

Preface

This book is intended to be used as a companion to *The Thinking Child: Brain-based learning for the foundation stage*. In *The Thinking Child*, you will find the theory about brain-based learning and descriptions of the research that backs up the methods and practices described in both books. It is important to have an overview of this theory in order to have maximum success in putting these brain-based techniques into practice. It would therefore be preferable to read *The Thinking Child* before moving on to use the suggestions in this book.

Once you are familiar with *The Thinking Child*, you will see that the structure of *The Thinking Child Resource Book* is very much the same. This book is also divided into an introduction and then four parts, which are subdivided into section steps. In order to help you to use both books in tandem, cross references are given to *The Thinking Child* in the margin. These cross references provide the background theory for the practical suggestions given in this book. If there is a possibility that an activity or suggestion taken out of context may be inappropriate for use with some children or settings, a warning is given through a caution sign.

In this book, the main aspects of brain-based learning are given context through either a case study, where we describe real children in real settings, or an anecdote about one of 'Our four children'. These four pre-schoolers, who were described in detail in *The Thinking Child*, are George, Carrie, Kishan and Samantha. They are fictitious characters from settings that use brain-based learning techniques, and the descriptions of their activities are representative of some of the best early years practice.

Some of the resources in this book are intended for photocopying for use while working with children, for staff development or for individual reference. Many suggestions are given in the form of lists which can be easily photocopied, such as ways to help children develop high self-esteem, ways to give positive feedback or ways to involve parents in your setting. These suggestions can be used as described or can be developed to suit your individual situation. Other sections give practical activities to do with children, such as circle time activities and games to promote a 'can do' attitude. At various points, you will find a suggestion for a practical task, called 'Activity', that you may wish to undertake either alone or with colleagues. Again, these can be adapted to suit each individual setting. Material that is printed within the text in a small version on a clipboard, can be found in a full-sized version for photocopying at the end of the book.

Working to understand how the child's brain develops and applying this knowledge to early years practice is no small undertaking. The challenge may be great but the rewards of working this way are immeasurable. We sincerely hope that *The Thinking Child* and *The Thinking Child Resource Book* will help you as you make that learning journey.



gives cross reference to the topic in *The Thinking Child*.



describes aspects of brain-based learning in real settings.



describes aspects of brain-based learning in a fictitious setting of one of 'Our four children'.



represents a small copy of the A4 size poster, which can be found in the Appendices starting on page 141.



gives warning that activities taken out of context may be inappropriate for use with some children or settings.

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Understanding the child's brain

Step 1: About brain-based learning

In recent years researchers have begun to understand more about the brain, and the mysteries of intelligence have begun to unravel. Scientists are now able to look deep inside the living, functioning brain, and many long-held theories are being disproved and new ones developed.



The brain consists of about one hundred billion nerve cells, called *neurons*. These neurons develop *dendrites* for transmitting information to other neurons and *axons* for receiving information. As patterns of thought are repeated, the participating neurons build stronger and more direct pathways, which are called *synapses*. The first few years of life in fact are the most critical for this wiring of the brain, and the more stimulation a child's brain receives, the more neural pathways are formed. As he repeats experiences, this pathway-building becomes permanent and strong – in other words, the experiences are committed to memory. In this way, nature and nurture act together to wire each individual child's brain in its own unique way. We cannot alter nature, but as practitioners we can provide the nurturing environment that will maximise the child's brain development.

When we use brain-based learning techniques, we are adapting the learning environment to take account of what scientists have found to be the best ways to help children to form these neural connections. That is what this book is about: applying current knowledge about the brain to the early years setting. Developing brain-based learning techniques can be exciting and extremely rewarding. We hope that this book and *The Thinking Child* will help you to put these techniques into practice with confidence.