

PRINCIPLES OF DEVELOPMENT

The process of biological development is an amazing feat of tightly regulated cellular behaviors—differentiation, movement, and growth—powerful enough to result in the emergence of a highly complex living organism from a single cell, the fertilized egg. But how does biological development occur? How can the fertilized egg give rise to the limbs, organs, and other tissues that comprise a living organism?

Principles of Development reveals the universal principles that govern the process of development. Written by one of the most influential developmental biologists of our time, Lewis Wolpert, it focuses on those systems that best illuminate common principles, demystifying the complex and intricate processes through which biological development occurs.

With co-authors whose expertise spans the discipline, *Principles of Development* combines a careful exposition of the subject with insights from some of the world's pioneering researchers in developmental biology, taking the student from the fundamentals through to the latest discoveries in the field.

- Focusing on common principles rather than attempting to present encyclopedic coverage of the field, it offers ideal coverage and depth for an undergraduate course, and refrains from overwhelming the student with excessive detail.
- Carefully selected further reading stimulates the student to explore the subject at a more advanced level, encouraging them to engage with the primary literature.
- Beautifully clear full-color illustrations help the student to visualize the principles being introduced, making them easier to grasp, and enhancing understanding.
- Numerous summary sections, both in words and diagrams, allow the student to recognize and fully digest the important concepts—providing an invaluable revision aid.
- Increased emphasis on the molecular mechanisms of development reflects the direction of modern research, presenting to the student a true picture of developmental biology today.
- An improved structure sees the chapter on the development of the *Drosophila* body plan placed before those on vertebrate body plans, building the student's confidence through the understanding of a simple system before progressing to a more complicated one.

Cover image appears courtesy of Daniel St Johnston

“Wolpert is great as the first text students get on this subject. It is concise and clear, and excellent for getting those principles over without too much detail.”

Seb Shimeld, University of Oxford

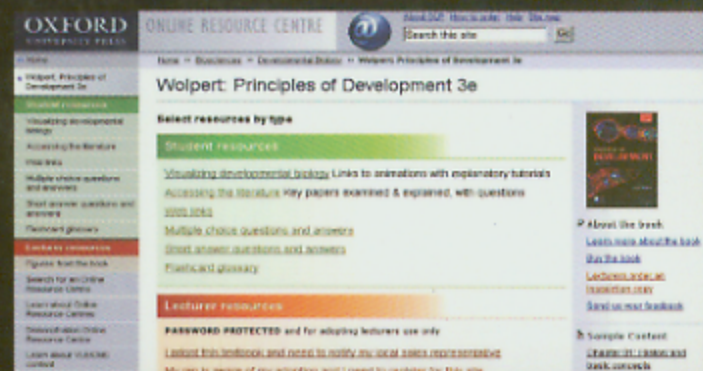
“I like the fact that Wolpert illustrates well all the principles of developmental biology and gives my students the background to read and understand research articles and at the same time does not cover all the fine details where the students can get lost and fail to learn the basic principles of developmental biology.”

Kelly Kruger, California State University



online resource centre

www.oxfordtextbooks.co.uk/orc/wolpert3e/



Lecturer resources

- Figures from the book

Student resources

- Visualizing developmental biology
- Accessing the literature
- Flashcard glossary
- Multiple-choice questions
- Short answer questions
- Web links

A Practical Guide to Developmental Biology by Melissa Gibbs, Stetson University (978-0-19-924971-8) guides students through a series of experiments, giving them a solid grounding in classic developmental biology as well as modern techniques.

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