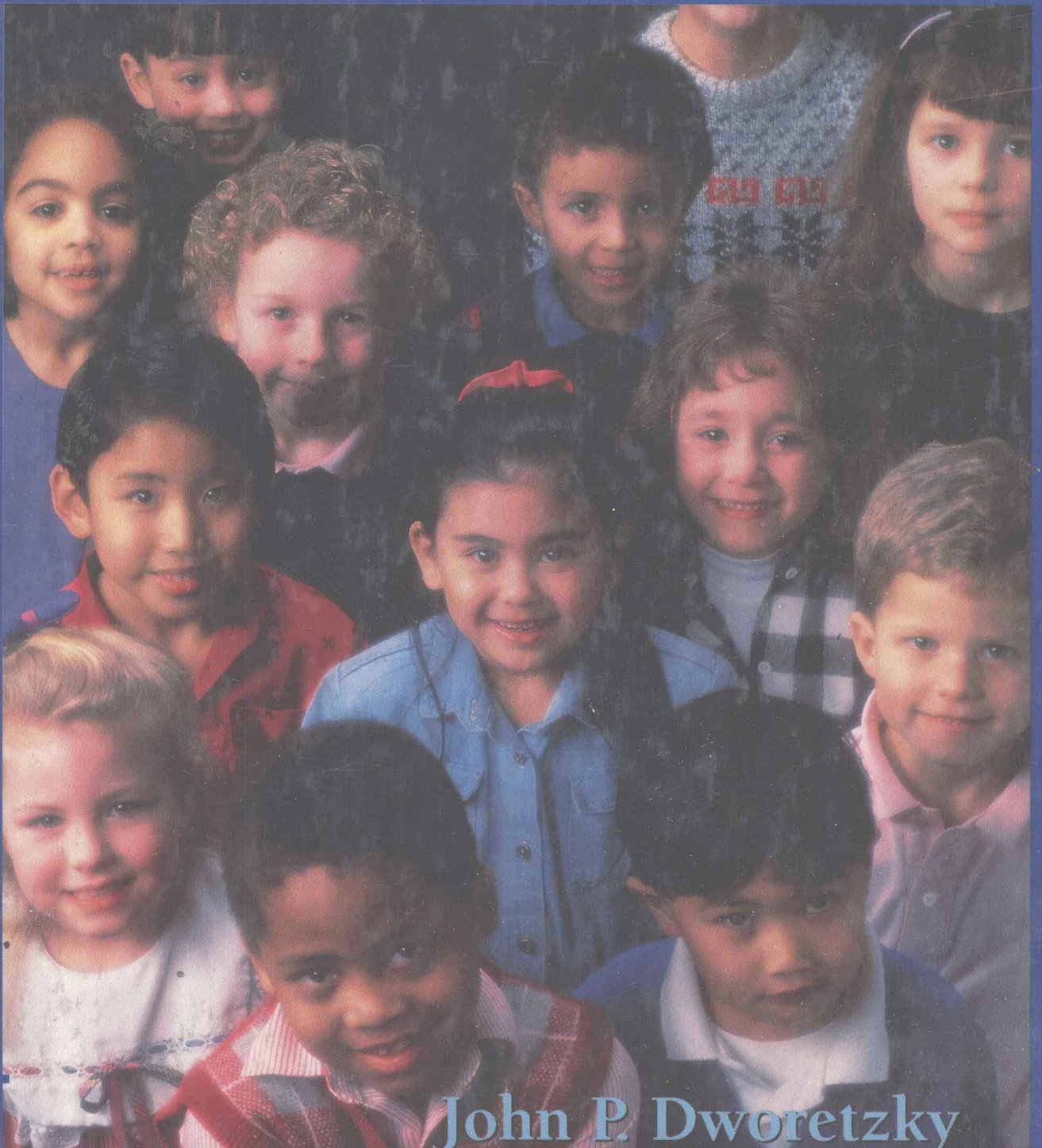


Introduction to **Child
Development**
SIXTH EDITION



John P. Dworetzky



Introduction to **Child**
Development

SIXTH EDITION

John P. Dworetzky

Western Washington University

West Publishing Company

Saint Paul/Minneapolis • New York • Los Angeles • San Francisco

Typesetting: Parkwood Composition Service
Name Index: Terry Casey
Cover Photo: © Walter Hodges, Tony Stone Images.

West's Commitment to the Environment

In 1906, West Publishing Company began recycling materials left over from the production of books. This began a tradition of efficient and responsible use of resources. Today, 100% of our legal bound volumes are printed on acid-free, recycled paper consisting of 50% new paper pulp and 50% paper that has undergone a de-inking process. We also use vegetable-based inks to print all of our books. West also recycles nearly 28 million pounds of scrap paper annually—the equivalent of 229,300 trees. Since the 1960s, West has devised ways to capture and recycle waste inks, solvents, oils, and vapors created in the printing process. We also recycle plastics of all kinds, wood, glass, corrugated cardboard, and batteries and have eliminated the use of polystyrene book packaging. We at West are proud of the longevity and the scope of our commitment to the environment.

West pocket parts and advance sheets are printed on recyclable paper and can be collected and recycled with newspapers. Staples do not have to be removed. Bound volumes can be recycled after removing the cover.



TEXT IS PRINTED ON 10% POST
CONSUMER RECYCLED PAPER



Acknowledgments and photo credits appear following the subject index.

British Library Cataloguing-in-Publication Data. A catalogue record for this book is available from the British Library.

COPYRIGHT © 1981, 1984, 1987, 1990, 1993 BY WEST PUBLISHING COMPANY
COPYRIGHT © 1996 BY WEST PUBLISHING COMPANY

610 Opperman Drive
P.O. Box 64526
St. Paul, MN 55164-0526

All rights reserved

Printed in the United States of America

03 02 01 99 98

8 7 6 5 4

Library of Congress Cataloging-in-Publication Data

Dworetzky, John

Introduction to child development / John P. Dworetzky.—6th ed.

p. cm.

Includes bibliographical references and index.

ISBN 0-314-06748-5

1. Child development. 2. Child psychology. 1. Title.

● PREFACE

Each year thousands of professors, myself included, review new textbooks searching for one we might wish to adopt, and each time we search for the textbook we'll never find—the one that would be just right for each and every student and still fit well with our own method of teaching. Even so, when I began writing, it was my hope to come as close to that kind of book as possible. My hope was to incorporate the content and format that I thought would be of most value to both professors and students, while keeping in mind that professors may have widely varying methods of teaching child development and that students will come to the course with different backgrounds and goals.

For this reason, this text attempts an integration of the popular formats used in most child development texts and holds them together with an SQ3R organization. As an author, I have been very pleased with the comments I have received from so many professors and students expressing their support for the first five editions.

Those unfamiliar with the text will find that the sixth edition continues to rely on the feedback and input from adopters throughout the United States, Canada, and overseas. Such feedback from the field has truly helped to make this a successful text, for which I am very grateful.

Because this is an introduction to child development, the basic content essential to all introductory courses has been included. At the same time, emphasis has been given to topics that have recently become important in the research literature. There is also an attempt to resolve a problem peculiar to textbooks on child development, that of whether to present material topically or chronologically. Material presented topically usually covers each topic as a whole. Students obtain information about such topics as cognitive development, moral development, or social development in a single go. Unfortunately, this approach often leaves students with a poorer sense of continuous development than does the chronological approach, in which different topics are covered in relation to different age groups. For example, the first few chapters of a chronologically based text may discuss many topics relating to infants and then, in the next chapters, may discuss the same topics as they relate to 2-, 3-, and 4-year-olds. In the next chapters, again, the same topics may be discussed in relation to school-age children, and so on. The problem with this approach is that students are exposed to major concepts piece-meal. Because of this the entire flow of the material may be disrupted. I have tried in this textbook to combine the best of both topical and chronological approaches. The material within each chapter is organized topically, while the general course of the text and the flow of each chapter from beginning to end is chronological.





There is also an emphasis on multi-cultural and gender issues throughout the text in keeping with the spirit that child development is the study of all children.

As for the depth and level of the coverage of this text, I have tried to continue the example of the first five editions and present complex technical ideas in a way that will maintain interest. I hope that you, the reader, will find that the material is set down in a comprehensible, enjoyable, and interesting way.

Organization of the Textbook

As you may already have noticed in skimming through the text, the format is unusual. Each chapter is divided into sections. First there is a *Chapter Preview*, which presents an interesting fact about or perspective on the material contained within the chapter. Following the *Chapter Preview* is the main body of the text, which provides the basic information within each chapter. Contained within each chapter are *At Issue* sections, which highlight and discuss important issues currently being debated in the literature or press. Following the main body is the *Applications* section, in which a topic or area covered in the chapter is applied in order to solve a problem or to deal with day-to-day issues. Next is a *Summary* in which the text material is reviewed. A *For Discussion* section sometimes follows the *Summary* section; it briefly deals with an unusual topic related to the chapter content. Following this in all chapters are *Questions for Discussion*, which are meant to stimulate discussion in class or among friends or classmates who are interested in the topic. The questions are provocative and answers are not provided, since many different answers are possible. The final section is *Suggestions for Further Reading*. Students often find a particular area exciting and want to learn more. I have been careful to select books that present new or thought-provoking material that you may enjoy. In this way you may pursue a particular area in order to do research or follow up your own interests.

Acknowledgments

It would be impossible to write a textbook without the help and cooperation of many others. I would like to thank those who kindly and generously gave their time to review this book and to provide criticism, encouragement, comments, suggestions, and ideas. I wish to express my personal appreciation to the following members of our academic community who assisted in the preparation of previous editions:

First Edition

Linda P. Acredolo
University of California, Davis

Thomas Bond
Thomas Nelson Community
College, Virginia

Glendon Casto
Utah State University

Dennis Coon
Santa Barbara City College

Stephen Cooper
Glendale College, Arizona

Joseph G. Cunningham
Auburn University, Alabama

Jeffrey W. Elias
Texas Tech University

Barry Gholson
Memphis State University, Tennessee

Frances S. Harnick
University of New Mexico

Don Holmlund
College of Marin, California

Ann Husmann
El Camino College, California



Daniel W. Kee
University of Southern California

Patti Keith-Spiegel
California State University,
Northridge

Candida Lutes
Texas A & M University

Richard Rees
Glendale College, Arizona

Barbara Rogoff
University of Utah

Stephen M. Saltzman
Los Angeles Valley College

Second Edition

Jeanne Armstrong
Lane Community College, Oregon

James A. Bard
Cleveland State University

Debra E. Clark
State University of New York at
Cortland

Edward J. Forbes
Lock Haven State College,
Pennsylvania

Ellen R. Green
St. Louis Community College

Laurence H. Harshbarger
Ball State University, Indiana

Third Edition

Nancy Hamblen Acuff
East Tennessee State University

Linda Baker
University of Maryland

Kathryn N. Black
Purdue University

DuWayne D. Furman
Western Illinois University

Gary W. Guyot
West Texas State University

Fourth Edition

Connie H. Duncanson
Northern Michigan University

Louella Fong
Western Kentucky University

Margaret Sand
San Diego State

Toni E. Santmire
University of Nebraska

Lois Pall Wandersmith
University of South Carolina

Mary Weir
Long Beach City College, California

Patricia E. Worden
California State University, Fullerton

Seth Kunen
University of New Orleans

Robert O'Neill
University of California, Santa
Barbara

William Romoser
University of Wisconsin, River Falls

J. Michael Shaner
Central Michigan University

Barbara Sommer
University of California, Davis

John E. Stone
East Tennessee State University

Maury Haraway
N.E. Louisiana State

Garrett Lange
University of North Carolina

Mary W. Laurence
University of Toronto

Gene R. Medinnus
San Jose State University

Jim Stigler
University of Chicago

Jan Kennedy
Georgia Southern College

Catherine King
University of New Orleans



George P. Knight
Arizona State University

Kathleen McCormick
Ocean County College

Fifth Edition

Robert Bornstein
Miami University

Rod Smith
Pensacola Junior College

H. Stuart Smith
Tidewater Community College

Jim Duffy
Memorial University of
Newfoundland

Eliot J. Butter
University of Dayton

Sixth Edition

Rebecca S. Bigler
The University of Texas at Austin

Daniel J. Cohen
William Rainey Harper College

Sylvia J. Cohen
Los Angeles Pierce College

Daniel Fasko, Jr.
Morehead State University

Francine Smolucha
Moraine Valley Community College

Amye Warren-Leubecker
University of Tennessee,
Chattanooga

William H. Zachry
University of Tennessee

James Starzec
State University of New York—
Cortland

Shirley M. Ogletree
Southwest Texas State University

Charlotte J. Patterson
University of Virginia

Anne Watson O'Reilly
West Virginia University

Maribeth Palmer-King
Broome Community College

Laura A. Thompson
New Mexico State University

Guy Wylie
Western Nebraska Community
College

In addition, I'd like to express my deepest gratitude to Clyde Perlee, Jr., editor-in-chief of West's college division, for his creativity, interest, and skill. His valued friendship and professionalism have been the supports upon which this edition, as well as the other editions, have been built. I also wish to express my personal appreciation to Ann Rudrud for the excellent design of this book and for her talent, patience, humor, and friendship under the most pressing of time constraints.

I also wish to thank Parkwood Composition Service for their extremely fast and skillful typesetting, Jan Lamar and all the others at West Publishing who have had a part in preparing this textbook. A special thanks to Dr. Arleen Lewis for many of the wonderful photographs in the text and to Dr. Nancy Davis for her valuable advice and information.

John P. Dworetzky

● TO THE STUDENT



How to Use the Unique Features of this Textbook

This book is based on a method known as SQ3R. SQ3R is a five-step plan that was developed by Dr. Francis P. Robinson. The SQ3R method is designed to promote effective studying, and the letters S-Q-R-R-R refer to the five steps.

The First Step: Survey The S in SQ3R stands for *survey*. The first thing to do is survey the assigned chapter. Read the titles and the headings. Glance at the captions under illustrations and pictures; read the summary at the end of the chapter. This may seem like an unusual way to begin, but it is the way the SQ3R method is designed, and it's effective. Usually you read a summary in order to review what you've covered in the chapter. But in this case the *Summary* is the very first thing you should read. Although you may not understand everything, the summary will give you an overall picture of the chapter contents, and it helps us to reinforce the major points when you come to them in the chapter. Once you have read the entire chapter you may, of course, reread the *Summary* in order to refresh your memory.

The Second Step: Question The Q stands for *question*. In the SQ3R method, every topic is introduced as a question, a means of increasing your interest in what you will be reading and helping you to focus on the material to come. In this text, the questions are already provided for you. Flip through the text for a moment, and you'll notice them. You may find the interjection of questions in the text obtrusive at first, but you will quickly become used to them and find that the questions help you focus your attention. You may even find that you were about to ask many of the same questions. This shows that you are concentrating on the material and that you understand what is being presented.

The Third Step: Read The first R stands for *read*. You should read the material under one heading and stop before going on to the next heading. That is, you should cover one small area within a chapter at a time. Before continuing to read, go on to step four.

The Fourth Step: Recite The second R stands for *recite*. When you recite, ask yourself questions about the material you have just read and make sure that you are able to answer them. Your student study guide* can help you in this

*If a student study guide for this text is not available in your bookstore, a copy may be obtained through West Publishing Company, or your bookstore may be able to order one for you.





because it contains questions with which you can test yourself. Once you know, by reciting, that you thoroughly understand what you have read, you can proceed to the next heading, reciting once again, before going on to the next heading, and so on.

Throughout the book you will find Learning Checks that help you to recite. If you can answer these Learning Checks correctly, you will know that you have read the material carefully and understand it. Remember, this is a textbook; it's a book for work. Don't feel uncomfortable about writing in it. It's not a completed work like *Moby Dick*. Add to it, make notes from class in the margins; fill in the answers in the Learning Checks where there are blanks; circle the answers to the multiple choice questions. Recording your answers will help you to remember the material and to catch errors.

The Fifth Step: Review Review is the final R in SQ3R. When you have read an entire chapter, review your notes, check through your student study guide, and look over any questions that you have written down. If possible, have someone read through the material and ask you about it. Make sure that you can answer the questions that have been posed. This is an important way of obtaining feedback.

Glossary Finally, you will find words set in boldface throughout the text. These are terms that are defined in the running glossary on each page near the first appearance of the term. If you are uncertain about the meaning of a term at later time, you can also look it up in the Glossary provided at the back of the book.

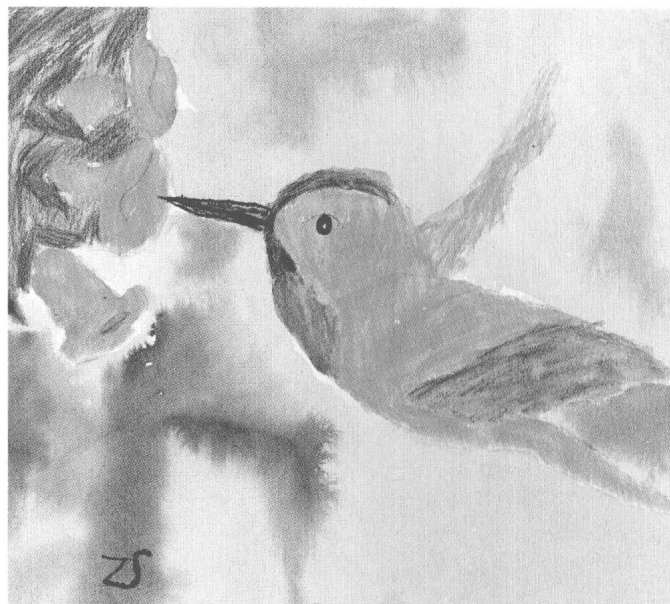
I hope that this text will provide you with a thorough introduction to child development, and that it will make you want to learn more.

John P. Dworetzky

● TO THE STUDENTS OF SILVER BEACH ELEMENTARY
SCHOOL, BELLINGHAM, WASHINGTON. THANKS FOR THE
WONDERFUL PICTURES.



Josh Levenson
Age 10



Zach Seilo
Age 11



Christa Keske
Age 7

CONTENTS IN BRIEF



UNIT ONE

Foundations of Development



1

CHAPTER 1

An Introduction to Development: History and Research 3

APPLICATIONS: The Ethical and Legal Aspects of Experimenting with
Children 28

CHAPTER 2

Inheritance and the Biological Foundations of Development 33

APPLICATIONS: Eugenics: Selectively Breeding Human Beings 60



UNIT TWO

Beginnings of Life: Birth and Infancy



67

CHAPTER 3

Conceptions, Prenatal Development, and Birth 69

APPLICATIONS: A Brave New World 100

CHAPTER 4

Growth, Plasticity, and Individual Differences 105



APPLICATIONS: The Genetics of Behavior 126

CHAPTER 5

Neural, Sensory, and Perceptual Development 131

APPLICATIONS: Overcoming Adverse Early Experiences 154

CHAPTER 6

Infant Social and Emotional Development 159

APPLICATIONS: Is Day Care a Good Idea? 188



UNIT THREE



The Developing Child: Learning, Language, and Cognition 194

CHAPTER 7

Learning 197

APPLICATIONS: Behavior Modification 218

CHAPTER 8

Language Development 225

APPLICATIONS: Strike When the Iron is Hot 254

CHAPTER 9

Cognitive Development I: Historical Foundations 261

APPLICATIONS: Why Children Stop Believing in Santa Claus 290

CHAPTER 10

Cognitive Development II: Modern Perspectives 295

APPLICATIONS: Speak Softer, I Can't Understand You 318

CHAPTER 11

Intelligence and Creativity 323

APPLICATIONS: Reaching Their Full Potential: Mainstreaming Handicapped Children 350



UNIT FOUR**The Developing Child: Social Processes 356****CHAPTER 12****Socialization and Personality Development 359**

APPLICATIONS: Parents Under Stress: Helping to Prevent Child Abuse 384

CHAPTER 13**The Development of Sexuality and Sex Roles 391**

APPLICATIONS: Overcoming Sex Stereotypes 410

CHAPTER 14**Peers, School, and the Social Environment 415**

APPLICATIONS: "All That Glitters. . ." 443

CHAPTER 15**The Development of Morality and Self-Control 451**

APPLICATIONS: Controlling Aggression and Violence 476

CHAPTER 16**Child Development in Other Cultures 483**

APPLICATIONS: My First Impressionism 500

CHAPTER 17**Children with Special Needs 509**

APPLICATIONS: Born to Be Wild: An Evolutionary Theory of Hard Times 532



UNIT FIVE**Adolescence 537****CHAPTER 18****Adolescent Physical and Cognitive Development 539**

APPLICATIONS: Adolescent Egocentrism: Understanding Adolescents Even
Though they May Not Understand You 556



CHAPTER 19

Adolescent Social and Personality Development 561

APPLICATIONS: Preventing Teenage Pregnancy 578

Glossary 583**References 595****Name Index 625****Subject Index 639**

CONTENTS



UNIT ONE

Foundations of Development 1



CHAPTER 1

An Introduction to Development: History and Research 3

CHAPTER PREVIEW: Who is Right? 3

RESOURCES 5

THE HISTORICAL CONCEPT OF CHILDHOOD 5

The Dawn of History 5

Scientific Approaches to Child Development 5

Empirical Efforts 6

The Twentieth Century 6

ISSUES IN DEVELOPMENT 7

Nature Versus Nurture 8

Stability Versus Change 8

Continuity Versus Discontinuity 9

RESEARCH METHODS 10

EXPERIMENTAL METHODS 10

Selecting Subjects 12

Definitions and Reliability 12

The Control 13

Observer and Subject Bias 15

Results of Our Experiment 15

Replication and Expansion 16

Single-Subject Design 16

NONEXPERIMENTAL METHODS 17





AT ISSUE



Broadening the Horizons of Child Research 22

APPLICATIONS



The Ethical and Legal Aspects of Experimenting with Children 28

The Correlational Method 17
Case Studies 19
Surveys, Questionnaires, and Statistical Analysis 20
LEARNING CHECK 21

USING AGE AS A VARIABLE 21

The Cross-Sectional Approach 21
The Longitudinal Approach 23

BUILDING A THEORY 24

A Jigsaw Puzzle 24

THEORIES OF HUMAN DEVELOPMENT 25

SCOPE VERSUS PRECISION, OR IT'S BETTER TO BE A BIG FISH IN A
SMALL POND 26

LEARNING CHECK 27

SUMMARY 30

QUESTIONS FOR DISCUSSION 31

SUGGESTIONS FOR FURTHER READING 31



CHAPTER 2



Inheritance and the Biological Foundations of Development 33

CHAPTER PREVIEW: How to Build Your Own Human Being 33

RESOURCES 35

DNA—THE ESSENCE OF LIFE 35

NATURE-NURTURE: CLONING THE BOYS FROM BRAZIL 36

THE EVOLUTION OF LIFE 36

Diversification and Mutation 37

The Evolution of Modern Humans 38

LEARNING CHECK 39

CHROMOSOMES AND INHERITANCE 40

Mendel's Laws 42

Simple Inheritance 42

Sex-Linked Inheritance 45

Complex Genetic Interactions 46

INHERITED DISORDERS 47

Down Syndrome 48

Other Chromosomal Abnormalities 50

Detection of Prenatal Defects 50

Gene Disorders 51

Screening and Treatment of Inherited Disorders 52

THE EVOLUTION OF BEHAVIOR 54

Polygenic Inheritance 56

Canalization 56

Sensitive Periods 57

LEARNING CHECK 58

AT ISSUE



Breaking the Code 55

SUMMARY	63
FOR DISCUSSION	64
ALIEN LIFE	64
QUESTIONS FOR DISCUSSION	65
SUGGESTIONS FOR FURTHER READING	66

APPLICATIONS	• • • •
Eugenics: Selectively	
Breeding Human Beings	60

UNIT TWO

Beginnings of Life: Birth and Infancy

67



CHAPTER 3



Conception, Prenatal Development, and Birth 69

CHAPTER PREVIEW: The Lamaze Method 69

RESOURCES 70

CONCEPTION 70

THE PERIOD OF THE OVUM 73

THE PERIOD OF THE EMBRYO 74

THE PERIOD OF THE FETUS 77

LEARNING CHECK 78

ADVERSE INFLUENCES ON PRENATAL DEVELOPMENT 79

Smoking 79

Alcohol 81

Caffeine 82

Other Drugs 82

Anesthesia and Analgesia 84

Environmental Hazards 84

Chemical Waste 84

Heavy Metals 84

Heat 85

Radiation 85

Pathogens 85

Toxoplasmosis 85

Viruses 86

Rh Factor Incompatibility 86

Maternal Diet 87

Emotional Stress 87

PARENTAL PLANNING 88

LABOR AND DELIVERY 89