# BASIC IS CHILD'S PLAY

## IBM PC EDITION

obert T. Grauer  Judy Gordon  Marsha Schemel

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ROBERT T. GRAUER

JUDY GORDON

MARSHA SCHEMEL

E8565972

ILLUSTRATED BY DIANNE THOMPSON BRIN

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

*Library of Congress Cataloging in Publication Data*

Grauer, Robert T., (date)
BASIC is child's play, IBM-PC edition.

Includes index.
Summary: Instructions for the elementary school student in programming with BASIC on an IBM-PC.
1. IBM Personal Computer—Programming—Juvenile literature. 2. Basic (Computer program language)—Juvenile literature. [1. IBM Personal Computer—Programming. 2. Programming (Computers) 3. Basic (Computer program language)] I. Gordon, Judy. II. Schemel, Marsha. III. Title. IV. Title: B.A.S.I.C. is child's play, I.B.M.-P.C. edition.
QA76.8.I2594G736 1984 001.64'24 83-24443
ISBN 0-13-058793-1

Editorial/production supervision: LYNN FRANKEL
Interior design: NANCY MILNAMOW and LYNN FRANKEL
Cover design: PHOTO PLUS ART (CELINE BRANDES)
Manufacturing buyer: GORDON OSBOURNE
Page layout: DANIEL BOILARD
Art creation & illustration: DIANNE THOMPSON BRIN

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Printed in the United States of America

10 9 8 7 6 5 4 3 2 1

ISBN 0-13-058793-1

Prentice-Hall International, Inc., *London*
Prentice-Hall of Australia Pty. Limited, *Sydney*
Editora Prentice-Hall do Brasil, Ltda., *Rio de Janeiro*
Prentice-Hall Canada Inc., *Toronto*
Prentice-Hall of India Private Limited, *New Delhi*
Prentice-Hall of Japan, Inc., *Tokyo*
Prentice-Hall of Southeast Asia Pte. Ltd., *Singapore*
Whitehall Books Limited, *Wellington, New Zealand*

*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 like its nonthreatening presentation. The happy consequence is that it may be used by parent and child together to provide a truly unique educational experience.



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*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 (CTRL, HOME, 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*.

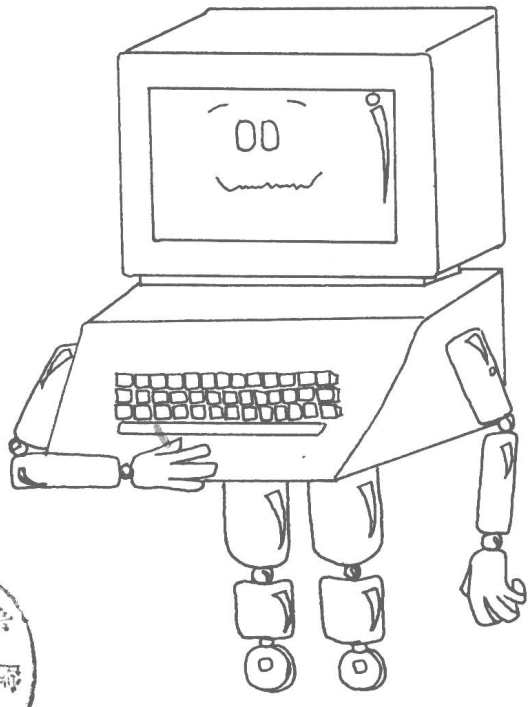
You can be a computer programmer, too. *BASIC Is Child's Play* will teach you how to use the computer and how to write your own programs.

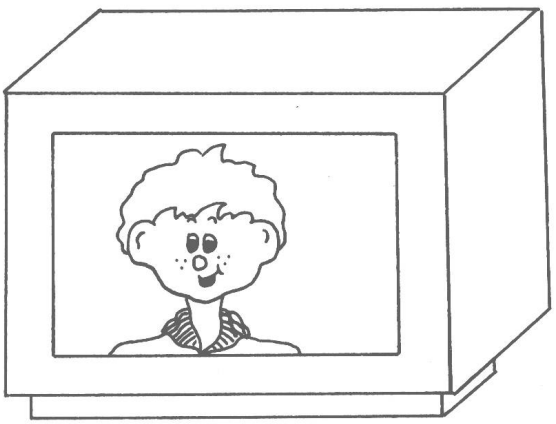
This book is simple for you and your parents to understand, as long as you read *everything* on each page. Peter and Patty will appear on many pages in this book. They will help you to understand many things about the computer. Always read their messages.

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

On your mark! Get set! Go!

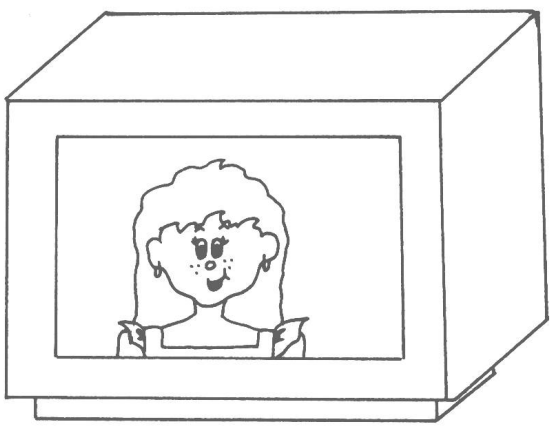
# MEET THE COMPUTER TWINS





**PARTICULAR PETER PROGRAMMER**

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



**PATIENT PATTY PROGRAMMER**

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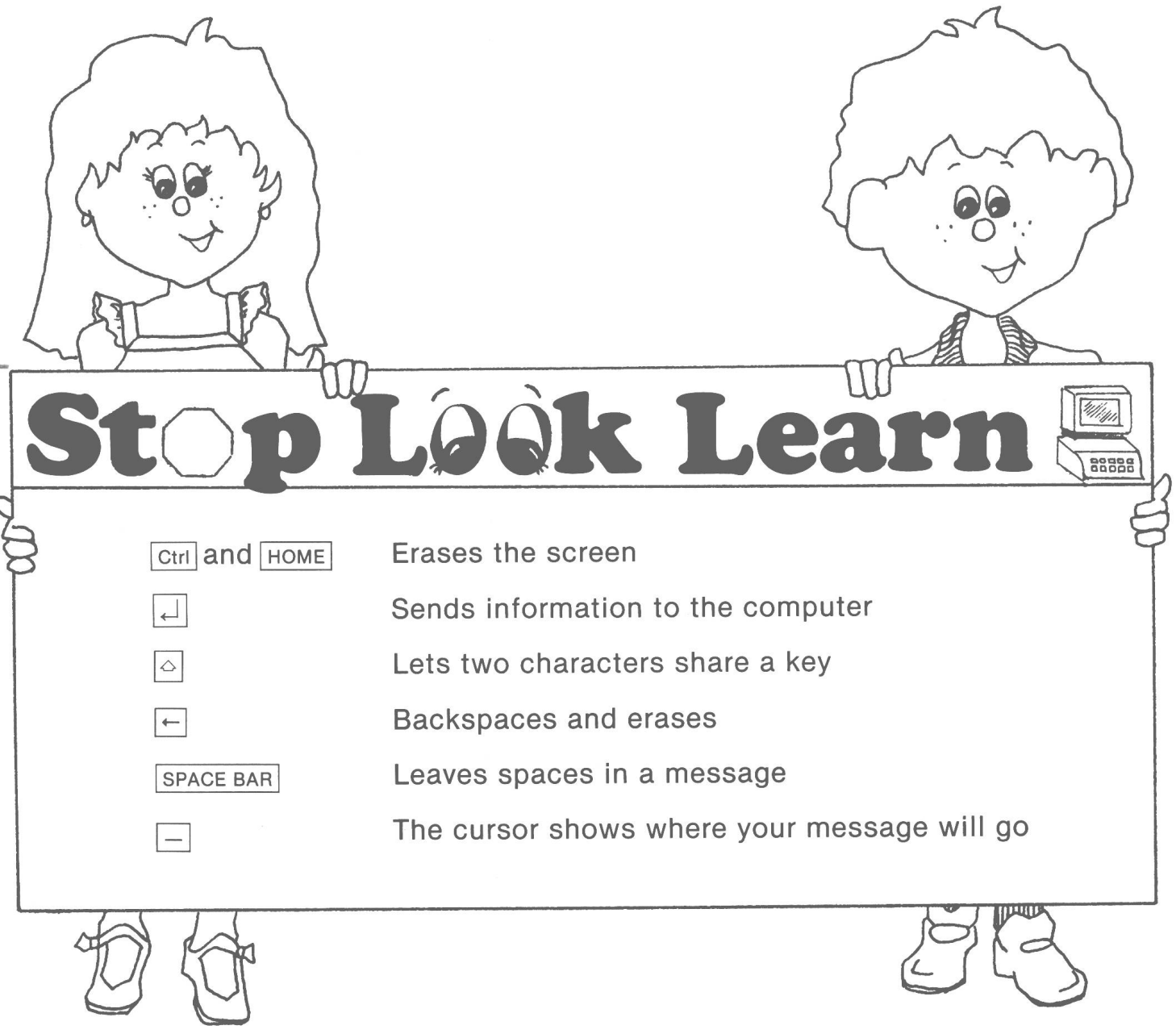
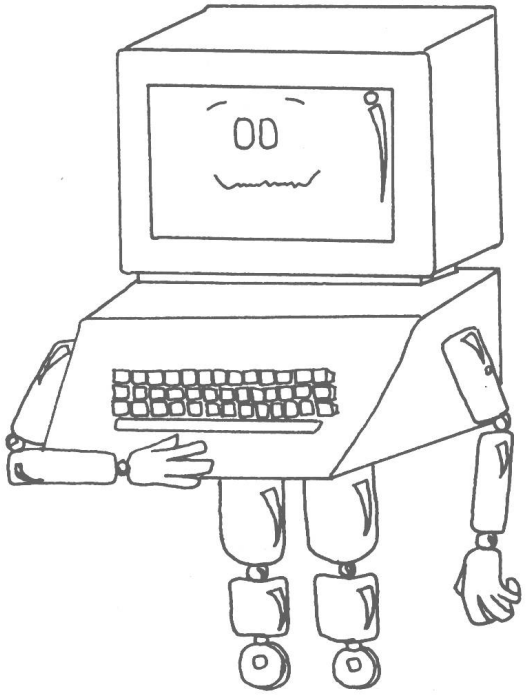
# 1

# THE KEYBOARD




| | |
|---|---|
| Ctrl and HOME | Erases the screen |
| ↵ | Sends information to the computer |
| ⇧ | Lets two characters share a key |
| ← | Backspaces and erases |
| SPACE BAR | Leaves spaces in a message |
| — | The cursor shows where your message will go |




## The Cursor

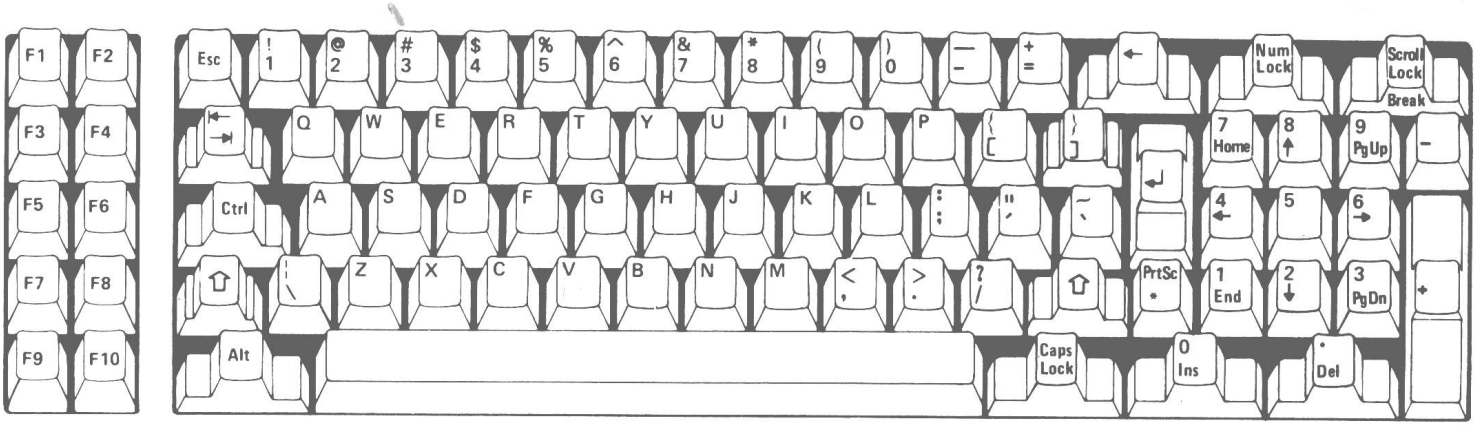
You can type a message, and I can make it appear on my screen.

You will know I am ready when you see _ on my screen. Whenever you see _ it means that I'm waiting for you to type a message.

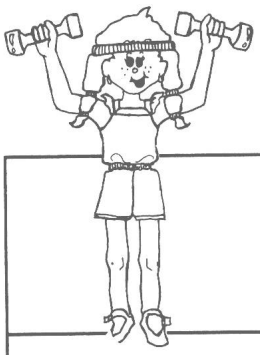
I have a big screen. So I will show you where to put your message.

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

This is my keyboard.



I have important characters on my 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.

## Upper and Lower Case

Are your letters all in lower case? You can get upper-case letters also.

Find the [⇧] key. There are two of these on my keyboard. Hold the [⇧] while you type a letter. Try it.

Hold [⇧]
Type IBM

It is tiring to hold the [⇧] key all the time. I will make life easier for you. Find the [CAPS LOCK] key. Press it down once.
Now type IBM. You still see upper-case letters because the [CAPS LOCK] key gives me all capitals.

It is easy to go back to lower-case letters.
Press the [CAPS LOCK] key once again.
Now type IBM again. This time you get lower-case letters.

You can go back and forth between upper case and lower case. It's easy to do. Just hit the CAPS LOCK key.

## WORKOUT

Type
    sneeze SPACE BAR
Type
    COUGH SPACE BAR
Type
    HiCcUp SPACE BAR
Type
    Laugh SPACE BAR

## Ctrl and HOME

Find the Ctrl key. *Ctrl* stands for *control* because it gives you special control.

Now find the HOME key.
Hold the Ctrl key with your left hand.
Press the HOME key with your right hand.

What happened?
Everything should have disappeared except the cursor. You remember, the cursor is my blinking line that shows where your message will go.



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