Teacher's notes

The format of **First Mental Arithmetic** differs from that of traditional mental arithmetic materials in that the children read the questions themselves and write down their answers – as in the Key Stage 1 national tests. The individual books may be used flexibly and children may set their own pace. However, you might find it helpful to use one book per term.

The mathematical content of the **First Mental Arithmetic** activities should already have been covered in maths lessons and the reading content is kept simple. Nevertheless, you might consider asking a classroom assistant to work with a group of children, helping them to read the questions. Ask the assistant to note the names of children needing further help, and the activities or concepts that they find difficult. You can then provide the necessary teaching, support or additional practice.

Books 4 to 6

Each of the Year 2 books is split into three sections. The sections are divided into sessions, each comprising one page of 30 questions. Parts A, B and C of each session contain different question types; for further details, please see the back cover. Depending on the child's skills, a session's work may be completed during the course of a week or over whatever time span you feel is appropriate.

As the children progress, different levels of support are provided. By the time they reach Books 4 to 6, the children will know some key maths facts. If they cannot recall these, they should be aware of strategies that will help them to find answers. Children needing more help may find a number line useful – either an actual line (provided in the **First Mental Arithmetic Teacher's Guide**) or one that they visualise.

Encourage the children to use the following mental strategies when working through Book 6.

- For addition and subtraction: using known facts to help them to find the answer. (For example, from $6 + 3 = 9$, they can work out that $36 + 3 = 39$; from $9 - 4 = 5$, they can deduce that $9 - 5 = 4$.)
- For finding the difference: counting up from the smaller to the larger number. (For example, for the difference between 19 and 21, they count up, 19 to 20, then one more to 21.)
- For multiplication: knowing the basic multiplication facts.
- For division: recognising that if they know $5 \times 2 = 10$, they can deduce that $10 \div 2 = 5$ and $10 \div 5 = 2$.
- For fractions: using squared paper to model the problem. (For example, for finding $\frac{3}{4}$ of 12, they would mark out a grid of 12 squares, find $\frac{1}{2}$, then find $\frac{1}{4}$ or $\frac{1}{2}$ of $\frac{1}{2}$, then find $\frac{3}{4}$.)

Assessment

- Sessions 11 and 12 at the end of each section test all the concepts and facts covered in that section.
- Check-ups test children's understanding of geometry and statistics.
- As children write their answers to the Just Facts questions, they will notice helpful patterns. Just Facts in Book 6 covers pairs that make 20, adding one- and two-digit numbers, and multiplication and division facts for 2s, 5s and 10s.

Record keeping

At the beginning of each pupil book section is a photocopiable Achievement Chart for completion by the child. In this book of answers, the Achievement Charts are replaced by photocopiable Group Record Sheets, which allow you to note achievements and learning needs for each child. For example, you might write: *Knows multiplication facts for 2* or *Needs practice in writing number family facts*. Alternatively, you can simply record the child's marks. Use the completed sheets to plan appropriate work.