# IHEMES

Secondary Education
Third Year
General Sciences - Life Sciences Sections



# Republic of Lebanon

Ministry of National Education, Youth and Sports

# THEMES

#### **Secondary Education**

Third Year

Sections: General Sciences - Life Sciences



Center for Educational Research and Development

New Curricula

General Executive Samya Abou Hamad

# THEMES

#### **Secondary Education**

Third Year Sections: General Sciences - Life Sciences

Orpha R. Darwish (Coordinator) Sami Samra

Center for Educational Research and Development



## **Acknowledgments**

The Educational Center for Research and Development expresses its thanks and appreciation to:

- Ministry of Environment
- United Nations Development Programme
- The World Conservative Union
- Global Environment Facility
- Protected Areas Project Lebanon
- Friends of Nature NGO presents

for their cooporation in contributing the required pictures, illustrations and documents.

■ Documentary Research : Iconographic Team, ECRD

Production & Distribution: Educational Company for Printing Publishing and Distribution SARL

**Layout :** Technical Team, SPC s.a.r.l. **Cover :** Technical Team, SPC s.a.r.l.

**Printing:** Youssef Baydoun Printing Press

© ECRD 2000, Sin-El-Fil, Lebanon, P.O.Box: 55264
All Rights Reserved for ECRD

4th impression 2010

## The National Textbook Project

By issuing the textbooks for the third year of each educational cycle, the Educational Center for Research and Development will have completed the third and last installment of 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 learning, using sophisticated educational means and up-to-date methodology that encourage and reinforce individual thinking and research, acquisition of skills, 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-aids 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 qualities. Yet the textbooks of the last two years contained some negative aspects. Such is the nature of human work, no matter how good the intentions or how great the effort extended. Here constructive criticism constitutes a real contribution to raising the standard of authorship, minimizing errors and filling gaps. We say that, with all due appreciation and respect to all those who have contributed to the success of this project.

The Educational Center for Research and Development is embarking this year on a process of evaluating the New Curricula and related textbooks, teacher training courses and student achievement. This is a natural and necessary step now that the new system has been put into effect. This process aims at identifying the curricular objectives that have been achieved as well as those that have not been achieved, with a view to proceeding with the positive aspects and correcting the negative ones.

As part of this correction process, we plan to review the versions that have been issued in order to secure good textbooks for our students, who always deserve the best.

March 13, 2000

President, Educational Center for Research and Development

**Nemer FRAYHA** 

		κ.	
•			
		•	



**FRODUCTION** 

The time will come when diligent research over long periods will bring to light things which now lie hidden. A single life time, even though entirely devoted to the sky, would not be enough for the investigation of so vast a subject. And so this knowledge will be unfolded only through long successive ages. There will come a time when our descendants will be amazed that we did not know things that are so plain to them...many discoveries are reserved for ages still to come, when memory of us will have been effaced. Our universe is a sorry little affair unless it has in it something for every age to investigate. Nature does not reveal her mysteries once and for all.

-- Seneca (AD 100)

To the Student

Themes is a series of textbooks designed for students studying English as a first foreign language. This is the third book for the Secondary Cycle in the New National Curriculum.

Themes follows a thematically organized, content-based approach, which emphasizes process-product writing. Three thematic units are grouped into two major parts. Part I: The Natural World focuses on natural phenomena (E.S.P., tectonic plates, the Continental Drift theory, and Mars). Part II: The World of Human Intervention deals with technology (the Mind Candy Kafe, electronic robbery, telemedicine, biotechnology, and the geosciences) and current concerns (health, the environment and over-population).

The Themes series employs an integrated approach, whereby the student's listening, speaking, reading, writing, cultural awareness, critical thinking and study skills are developed. In this textbook, all the skills are consolidated in process-product writing. The textbook includes authentic selections. It is hoped that this approach will assist students in developing their language and furthering their communicative proficiency.

The series emphasizes learner-centered instruction, in which students are encouraged to express their opinions orally and in writing. Activities involve learners in individual, pair and group work.

Out-of-class assignments include reports, projects and research work. Subskills such as grammar and vocabulary have been integrated as tools used to develop the major skills. Vocabulary items needed for a better understanding of the selection are given in glossaries preceding the reading texts.

The authors believe that learning a language is a cognitively-based skill involving application of the language in tasks that relate to the student's academic and socio-cultural environment. It is through such an approach that one can acquire the necessary proficiency and competence to perform successfully. Learning a language can be an exciting and rewarding experience.



CONTENTS

# **Part I: The Natural World**

#### UNIT I NATURAL PHENOMENA

Chapter 1	The World Within Us	17
Part A	Is There Perception Without Sensation?	
	Claims of ESP	
Part B	Skepticism about ESP	
Part C	Language Conventions: Fragments	20
Part D	Focusing on Process/Product Writing	22
	Writing Topics	
	Focusing on the Audience	
	Focusing on the Purpose	
	Pre-writing Activities	
	Choosing a Topic	
	Brainstorming	
	Paraphrasing	
	Reporting and Summarizing	
	First Draft	
Part E	Expanding Your Point of View	25
	Peer Feedback	
	Revising	
	Conferencing with the Teacher	
	Further Drafting	
	Outlining the Final Draft	
Dowt F	Publishing	07
Part F	Chapter Assessment	27
	Sequenced Research Project	
	Choosing the Topic	
Chapter 2	The World Around Us	29
Part A	What Is a Tectonic Plate?	23
Part B	The Continental Drift Theory	30
Part C	Writing Skills: Paraphrasing	33
Tures	Language Conventions: Comma Splices and Fused	00
	Sentences	
Part D	Foucusing on Process/Product Writing	35
	Writing Topics	
	Focusing on Paragraph/Essay Format	
	Focusing on Main Ideas - Thesis	
	Statements/Topic Sentences	
	Pre-writing Activities	
	Choosing a Topic	

	Brainstorming Paraphrasing Reporting and Summarizing First Draft	
Part E	Expanding Your Point of View Peer Feedback Revising Conferencing with the Teacher Further Drafting	39
Part F	Chapter Assessment	39
Chapter 3	New Worlds	40
Part A Part B Part C	The Face on Mars Mars' Chaotic Climate Writing Skills: Paraphrasing	43 45
Part D	Conventions: Subject-verb Agreement Focusing on Process/Product Writing Focusing on Patterns of Organization Pre-writing Activities Choosing a Topic Brainstorming Paraphrasing Reporting and Summarizing First Draft	48
Part E	Expanding Your Point of View Peer Feedback Revising Conferencing with the Teacher Further Drafting	50
Part F	Chapter Assessment	50
	The World of Human Intervention	51
Unit II Chapter 1	TECHNOLOGY The World Within Us	52
Part A Part B Part C	The Mind Candy Kafe Electronic Robbery - The New Plagiarism Writing Skills: Summarizing Passages Language Conventions: Achieving Consistency in Tense, Person, Number, and Tone	54 56
Part D	Focusing on Process/Product Writing Focusing on Supporting Evidence and the Unity of Ideas	58

	Pre-writing Activities	
	Choosing a Topic	
	Brainstorming	
	Paraphrasing	
	Reporting and Summarizing	
	First Draft	
Part E	Expanding Your Point of View	61
	Peer Feedback	01
	Revising	
	Conferencing with the Teacher	
-	Further Drafting	
Part F	Chapter Assessment	63
raiti	Sequenced Research Project - Writing a Survey Report	03
	Choosing and Analyzing the Sample	
Chapter 2	The World Around Us	64
Gliaptei Z	THE WOTH ATOUR US	04
Dowt 5	m 1	
Part A	Telemedicine	
Part B	Biotechnology	66
Part C	Writing Skills: More Summarizing	68
	Language Conventions: Sentence Variety	
Part D	Focusing on Process/Product Writing	70
	Focusing on Introductions	
	Pre-writing Activities	
	Choosing a Topic	
	Brainstorming	
	Paraphrasing	
	Reporting and Summarizing	
	First Draft	
Part E	Expanding Your Point of View	72
	Peer Feedback	
	Revising	
	Conferencing with the Teacher	
	Further Drafting	
Part F	Chapter Assessment	73
	Sequenced Research Project: Writing a Survey	
	Report Analyzing and Arranging the Data	
<b>Chapter 3</b>	New Worlds	74
\		
Part A	The Coming 500 Years	
	What's Next?	
Part B	Geosciences	76
	Future Careers	

Part C	Writing Skills: Making Logical Assertions	79
	Language Conventions: Adding Coherence	
Part D	Focusing on Process/Product Writing	81
	Focusing on Conclusions	
	Pre-writing Activities	
	Choosing a Topic	
	Brainstorming	
	Paraphrasing	
	Reporting and Summarizing	
Dort F	First Draft	00
Part E	Expanding Your Point of View	83
	Peer Feedback	
	Revising Conferencing with the Teacher	
	Further Drafting	
Part F	Chapter Assessment	0.4
· uiti	Sequenced Research Project: Writing a Survey Report	84
	Writing the Report	
	writing the report	
Unit III	CURRENT CONCERNS	85
Chapter 1	The World Within Us	
Unapter 1	I IIG WOLIU WILIIII 03	86
Part A	The Nature of Headaches	
Part B	Eating Disorders	90
Part C	Writing Skills: Avoiding Logical Fallacies	94
T dit U	Language Conventions: Pronoun Agreement	3 <del>4</del>
Part D	Foucusing on Process/Product Writing	97
14111	Focusing on Unity	01
	Pre-writing Activities	
Part E	Expanding Your Point of View	100
Part F	Chapter Assessment	101
	Sequenced Research Project	
	Interviewing an Expert	
<b>Chapter 2</b>	The World Around Us	102
Part A	Protecting the Environment	
Part B	The Lebanese Environment and Development Observatory	105
Part C	Writing Skills: More Paraphrasing and Summarizing	108
	Language Conventions: Making Segments Parallel	
Part D	Focusing on Process/Product Writing	109
	Refocusing on Citing Sources, Paraphrasing,	
	Summarizing, Quoting	
٠	Pre-writing Activities	

raitr	Chapter Assessment	113
	Sequenced Research Project	
	Summarizing Documents	
01		
Chapter 3	NEW WORLDS	114
Part A	Tommorow and Tommorow and Tommorow by Kurt	
	Vonnegut, Jr. First Part	
<b>Part B</b> 1.2	Tommorow and Tommorow and Tommorow by Kurt	120-12
	Vonnegut, Jr. Third Part	
Part C	Writing Skills: Summarizing a Short Story	130
	Writing Conventions: Avoiding Gender Bias and Vague	
	Reference	
Part D		131
I alt D	Focusing on Process/Product Writing	131
	Sharpening Your Editing Skills	
	Pre-writing Activities	
Part E	Expanding Your Point of View	133
Part F	Chapter Assessment	134
	Sequenced Research Project	
	Summarizing Documents	
	č	

112

Expanding Your Point of View