# Contents

Getting the most from this book . . . . . 4
About this book . . . . . 5

## Content Guidance

Research methods and techniques . . . . . 6
Planning and conducting research . . . . . 12
Data recording, analysis and presentation . . . . . 25
Report writing . . . . . 40
Practical activities . . . . . 43
How science works . . . . . 45

## Questions & Answers

### Section A

Multiple choice . . . . . 50
AS questions . . . . . 50
A-level questions . . . . . 52

### Section B

Research design and response . . . . . 55
AS example 1 . . . . . 55
AS example 2 . . . . . 61
A-level example 1 . . . . . 67
A-level example 2 . . . . . 71

### Section C

Data analysis and interpretation . . . . . 76
AS example 1 . . . . . 76
AS example 2 . . . . . 82
A-level example 1 . . . . . 88
A-level example 2 . . . . . 94
Answers to multiple-choice questions . . . . . 99

Knowledge check answers . . . . . 100
Index . . . . . 102

**4/4 marks awarded.** The issue of consent has been identified and described. The student explains how this issue relates to observational research and has linked it to the observation described. This answer achieves full marks despite wandering off the point a little at the end with talk about issues of social desirability.

**3** **(a)** Inter-rater reliability means that two or more observers record the same information when observing the same behaviours.

**3/3 marks awarded.** This explanation is exactly right.

**(b)** The researcher could ensure that this observation has inter-rater reliability by compiling the observation sheet in such a way that all the observer has to do is record the food on the tray. The lead researcher would categorise the food as healthy or unhealthy, so there is no room for the observers to have to make this judgement. This is where levels of inter-rater reliability may fall because different observers may judge certain foods differently. The researcher would also need to train the observers to use the observation sheet before they conducted the real observation.

**4/4 marks awarded.** This is a good answer. Student A has suggested that the more objective the coding becomes, the more likely it is that two or more observers will agree. So if observers only have to tick exactly what each person buys, there is less room for individual differences of opinion than there might be if the observers had to decide whether someone's lunch was healthy or unhealthy. The student also mentions training the observers, which would also reduce differences of interpretation.

**4** There will be a difference in the food choices of males and females eating in a shopping centre food court.

**3/3 marks awarded.** This is a clear alternate hypothesis which contains details of the independent variable (male/female) and the dependent variable (food choices). This is a non-directional hypothesis as it does not state which direction the difference will be (males or females healthier for example).

**5** I would conduct this as a structured observation and I would design a coding sheet with categories for all the different food outlets. I would decide if they were healthy or unhealthy. I would make this a participant observation as I would buy some food and sit near the food counter to observe. I would count how many males and females went to each counter. I would do this for an hour in the morning, an hour at lunchtime and another hour in the afternoon.

**4/15 marks awarded.** Student A has not spent very much time on this question and so does not earn many marks. There should be plenty of time to think carefully and to plan your answer in detail.