

A Brilliant Introduction to the Science of the Brain

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John Dowling is the Gordon Llura Gund Research Professor of Neuroscience at Harvard University and one of the best teachers of brain science in the country, as evidenced by the fact that he has taught the introductory course on Behavioral Neuroscience at Harvard for over 30 years. In fact, Dowling developed this book: *Understanding the Brain: From Cells to Behavior to Cognition*, in conjunction with the Harvard University Freshman Seminar entitled *The Amazing Brain*. In the book Dowling traces the progress we are making in understanding how the brain functions, with emphasis on vision, perception, language, memory, emotion and consciousness.

Dowling begins by outlining in general terms how the brain works. In so doing he gives us an initial insight into the organization of the brain. Dowling then goes on to describe specific aspects of brain function: perception, language, memory, emotion and consciousness. He details how nerve cells differ from the other cells in the body and then goes on to describe how nerve cells communicate with one another and how they convey sensory information into the nervous system and motor action out of the nervous system. Dowling then discusses the organization of the nervous system of simple invertebrate animals, and then goes on to consider the more complex organization of the mammalian brain—your brain and mine—and includes discussions of plasticity, emotion, and rationality.

Understanding the Brain: From Cells to Behavior to Cognition is a perfect introduction for anyone who comes to the brain with little background in brain science and who wants to have a meaningful understanding of how the brain works. It is written with enormous clarity and precision. As a result, the book is at once an easy and enjoyable read, while at the same time it explains in some detail how the molecular machinery of the brain is responsible for the activities of your mind and how your mind is responsible for your imagination, your reasoning ability, and your fantasy life. I find this to be an extraordinary book ... a must read. It is brilliantly written and easily understandable even by people coming to the book from outside the nervous system. At the same time the book is highly informative, so that those who know about the nervous system will also enjoy reading it and will learn from it.