

Science For Life

Grade 5
Basic Education

Part 2



National Center for Educational Research and Development



National
Textbook

New Curricula



Republic of Lebanon

Ministry of Education and Higher Education



SCIENCE FOR LIFE

Basic Education
Grade Five

Center for Educational Research and Development



National
Textbook

New Curricula

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SCIENCE FOR LIFE

Basic Education
Grade Five

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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**

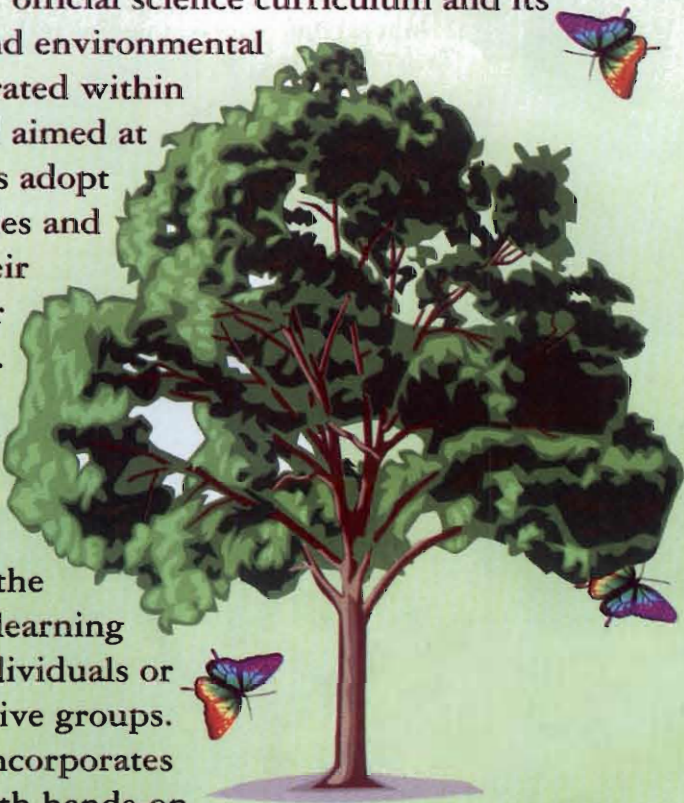
Nemer FRAYHA

Introduction

The topics of the grade five science book center around five themes which include: Plants and Their Habitat, Animals and Their Habitat, Man and His Health, Matter and Energy, and Earth and the Universe.

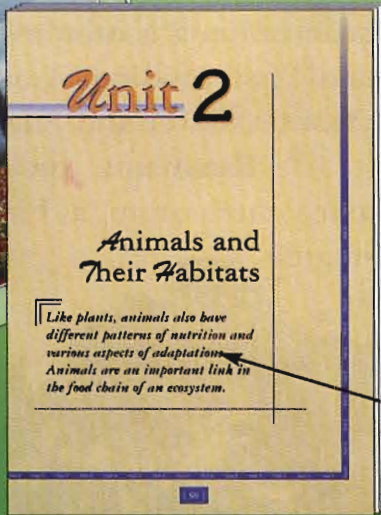
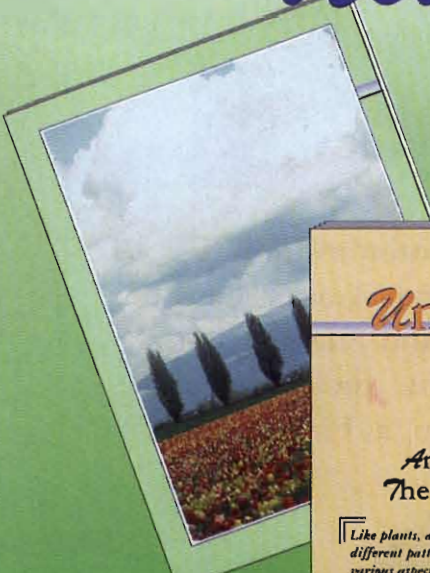
Following the new official science curriculum and its objectives, health and environmental education was integrated within the above topics and aimed at helping the students adopt positive attitudes and behaviors towards their health and their environment. The learning approach on which this book is based requires the students to actively participate in the teaching-learning process either as individuals or in cooperative groups. This approach also incorporates science content with hands-on activities that require the use of everyday material and resources.

It is hoped that this science book will help the students develop and attain a clear understanding of science and its application in daily life.

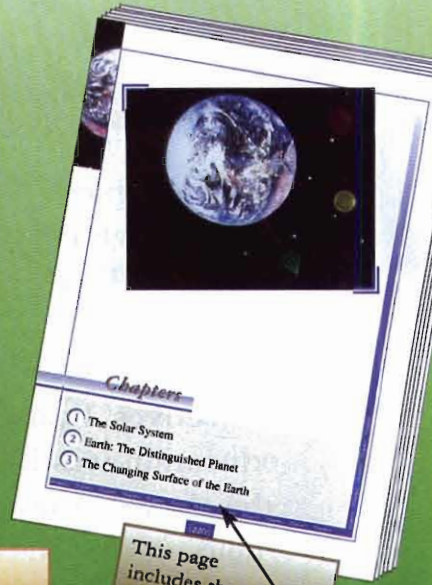


The Authors

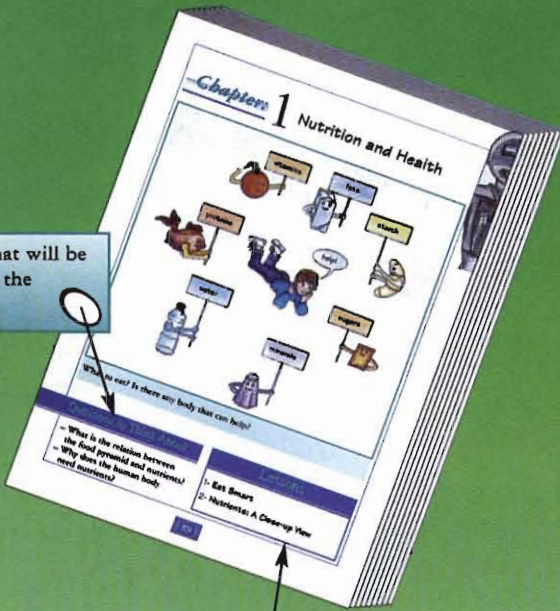
Using This Book



Introduction and illustration: They give you a general idea about the theme of the Unit.



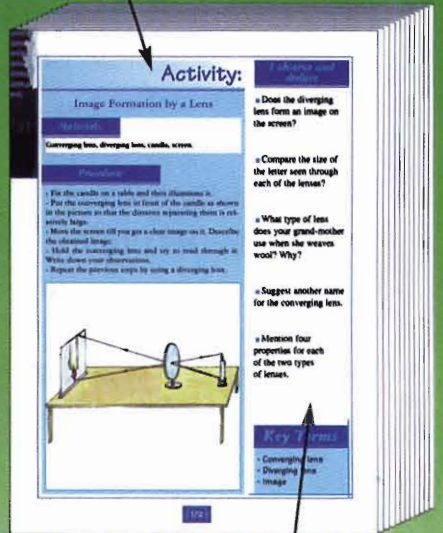
This page includes the titles of the chapters in the Unit.



Questions that will be discussed in the lessons.

The lessons that will help you find answers to the questions.

Document or activity



Answering these questions will help you find answers to the questions and lead you to make conclusion.