

Physics

Teacher's Guide

Basic Education
Grade Seven



Center for Educational Research and Development

National
Textbook
New CURRICULUM

Republic of Lebanon

Ministry of Education and Higher Education



PHYSICS

Teacher's Guide ■

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New Curricula

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The translation into English of this book was reviewed and corrected by faculty members at the American University of Beirut.

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Together We Build Through Education!

The Center for Educational Research and Development (CERD) has embarked on an extensive workshop for assessing and developing the educational framework and curricula which have been placed into effect more than three years ago. With full realization of the fact that the educational cycle must continue normally through its components, and until the development process attains its aspired objectives, we are placing in the hands of students, teachers and directors of public schools, this corrected version of textbooks issued by CERD as part of the National Textbook Series.

This version is an interim stage incorporating the corrected typographical and linguistic errors discovered by CERD specialists as well as teachers and students through their daily dealings with the books. The process of assessment and development of the framework and curricula will take into consideration all the comments that have been made, or will be made, in this regard.

It is expected that once the curricula are developed and aligned with the general and specific objectives set for them, the textbooks will be realigned with the new curricular and framework requirements, including tying the content of a course to the number of teaching hours set for it during the school year, taking into consideration vertical alignment within the same course as well as the horizontal alignment with the rest of the courses.

I take this opportunity to invite all school administrators, teachers and students and all officials concerned in public and private schools alike, to promptly send their comments on these curricula and books as their contribution to enrichment of this momentous national process.

This workshop, which was launched under the kind sponsorship of His Excellency the Minister of Education and Higher Education in implementation of Decree No. 10227 embodying the educational curricula and their objectives, fits in with CERD's proclaimed new motto "Together We Build Through Education".

It is our earnest desire to see this national, all-inclusive workshop attracting the greatest amount of interest and participation to define the safest and soundest educational options that directly affect our children, as we vow to continually modernize education and develop its ways and means to keep abreast of modern developments and progress in science and technology.

Dr. Leila MALEEHA
President CERD

Preface

The teacher's guide book is an indispensable complement to the student's book; it helps the instructor to achieve the objectives assigned in the physics curriculum.

This book focuses on two main subjects: Matter and Electricity

It includes:

- ⇒ the official physics curriculum for grade seven.
- ⇒ learning objectives.
- ⇒ pedagogic instructions.
- ⇒ instructions and evaluation tools.
- ⇒ table of competances.
- ⇒ correct answers of the exercises in the student's book and answers of the questions of the activities.
- ⇒ additional exercises with their answers.
- ⇒ a set of suggestions that may help the teacher to explain some concepts in the student edition.

In addition, it:

- ⇒ clarifies the objectives of the authors that reflect the proposed official program.
- ⇒ specifies the necessary materials needed to perform the experimental activities described in the student's book. (These materials are abundant and can be easily obtained), and the teacher may ask the students to bring the needed materials if possible.
- ⇒ provides hints to perform the proposed activities. Most of these activities are to be performed by the student while the demonstrative activities and the those that may be dangerous are to be done by the teacher.
- ⇒ suggests the steps that should be followed to teach the chapter, with the understanding that the teacher may follow any appropriate way.
- ⇒ suggests further ideas for research and questions that help the student to recognize his environment

We hope that this book will meet the needs of our colleagues, improve their general teaching, direct their methodology, and make their educational job easier.

The authors.

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