

Preface

New biological phenomena are being discovered every day and the information that accumulates is being continually updated. As long as we continue to manage our lives in modern society, learning about the relationships between the organisms themselves and their environment is becoming increasingly important regardless of the field involved. Therefore, it has recently become important to define fields beyond those that can be neatly categorized as the sciences. In recent years, various fields are being defined that are limited to not just one discipline, but categorized as interdisciplinary areas of study. Under these circumstances, as well as specializing in the provision of in-depth learning of specific fields of study, it is also desirable for a university education (occasionally in high school education) to provide students with the opportunity to learn about a wide range of academic disciplines. University subjects related to the natural sciences aim for students to learn about different phenomena related to the creation of life and the living organisms that include humans from a variety of viewpoints, including their relationship with human society. What are the effects that instigate changes in the environment? What are genetically-modified foods? How does firefly glimmer? (enzyme catalysis)? What is inheritance, evolution, disease, and cancerous cells? The majority of topics encountered as part of our daily lives can be relatively easy to understand with some basic knowledge about living organisms.

This text book (originally as “やさしい基礎生物学 第2版”) does not necessarily require knowledge of biology gained up to high school. It is aimed especially at non-biology major students who will gain a basic knowledge of the biological sciences in the English language. For learning efficiently, many illustrations have been incorporated, but also the biggest characteristic of this text book is that it is comprised of almost exactly the same layout as the original Japanese version (2nd edition). So one may study biological sciences in English or in Japanese; it is up to the reader from which language you learn.

By gaining a basic knowledge of biological sciences, we translators hope you that this will create an environment for yourself to think about the relationship between a sustainable society and the natural environment based on basic knowledge of biological (life) sciences.

The translators wish to acknowledge Dr Tomoko Hashimoto (Kyono Art Clinic), Dr Tomotsugu Arikawa (Keio University) and anonymous English native speakers for their insightful comments and suggestions. We would also like to express our deepest appreciation to the original authors, Mr Akihiro Aiba (Yodosha Co., Ltd.) and Mr Yasuaki Mochizuki (Yodosha Co., Ltd.).

On behalf of the translators,
Kensuke TOYODA
August 2016