Preface

This book has been developed and expanded from materials prepared for a course delivered to Masters students in Earth Science at the Australian National University. These students had a broad range of experience and discipline base, and so from the beginning the treatment was rather general. The aim is to build an understanding of the nature of scientific research, and the way in which it can be planned and managed. The emphasis is on broadly applicable principles that can be of value irrespective of discipline, derived from my extensive research, editorial and management experience.

This short work is aimed at beginning researchers, particularly in the later stages of Ph.D. work and Postdoctoral workers, but should also be of value for independent researchers. In the early days of research guidance is likely from research supervisors and advisors. But, all too soon, a researcher can confront the situation where they are expected to be able to develop their own projects and make them work. This book is intended to help this transition, and to provide a framework that should be of value into the future. Each researcher will establish their own style and mode of work, my aim is to aid them to make this process as effective as possible.

At a number of points in the book I have made use of material prepared by different organisations, such as guidelines for proposals. Such material is designated by distinctive type, and often appears as boxed text. Apart from this material, the content is my own and I have prepared the figures and charts specifically for this book.

I am grateful for the feedback provided by the students who participated in the various deliveries of the course. Their input helped significantly in clarifying the issues confronting the novice researcher. In the course there was a strong interactive component, which is difficult to reproduce outside the class environment. Some self-help exercises are suggested based on these interactions. These exercises are likely to be of greatest value when discussed with others.

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Canberra, March 2014.