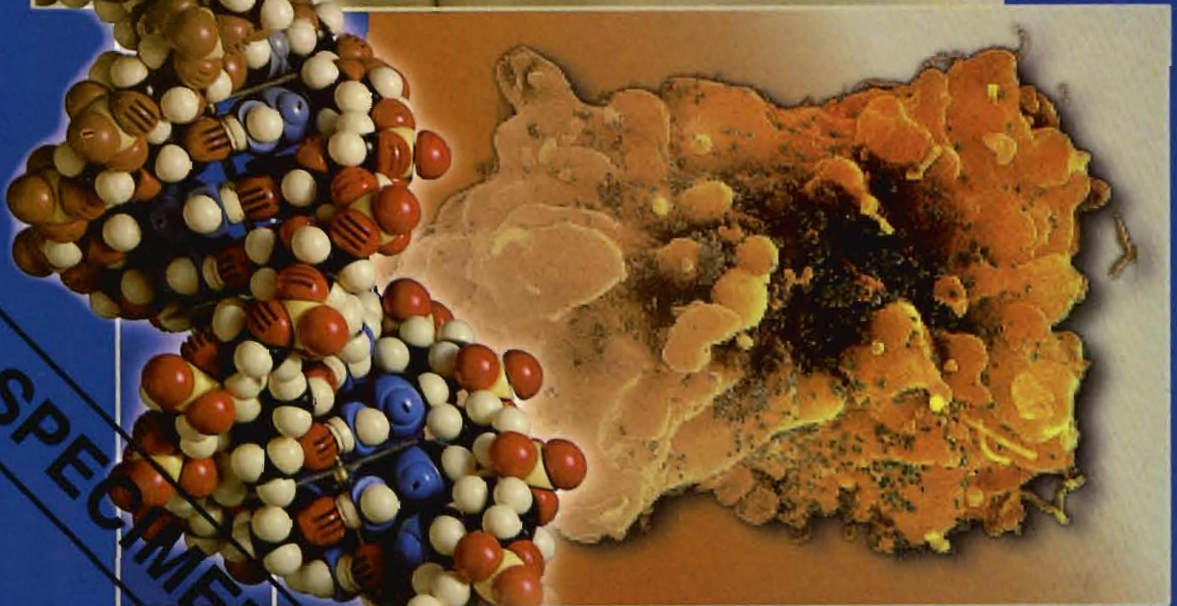


Life Science

Secondary Education
Second year
Humanities Section



SPECIMEN

Republic of Lebanon

Ministry of National Education, Youth and Sports

LIFE SCIENCE

Secondary Education

Second Year

Humanities Section

Center for Educational Research and Development



New Curricula

General Coordinator
Moustapha Yaghi

Scientific Reader
Soulaïma Shamaat

Translators
Soulaïma Shamaat
Ramez Chahine



LIFE SCIENCE



Secondary Education

Second Year

Humanities Section

Ramez Chahine (Coordinator)

Adnan Hosari

Rima Slim

Center for Educational Research and Development

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The National Textbook Project

This is the second installment of textbooks completed by the Center as part of a three-stage effort to produce the books called for by the New Curricula. We are placing these books in the hands of students with the great hope that we are moving, step by step, toward the goal of acquiring sound and modern learning, using sophisticated educational means and up-to-date methodology that encourage and reinforce individual thinking and research, the acquisition of skills, the development of ethical and national attitudes, the feeling of national belonging as well as the feeling of belonging to humanity at large.

The on-going revolution in information, communication and educational technology has undoubtedly limited the role of the textbook and lowered the rank it used so recently to occupy. However, in our society and in many other societies, the textbook remains the basic means of education, and it is our duty to exert our utmost effort and care to come up with the best product as to form and content. Yet we should not lose sight of the fact that the textbook is not sufficient by itself but should rather be used as a stepping stone to access other sources of information. What is important is to keep a clear vision and maintain the right course toward our objective. The means should not turn into the end and the student should always remain the focus of the learning/teaching process.

No one ignores or denies the fact that textbook writing requires very high academic and educational qualifications and very wide field experience. The authors committees undeniably possess such qualifications and qualities, yet last year's textbooks did contain some faults and gaps which were duly pointed out by researchers in many articles, and, indeed, we have benefited from some of them. Such is the nature of human work, no matter how good the intentions or how great the effort exerted.

Constructive criticism is a real contribution to raising the standard of authorship, minimizing errors and filling gaps. We only hope that criticism will always be objective and motivated by a desire to enhance educational reform in order to achieve better products.

A favorite adage handed down from our old scholars: "He who criticizes you is as helpful as a co-author". Let all criticism directed at the Center be of this caliber.

In closing, we hope that we all will have benefited from our experience and that the textbooks of the third and final stage be closer to realizing our hopes and more beneficial to our students. We are now preparing ourselves to assess the parts so far achieved of the new curricula and to assure that our educational movement is proceeding on the right track for achieving the best results.

June 2, 1999

**President, National Center for Educational
Research and Development**

Nemer FRAYHA

F O R E W O R D

“ Culture is what we still know after we forget everything ”

Dear students:

When opening this book, you will ask yourself: “What is the content? Is it interesting? What will it teach me?”

In answer to the 1st question:

The second year program-Humanities section - is centered on Man, mainly on two themes:

- Reproduction and heredity.
- Immunology and health.

In answer to the 2nd question:

This manual is midway between pure science and knowledge for the laymen. It is written in a concise yet comprehensive language. Those terminologies that are unavoidable, are explained in the glossary. The book is divided into several simplified chapters each covering a particular subject. Each chapter, in turn, is divided into documents of one or two pages facing each other. The readings and the summary diagrams are designed to provide the information needed. An evaluation of knowledge could be performed by simple exercises present at the end of each chapter.

Technically, this book is presented in a double typography: the basic explanations that must be done in class, are typed in big letters, and the information that complement and complete the discussions are typed in smaller letters. On the other hand, the choice is left to the teacher to utilize or omit the framed paragraphs and the readings, which may serve also as additional explanations that he can comment on, even if not included in the exam material. Very often, these texts present the most interesting aspects of modern biology: they draw attention to some non-resolved problems and recent research themes. These supplements should arouse the interest of enthusiastic students.

In answer to the 3rd question:

Teaching biology is not an end in itself. It should help you in real life to comprehend all new information issued in mass media, ethical problems raised by the accelerated evolution of modern biology, and, most important, in health education that will enhance your civic awareness and will prepare you to better exercise individual, familial and social responsibilities.

Thanks are due to all those who have contributed in the achievement of this work.

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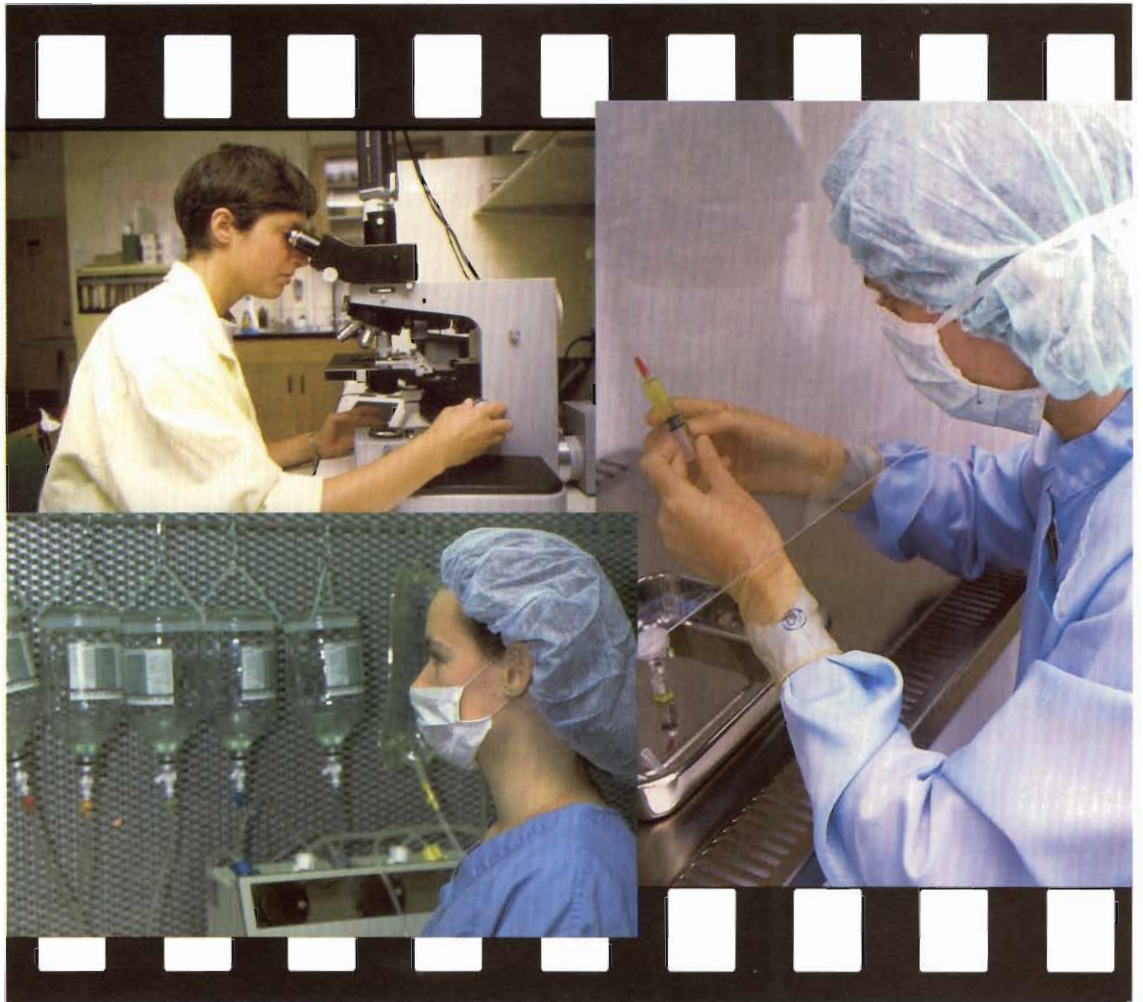


Fig.1: Progress in the field of reproduction and heredity is the result of a long and laborious research work.