

Preface

This Fifth Edition of *Essentials of Biology* provides nonscience majors with a fundamental understanding of the science of biology. The overall focus of this edition addresses the learning styles of modern students, and in the process, increases their understanding of the importance of science in their lives.

Students in today's world are being exposed, almost on a daily basis, to exciting new discoveries and insights that, in many cases, were beyond our predictions even a few short years ago. It is our task, as instructors, not only to make these findings available to our students, but to enlighten students as to why these discoveries are important to their lives and society. At the same time, we must provide students with a firm foundation in those core principles on which biology is founded, and in doing so, provide them with the background to keep up with the many discoveries still to come.

In addition to the evolution of the introductory biology curriculum, students and instructors are increasingly requesting digital resources to utilize as learning resources. McGraw-Hill Education has long been an innovator in the development of digital resources, and this need, and its authors, are at the forefront of the integration of these technologies into the science classroom.

The authors identified several goals that guided the preparation of this new edition:

1. Updating of chapter openers and Connections content to focus on issues and topics important to a nonscience major classroom
2. Utilization of the data from the LearnSmart adaptive learning platform to identify content areas within the text that students demonstrate difficulty in mastering
3. Refinement of digital assets to provide a more effective assessment of learning outcomes to enable instructors in the flipped, online, and hybrid teaching environments
4. Development of a new series of videos and webones to introduce relevancy and engage students in the content

Relevancy

The use of real world examples to demonstrate the importance of biology in the lives of students is widely recognized as an effective teaching strategy for the introductory biology classroom. Students want to learn about the topics they are interested in. The development of relevancy-based resources is a major focus for the authors of the older series of texts. Some examples of how we have increased the relevancy content of this edition include:

A series of new chapter openers to introduce relevancy to the chapter. The authors chose topics that would be of interest to a nonscience major, and represent what would typically be found on a major news source.

The development of new relevancy-based videos, BioNow, that offer relevant, applied classroom resources to allow students to feel that they can actually do and learn biology themselves.

- A website, RicochetScience.com, managed by Dr. Windelspecht, that provides updates on news and stories that are interesting to nonscience majors. The Biology101 project links these resources to the major topics of the text. The site also features videos and material animations to assist the students in recognizing the relevancy of what they are learning in the classroom.



- In addition, the author's website, michaelwindelspecht.com, contains videos and articles on how the *Essentials of Biology* text may be easily adapted for use in a topics-based course, or in the hybrid, online, and flipped classroom environments.

