reading is another way, perhaps under-used in primary science due to a too-literal interpretation of what 'active' means in learning. Communication is two-way, of course, and when children are excited about what they have learned they want to share it with others. This is the best motivation for recording and reporting, but so often 'writing about it' is the only way of doing this and is hardly motivating or exciting! This brings us to the five articles in this issue on the theme of recording and communicating, giving practical ideas to complement these theoretical points.

On recording and communicating

We begin with an article by **Lynne Wright**, who tackles the vexed question of how to make recording in primary science a useful activity rather than a chore. Then **Alan Peacock** takes up the equally knotty problem of how to select and make the best use of books for pupils. **John Stringer** continues this subject from the point of view of an author. He describes writing for children as 'the closest thing to teaching on paper'. There follows a second contribution from **Alan Peacock**, drawing on the research he has done into the activities of visitors to the Eden Project. Here he focuses on the talk among members of family groups during their visits. Parents, it seems, interact rather differently with their children than teachers

with visiting school groups. Consequently, the children's opportunities to learn are quite different in these two contexts. In the fifth theme article **Michael Little** offers a rich range of ideas for using drama as an alternative means of communication in science and one that clearly 'facilitates meaningful learning'.

Of brains and remains

In the non-theme section the first article arises from an unusual collaboration between a kindergarten teacher and a neuroscientist. **Donna Cynkar** and **Mark Rutledge-Gorman** give a fascinating description of work on helping young children to develop their ideas about the brain and how to keep it from injury. This is sure to spark ideas for similar work with older children. The second article, by **Philip Stephenson** and **Frances Sword**, also recounts activities arising from collaboration between people inside and outside the school system, in this case museum staff. They describe work stimulated by children examining a museum collection of ancient objects that enabled them to use and develop scientific ideas in tackling problems in real contexts. The reference in this article to the Primary National Strategy led us to ask **Roger Mitchell**, chair of the ASE Primary Science Committee, to write a short piece to explain what this is and what is and is not known about how it is likely to impact on primary science.

In search of new authors

I'm sure that many readers of *PSR* realise that they have ideas to share, but then don't follow up this urge to write. To encourage these potential authors to take up their pens – or keyboards – we are holding a competition for new writers (see details opposite). If you have ideas to share and have not written about them for *PSR*, or you know someone else in this position, then please have a go and spread the word to others.

Changes to the *PSR* editorial board

First, we are pleased that **Liz Lakin** has agreed to become the Reviews Editor, taking over from **John Stringer**. We are grateful to **John** for his work on reviews over the past two years. Second, as this issue brings to an end my five-year term of office as Editor, **Alan Peacock** has been appointed by the ASE to take over as Editor from the next issue. Although **Alan** has been a member of the editorial board for the last two years, I would like to extend the warmest welcome to him in this new role.

Editing *PSR* has been an enjoyable and rewarding task, but it is time for fresh thinking to influence the next phase in the journal's development. I will continue to be one of *PSR*'s most ardent supporters and will no doubt contribute a few words from time to time. I would like to end by thanking everyone who has supported me in the role of Editor over the past five years.

Wynne Harlen

Competition for new writers

We know you're out there – it's time to show yourself!

There are great ideas being put into practice in many classrooms that could be helping others if only they were shared. *Primary Science Review* is there to be used for just this purpose. To extend the sources of our articles we are asking teachers, head teachers or classroom assistants, who have not yet written about their work, to try doing so. The main reward is seeing your work in print, but in addition we

are offering prizes and will publish a selection of articles. The winning author will receive a year's ASE subscription free, or £50 worth of ASE publications. The second prize will be £15 worth of ASE publications. Remember, publication not only helps others but is a recognition of your own or your school's good practice, adding to the profile of both.

Send us an account of some aspect of your work that you find particularly effective and which could be of value to others. It might be about how you deal with a particular topic, some innovative use of resources or of ICT or how you or your school manage some aspect of science, how you involve pupils, parents or others in science activities. The account should be between 1000 and 2000 words, illustrated if possible and appropriate with children's work or photographs.

Submit your article by e-mail to psreditor@ase.org.uk

The closing date for the competition is **19 November 2004**.

Please note that this competition is for new writers (who have not before written for a wide audience). If you have already written for *PSR*, keep it up (see the note about themes below and the writing for *PSR* guidelines on page 16).

PSR themes

We intend to continue with the selection of some articles in each *PSR* around a theme, whilst other articles will be on a range of topics. So please do not be deterred from sending us your writing if you have something to write about that is not on a theme. We will occasionally have an issue with no single theme. Also, past themes will be revisited, so if you want to write about a topic that fits a theme on which we have already published some articles, please do not think you have 'missed the boat' – indeed reading what others have written on a theme may spark off an idea, so do send it to us.

Future themes:

PSR 85 (Nov/Dec 2004): Science in the home

Exploration of materials used in building, and inside the house: kitchen science, etc. The science around foods, fuels, furniture, bread, bricks, blankets, heating, cooling, washing and drying; and home/school studies.

PSR 86 (Jan/Feb 2005): Science and citizenship (copy deadline: contact editor now!)

The science behind responsibility towards the environment, towards oneself (personal well-being) and towards others inside and outside the classroom. Recycling, caring for local sites, sustainability. Developing skills of enquiry and using evidence in making decisions.

PSR 87 (March/April 2005): Energy sources (copy deadline 29 October 2004)

Activities and background information relating to commonly used forms of energy, such as electricity, sound, light, and their sources, particularly renewable ones, such as wind, water and tides. Children's understandings of energy-related phenomena and ways of developing their scientific ideas.

PSR 88 (May/June 2005): Planning investigations (copy deadline 11 February 2005)

Planning by teachers relating to parts of investigations as well

as whole extended ones. Going beyond 'fair testing' to other types of investigation, including ones that are conducted outside as well as inside the classroom. Ways of helping children to plan investigations, using different frames and formats. Identifying and assessing children's progression in planning scientific investigations.

Already published:

- PSR 62* (March/April 2000): Food and farming
- PSR 63* (May/June 2000): Everyday materials
- PSR 64* (Sept/Oct 2000): Light and dark
- PSR 65* (Nov/Dec 2000): Looking after ourselves
- PSR 66* (Jan/Feb 2001): Our environment
- PSR 67* (March/April 2001): ASE centenary issue
- PSR 68* (May/June 2001): Assessment
- PSR 69* (Sept/Oct 2001): Learning about science and scientists
- PSR 70* ((Nov/Dec 2001): Forces
- PSR 71* (Jan/Feb 2002): Science and everyday life
- PSR 72* (March/April 2002): Earth and Space
- PSR 73* (May/June 2002): Celebrating Science Year
- PSR 74* (Sept/Oct 2002): Words in science
- PSR 75* (Nov/Dec 2002): Gardens for life
- PSR 76* (Jan/Feb 2003) ICT
- PSR 77* (March/April 2003): Primary science across the world
- PSR 78* (May/June 2003): Early years
- PSR 79* (Sept/Oct 2003): Managing primary science
- PSR 80* (Nov/Dec 2003): Effective transition
- PSR 81* (Jan/Feb 2004): Creativity
- PSR 82* (March/April 2004): Thinking and feeling
- PSR 83* (May/June 2004): Questions and dialogue
- PSR 84* (Sept/Oct 2004): Recording and communicating

IF YOU ARE INTERESTED IN PURCHASING ANY BACK ISSUES OF *PSR* PLEASE CONTACT JOAN HYSLOP AT ASE ON 01707 283000 TO CHECK AVAILABILITY. A CHARGE OF £3 A COPY IS MADE TO MEMBERS.

Contributions for forthcoming issues are very welcome. Please send contributions or suggestions to: The Editor, Primary Science Review, ASE, College Lane, Hatfield, Herts AL10 9AA. E-mail: psreditor@ase.org.uk