



Asking Questions in Biology

Fifth edition

A Guide to Hypothesis-testing, Experimental Design and
Presentation in Practical Work and Research Projects

Barnard • Gilbert • McGregor

Asking and answering questions is the cornerstone of science, yet formal training in understanding this key process is often overlooked.

Asking Questions in Biology unpacks this crucial process of enquiry, from a biological perspective, at its various stages. It begins with an overview of scientific question-asking in general, before moving on to demonstrate how to derive hypotheses from unstructured observations. In the main sections of the book, it then explains how to use statistical tests as tools to analyse data and answer the questions, before finally showing the best practice in presenting scientific reports.

This edition has been revised, reorganised and updated throughout with additional coverage of topics such as extracting information from the scientific literature. Throughout, examples are shown using R®, by far the most important statistical tool available for the modern student.

The book is an indispensable companion to all students of biology, but particularly those enrolled in courses concerning experimental design, data analysis, hypothesis testing, research methods, or any practical project work.

The late Chris Barnard was Professor of Animal Behaviour at Nottingham University. Francis Gilbert is Professor of Ecology at Nottingham University. Peter McGregor is Research Co-ordinator for Science & Natural Environment at Cornwall College.

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