

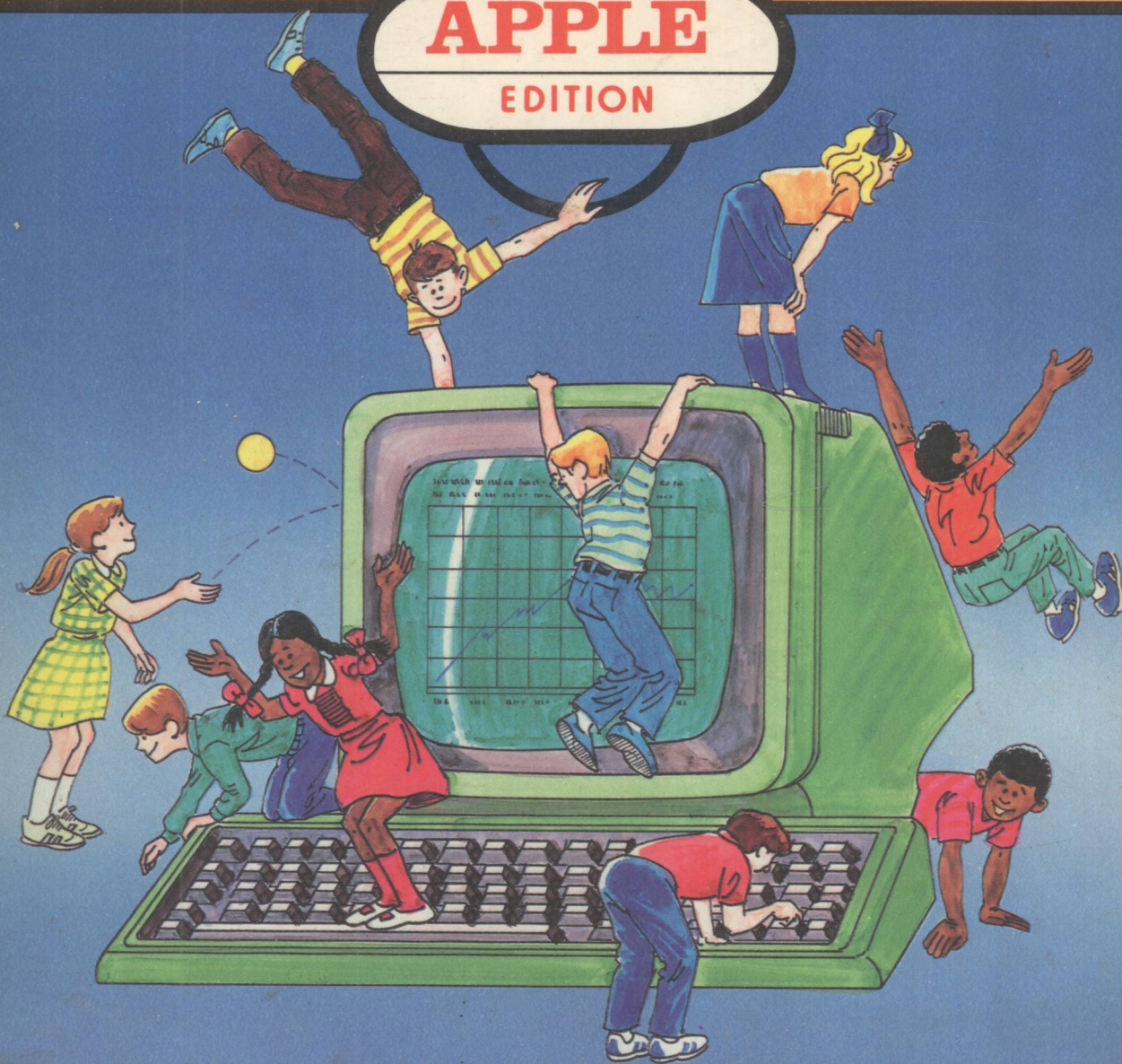
BASIC

IS

CHILD'S PLAY

APPLE

EDITION



Robert T. Grauer

Judy Gordon

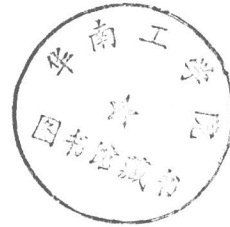
Marsha Schemel

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BASIC IS CHILD'S PLAY

APPLE Edition



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JUDY GORDON

MARSHA SCHEMEL



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ILLUSTRATED BY DIANNE THOMPSON BRIN

PRENTICE-HALL, INC., Englewood Cliffs, New Jersey 07632

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For Marc

Our gentle touch of sunshine

PREFACE

To the Parent and Teacher

We bought a home computer last Christmas, and all my son does is play video games.

A frustrated parent

Our school had three computers last year and is getting ten more this year. Parents are demanding that we include computer literacy in our curriculum.

A harried principal

Students have been asking for help in learning to program. Time is of the essence in the elementary school classroom, and all lessons cannot be teacher directed. We need new material for independent learning.

A dedicated teacher

Incredible as it sounds today, long division was actually taught at Harvard. In much the same way, a future historian will write that BASIC programming was once presented only at the graduate level of a few select universities.

The trend is unmistakably clear: Computer literacy has filtered down from the university to the high school and is today making inroads in the middle school. Our objective is to take it one level further and bring the subject into the primary grades. The premise of our book is simply that children are ready, willing, and able to master elements of computer literacy that have escaped their parents.

BASIC Is Child's Play was written for use in the elementary school and has been well received by children of all ages. Simultaneously, the book has been enthusiastically endorsed by the parents of these children, who liked its nonthreatening presentation. The happy consequence is that it may be used by parent and child together to provide a truly unique educational experience.

BASIC Is Child's Play is an exciting book that requires the reader to participate actively as he or she progresses. *The programming examples are tied directly to the elementary school curriculum.* Thus, when we introduce * and / as BASIC symbols for multiplication and division, we remind the student of the terms *product* and *quotient*. We do not cover all of BASIC, but only those elements which can be readily understood by the elementary-aged child. Nevertheless, we provide a thorough introduction to computer programming, and the end result is the ability to write and understand useful programs.

Our book has 12 chapters. Each chapter begins with a "Stop, Look, Learn" page to highlight vocabulary and concludes with an "Accomplishments" page for reinforcement.

Chapter 1 is a total introduction to the keyboard and assumes no previous knowledge whatsoever: The reader is gradually led to the keys necessary for computing (SHIFT, RETURN, etc.). Chapter 2 continues the introduction by having the reader write a BASIC program. He or she is shown how to write a program displaying simple messages.

Chapters 3 and 4 develop the foundation for more significant work later on. Chapter 3 presents important system commands. Chapter 4 focuses on editing programs.

Chapter 5 pertains to the use of a disk system. Although this feature is optional, more and more home computers are equipped with a disk, and its availability enhances the capability of a computer system immeasurably.

Chapters 6 to 11 return to BASIC per se. Chapter 6 presents essential ground rules such as variable names and memory assignment. Chapter 7 covers the PRINT statement in depth. Chapter 8 presents arithmetic, and Chapter 9 focuses on loops. Chapters 8 and 9 are especially helpful for elementary school mathematics. Chapter 10 discusses the INPUT statement, and Chapter 11 provides material on decisions and the IF statement.

Chapter 12 consists of five complete BASIC programs with accompanying discussion. The reader is asked simply to copy the programs as they are and enjoy the results.

Acknowledgments: The People Behind Our Book

Once upon a time there were three people, Bob, Judy, and Marsha. Bob had an idea. He wanted to write a computer book for children. But Bob only knew how to use BIG words. You see, Bob teaches college and writes textbooks for college students.

Along came Judy and Marsha. Bob asked Judy and Marsha to write the book with him. Marsha and Judy are elementary school teachers. They took the BIG words and changed them to LITTLE words.

Our budding authors needed a place to work, a copy machine, and lots of white-out. Judy's husband, Jim, said, "No problem, use my office," but he didn't know they would stay so long. Then Bob, Judy, and Marsha had to eat, so Alan, Marsha's husband, became "the wiz with the wok." Bob's wife, Marion, kept telling them they had a good idea.

Bob, Judy, and Marsha were great at writing but terrible at drawing. All of a sudden, they found a super artist, Dianne Thompson Brin, who brought the book to life. Everyone was delighted.

Only two problems remained. They needed a computer and they needed a typist. Along came Ronald Abramson with a machine, and miracle of miracles, Sheila Grossman, Annette Rich and Cookie Goodman could read their handwriting.

Luckily for the three authors, Karl Karlstrom decided to publish the book. He gave it to his production editor, Lynn Frankel, who turned it into something special.

The brain power of University of Miami students Jackie Clark, Negia Milian, and Andrew Cohen helped to proofread the book. Alan Moldof and Doug Lenonhart, students at Taravella High School, rewrote the programs for different computers. Elementary school students, Adam Moldof, and Jessica and Benjy Grauer helped test the book.

Everyone contributed in their own special way. Marsha's children, Rick and Allison, left Mom alone, and deserve a special award for their patience. Judy's son, Danny, wrote such positive letters from camp that Judy didn't worry.

Lorette Smith and George Gott, the Principals at Westchester and Maplewood, thought the whole thing was terrific. Last, but definitely not least, a BIG THANKS to the enthusiastic students in Westchester and Maplewood Elementary Schools, who put the book to the crucial and critical test. They proved that *BASIC is Child's Play* really works.

Thanks.

**BOB GRAUER
JUDY GORDON
MARSHA SCHEMEL**

To the Child

Did you know that you use computers all of the time? TV sets, video games, microwave ovens, and even telephones are all run by some kind of a computer. People have to tell these computers what to do. These people are called *computer programmers*.

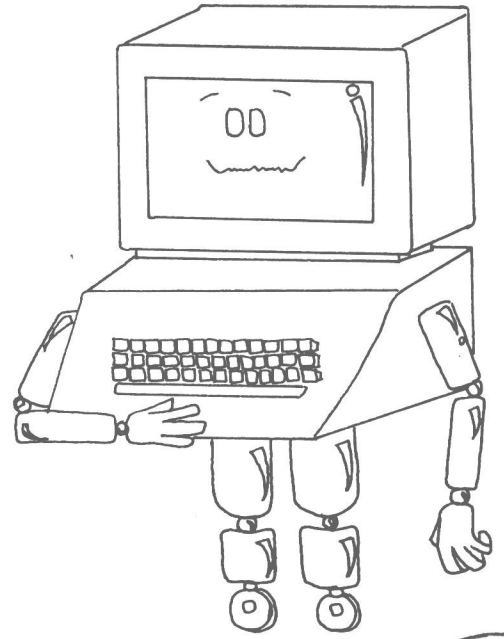
You can be a computer programmer, too. *BASIC Is Child's Play* will teach you how to use the computer and how to write your own programs.

This book is simple for you and your parents to understand, as long as you read *everything* on each page. Peter and Patty will appear on many pages in this book. They will help you to understand many things about the computer. Always read their messages.

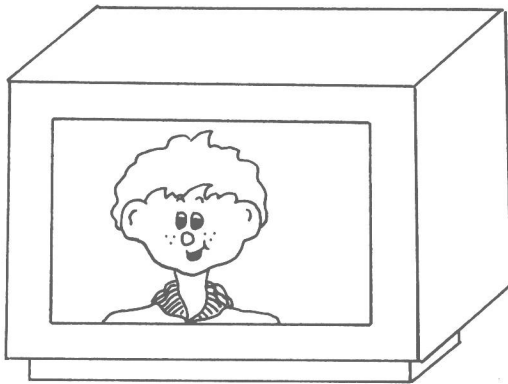
Follow all directions and you will have an easy and enjoyable time using your computer.

On your mark! Get set! Go!

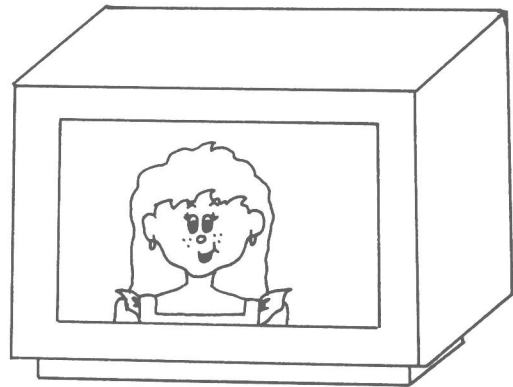
MEET THE COMPUTER TWINNS



The twins will remind you
of facts you need to remember.



PARTICULAR PETER PROGRAMMER



PATIENT PATTY PROGRAMMER

CONTENTS

	PREFACE	ix
1	THE KEYBOARD	1
	Stop, Look, Learn 1	
	The Cursor 2	
	Workout 3	
	The RETURN Key 4	
	Home 5	
	The SHIFT Key 5	
	Simple Arithmetic 7	
	Erasing 7	
	The Space Bar 8	
	Confusing Keys 9	
	Workout 10	
	Workout 11	
	Getting Fancy 14	
	Workout 16	
	Accomplishments 17	
2	YOUR FIRST PROGRAM	19
	Stop, Look, Learn 19	
	Calculating 20	
	Workout 21	
	Workout 22	
	PRINT 24	

Workout 25
Line Numbers 25
Workout 28
Slowing Things Down 30
Workout 32
Bugs 33
Using the Semicolon 34
Using the Comma 35
Workout 36
Accomplishments 39

3 COMMANDS 41

Stop, Look, Learn 41
RUN 42
HOME 43
LIST 44
NEW 45
Commands and Statements 47
Workout 51
Accomplishments 53

4 EDITING 55

Stop, Look, Learn 55
A Shortcut 56
Editing 57
Adding Lines 57
Removing Lines 59
Changing a Line 61
An Exercise 63
Workout 66
Accomplishments 70

5 SAVING PROGRAMS 71

Stop, Look, Learn 71
Using a Diskette 74
SAVE 76
LOAD 77

CATALOG 78
Workout 80
Accomplishments 82

6 VARIABLES 83

Stop, Look, Learn 83
Variable Names 84
Workout 87
Assignment 89
Computer Memory 92
Workout 94
Accomplishments 97

7 PRINT 99

Stop, Look, Learn 99
A Shortcut 100
Strings 101
Pictures 104
Spacing Output 105
Commas and Semicolons 106
Workout 108
Accomplishments 110

8 ARITHMETIC 111

Stop, Look, Learn 111
Assignment 112
Workout 113
Arithmetic 114
Workout 116
Combining Operations 117
Parentheses 119
Workout 121
Left-to-Right Order 122
Workout 124
Accomplishments 126

9	LOOPS	127
	Stop, Look, Learn <i>127</i>	
	FOR-NEXT Statements <i>128</i>	
	Counting by Twos <i>130</i>	
	Counting by Any Number <i>132</i>	
	Counting Backwards <i>132</i>	
	Workout <i>134</i>	
	Accomplishments <i>136</i>	
10	INPUT	137
	Stop, Look, Learn <i>137</i>	
	INPUT <i>138</i>	
	PRINT before INPUT <i>139</i>	
	Silly Sentences <i>144</i>	
	Workout <i>146</i>	
	Accomplishments <i>147</i>	
11	DECISIONS, DECISIONS	149
	Stop, Look, Learn <i>149</i>	
	Decisions <i>150</i>	
	Conditions <i>150</i>	
	Workout <i>151</i>	
	IF <i>152</i>	
	Finding an Average <i>154</i>	
	Another Program <i>156</i>	
	Workout <i>158</i>	
	Accomplishments <i>161</i>	
12	SOME TERRIFIC PROGRAMS	163
	Stop, Look, Learn <i>163</i>	
	Program 1: What's Your Average? <i>165</i>	
	Program 2: Party Time <i>166</i>	
	Program 3: Guess the Number <i>167</i>	
	Program 4: Spelling Bee <i>168</i>	
	Program 5: Super Calculator <i>169</i>	
	INDEX	171

1

THE KEYBOARD



Stop Look Learn



?SYNTAX ERROR

A message from the computer saying it doesn't understand you

HOME

Erases the screen

RETURN

Sends information to the computer

SHIFT

Lets two characters share a key

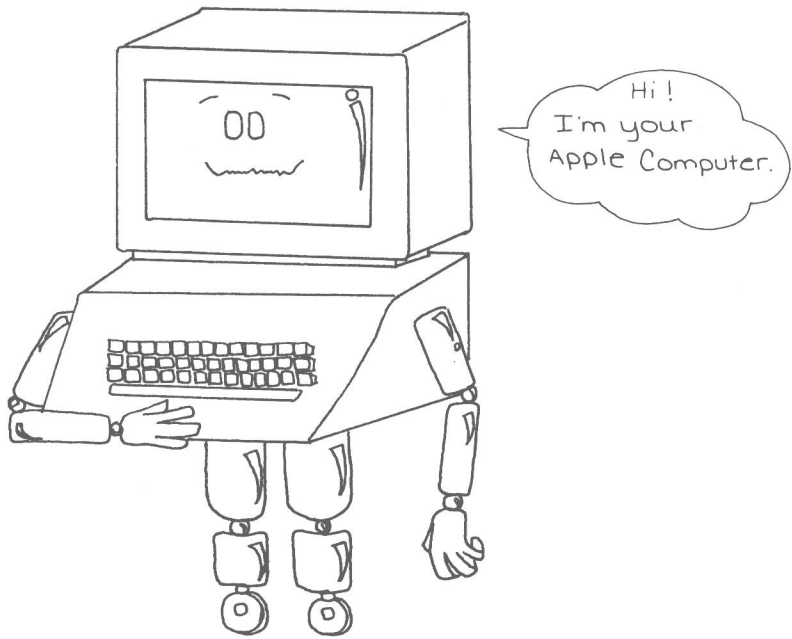
Cursor

A blinking block that shows where your message will go

Apple IIe

Apple II's cousin





The Cursor

You can type a message, and I can make it appear on my screen.

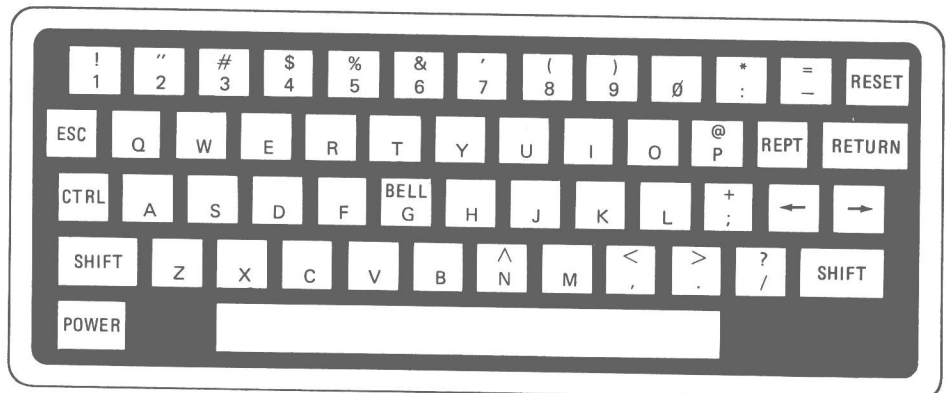
You will know I am ready when you see a blinking block on my screen.

Whenever you see a blinking block, it means that I'm waiting for you to type a message.

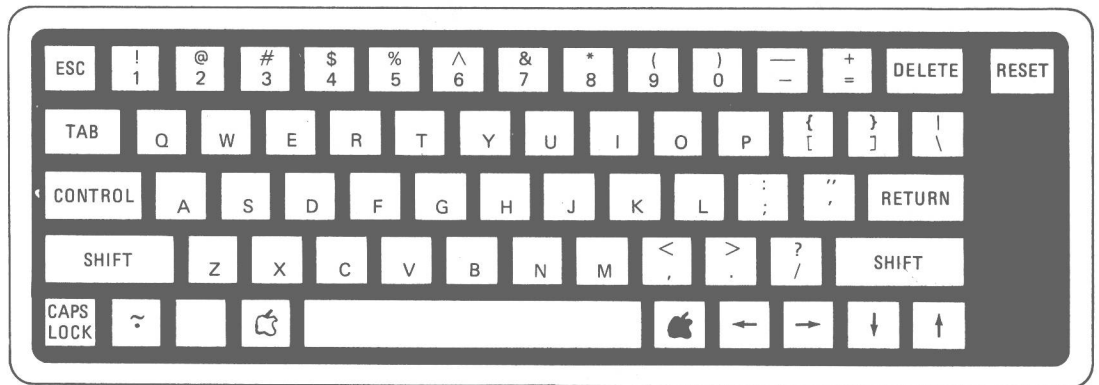
I have a big screen. So I will show you where to put your message.

The blinking block shows where your message will begin. The blinking block is called a *cursor*.

This is my keyboard. I am the Apple II.

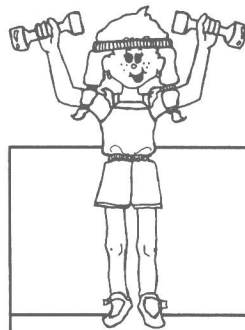


I have a new cousin, the Apple IIe. My cousin's keyboard is almost the same as mine. This is the Apple IIe keyboard.



Which computer do you have, the Apple II or the Apple IIe? It really doesn't matter because both computers are terrific. You can use either keyboard to get the job done.

There are important characters on a keyboard. Each letter or symbol is a character. Let me show you some of my characters.



WORKOUT

- Find the **H** and press it down.
- Press it 3 more times.
- Find the **S** and press it down.
- Press it 4 more times.
- Find the **A** . Press it down.
- Find the **P** . Press it down.



Did you finish the workout? Good. Then you should see

HHHHSSSSSAP

on the screen. Where is the blinking block? The *cursor* is at the end of the line. The cursor is after the letter P.

The cursor shows where the next letter will go. The next letter you type will go at the end of the line.

The `RETURN` Key

Find the `RETURN` key. Press it down. The `RETURN` key sends your message to me. It sends what you typed on the screen to my brain.

When you press `RETURN`, you should see

?SYNTAX ERROR

on the screen and hear a beep.

Did you type ?SYNTAX ERROR? No, you didn't. I, the computer, typed the message ?SYNTAX ERROR. It's my way of saying I don't understand you. I don't understand your last message to me.

Your last message to me was HHHHSSSSSAP. That's not a real word. It doesn't make sense to you. It doesn't make sense to me either. That's why I typed ?SYNTAX ERROR.

In this chapter you will type a lot of silly messages to me. So I will say ?SYNTAX ERROR to you very often.

It's okay for now. Don't worry about ?SYNTAX ERROR. Let me have my fun too.

Sooner or later there will be a lot of silly messages on my screen. You can make them all disappear. This is what you do.