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**Oxford KS3 Science:**  
**Activate 1 Student book**  
*Philippa G. Hulme, Jo Locke and Helen Reynolds*  
*Oxford: Oxford University Press, 2014*  
172 pp. £14.99  
ISBN 978 0 19 839256 9

**Oxford KS3 Science:**  
**Activate 1 Teacher Handbook**  
*Simon Broadly, Mark Matthews, Victoria Sturt and Nicky Thomas*  
*Oxford: Oxford University Press, 2014*  
176 pp. £49.99  
ISBN 978 0 19 839259 0

*Activate* is a well-designed key stage 3 science course designed to meet the requirements of the 2014 Programme of Study of the National Curriculum for England. The teacher’s handbook links each lesson to a double page in the student textbook. Three-part lesson plans are designed for 50–60 minute periods with ideas for support and extension, making it a great resource for non-specialist teachers. Lesson outcomes link content with developing skills and move

away from traditional levels to broader ‘bands’ referring to ‘developing’, ‘secure’ and ‘extending’ targets.

The textbook is clearly laid out with key words and objectives signposted for students. Questions for each topic are differentiated and the chapter summary and key points are excellent resources for revision. This book has maths and literacy skills built in from the start of the course to prepare students for the demands of the new GCSEs. The book reflects the challenging content requirements of the new curriculum and would need to be supplemented with additional resources to allow weaker students to get the most from the course.

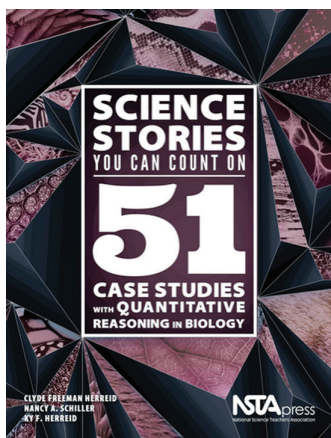
The online *Kerboodle* resource provides additional worksheets, activities and assessments to support this scheme of work. There are a variety of assessment activities, which are based upon assessment for learning principles, and a checkpoint system encourages teachers to follow assessment with learning.

This scheme of work follows a traditional approach rather than a thematic one and would be suitable for schools that are looking to update their schemes of work for the new curriculum.

*Natalie Timoney*

### **Science Stories You Can Count On: 51 Case Studies with Quantitative Reasoning in Biology**

*Clyde Freeman Herreid, Nancy A. Schiller and Ky F. Herreid*  
Arlington, VA: NSTA Press, 2014  
549 pp. £33.95  
ISBN 978 1 938946 05 9



This substantial book aims to develop pupils’ quantitative reasoning skills in biology in an engaging and relevant manner through the use of stories. It is primarily aimed at pupils studying A-level (age 16–18) and above and covers a wide range of areas, including stories with titles such as ‘As the Worm Turns: Speciation and the Maggot Fly’ and ‘The Case of the Druid Dracula’, each providing an opportunity to develop data-handling skills as well as logical reasoning.

Following an introduction outlining how and why numbers are so important in biology, there are 51 case studies covering core concepts such as: evolution; pathways and transformations of energy and matter; information flow; exchange and storage; structure and function; and systems. Each case study is a ready-made lesson, providing learning objectives and identifying the quantitative reasoning skills or concepts covered. The case studies themselves consist of stories where the characters have a problem, such as querying whether mobile phone use causes cancer or why bee colonies are collapsing. Data

and activities follow, including tasks such as reading scientific papers, graphing and answering questions. Mathematical skills are comprehensively covered, including using graphs to formulate predictions and explanations, articulating complete and correct claims based on data, and formulating null and alternative hypothesis. There are website links throughout that are helpful and more materials are available online. Unfortunately, the answer key is only available to paid subscribers to the National Centre of Case Study Teaching in Science.

The difficulty of the material varies but the contexts are interesting and sure to engage pupils and teachers alike. Those interested in trying the flipped classroom may find it particularly useful as pupils can engage with the often-lengthy material prior to lessons to maximise the use of classroom time.

I would recommend this book to those interested in developing an alternative approach to teaching data-handling skills and as a source of ideas for making biology and data more relevant to pupils’ lives.

*Sarah Wood*

### **Argument-Driven Inquiry in Biology: Lab Investigations for Grades 9–12**

*Victor Sampson, Patrick Enderle, Leanne Gleim, Jonathon Grooms, Melanie Hester, Sherry Southerland and Kristin Wilson*  
Arlington, VA: NSTA Press, 2014  
456 pp. £25.36  
ISBN 978 1 938946 20 2

If you want to extend the use of argumentation in your