HILDA'S
FLOUR MILL

RICHARD SCARRY'S

HOW
THINGS
WORK™
IN BUSYTOWN

**AGES
3-6**

FLOUR BRAN

BAKERY

**Develops early learning skills and an
understanding of how a community
works together.**

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RICHARD SCARRY'S

HOW THINGS WORK

IN BUSYTOWN

FARM

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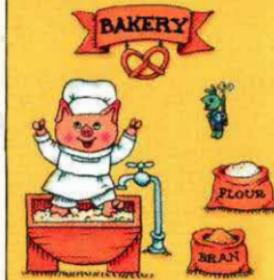
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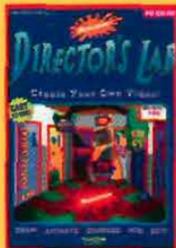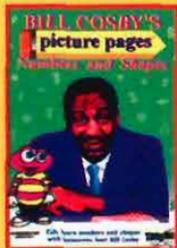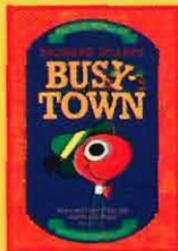
Paramount Interactive™

DESIGNED AND DEVELOPED BY

NOVOTRADE™

RICHARD SCARRY'S
HOW THINGS WORK™
IN BUSYTOWN

Version 1.0

MPC
MAC
CD00085

Paramount Interactive

DESIGNED AND DEVELOPED BY
NOVOTRADE

FARM

HILDA'S
FLOUR MILL

RICHARD SCARRY'S

HOW THINGS WORK™
IN BUSYTOWN

FLOUR BRAN

BAKERY

PARENT'S GUIDE

HOW THINGS WORK

IN BUSYTOWN

Parent's Guide

Credits for Richard Scarry's *HOW THINGS WORK IN BUSYTOWN*

Computer Game Designed and Developed by: Novotrade

Executive Producer: E. Jane White

Producer: Janet Padlad

Production Assistant: Stephanie Wilson

Computer Graphics and Animation: Novotrade

Software Engineering: Novotrade

Product Manager: Alecia Bridgwater

Marketing Consultants: Swanberg Associates

Educational Consultants: Creative Media Applications and Linda Espinosa

Parent's Guide Produced by: Creative Media Applications

    Writer: Garrett Christopher

    Design and Production: Fabia Wargin Design

Music

Patrick Adams

Pat Parrish

Christine Wiltshire

Barbara Bellens-Picón

Rafael Picón

TABLE OF CONTENTS

INTRODUCTION

Richard Scarry's popular Busytown characters make another appearance — this time in a new interactive software program called *How Things Work*. As the title suggests, the focus in this program is *How Things Work* together in a community. You and your child may be familiar with some of the popular Busytown titles created by Richard Scarry.

Translated into 30 languages, over 100 million copies of his books have been sold over the past three decades! Scarry's energetic and imaginative animals make up the cast of characters for the *How Things Work* software program. Mirroring real-life activities, these lively characters operate a farm, run a mill, supervise the operations in a full-service bakery, remove and recycle trash, construct roads, and operate the assembly line in a machine shop.

How Things Work software is designed to encourage your child to experiment: to manipulate machines, sequence processes, and interact with a variety of work environments based on everyday life in the Busytown community. The interactive nature of the program creates a learning environment that allows children to explore language, express creativity with siblings and friends, and solve problems in models of real-world situations. As you watch your child interact with the *How Things Work* characters, you will sense your child's excitement as well as his or her feeling of accomplishment that comes with this type of exploratory play.

PROGRAM DESCRIPTION

How *Things Work* is an interactive software program that invites children to explore the importance of work within a community setting through computer simulations and hands-on extension activities. With Lowly Worm as a guide, children travel to different work sites throughout Richard Scarry's Busytown community. There they interact with familiar characters such as Huckle™, Turnip Goat™, Hilda Hippo™, and Mr. Sweepy™ to discover what is involved in growing a crop, baking a loaf of bread, recycling the trash collected from Busytown residents, or constructing a new road. Life is never dull for these Busytown characters as they work together to produce everything their community needs.

How Things Work software is designed for children ages three to six. There are seven themed playgrounds in the program, and each has a Easy and an Advanced level. Designed to grow with your child, the playgrounds can be explored again and again, offering new challenges and discoveries during each visit.

This guide is filled with suggestions to help you capitalize on the appeal of the popular Richard Scarry characters and their busy world. It provides many options for making the playgrounds and the extension activities work for you and your child. For ease of use, the guide is organized into these sections:

- GETTING STARTED — A simple step-by-step guide on how to install *How Things Work* on your computer.
- USING *HOW THINGS WORK* — A brief overview of the content of each playground and simple directions on how to use it.
- MULTIDISCIPLINARY *HOW THINGS WORK* ACTIVITIES — This section contains projects and ideas that extend the concepts presented in *How Things Work*. A motivating "good job" award certificate and bookmark are also included.
- *HOW THINGS WORK* SKILLS — This section outlines the skills that your child practices while using the *How Things Work* software.

GETTING STARTED

DOS VERSION

There are two versions of *How Things Work*: a Floppy Disk version and a CD-ROM version. The two versions are very similar. Both versions require that you install them before they can be used.

The Floppy Disk version is the same game as the CD-ROM version, but with less speech and music. The CD-ROM version includes the lyrics to all of the songs in a special sound studio. The floppy version only includes a few lines of lyrics for each song.

If you have the CD-ROM version, follow the instructions for CD-ROM installation below. If you have the Floppy Disk version, go directly to the segment on installing the Floppy Disk version of *How Things Work* in this guide.

Installing the CD-ROM version of *How Things Work*

- Start your computer in the usual way. The Installation Program runs under both DOS and Windows as a DOS application.
- Insert the *How Things Work* CD-ROM into your CD-ROM drive.
- Switch to your CD-ROM drive. If your CD-ROM is drive D, type D: and press ENTER.
- Type INSTALL and press ENTER.

The Installation Program will help you make selections to insure that your system is set up to run *How Things Work*. This program creates a directory and copies some necessary files onto your hard drive. These files require less than one megabyte of disk space. Follow the on-screen instructions as described below. You may exit the Installation Program at any time by pressing ESC.

The Installation Program contains a series of screens with selection windows. The default choice is highlighted. Use the mouse or the up and down arrow keys to highlight your selection(s). Then press ENTER. To confirm your selection(s), use the mouse or the left and right arrow keys to move to the OK or YES/NO box. Then press ENTER.

- The Installation Title Screen appears first. Press ENTER to continue.
- If the Installation Program detects that you do not have enough free

conventional memory to run *How Things Work*, a screen appears that asks if you want to continue the installation. *How Things Work* requires 530,000 bytes of free conventional memory. See the Trouble Shooting section of this guide if you do not have enough memory. You may continue with the installation and solve the memory problem before you run *How Things Work* for the first time.

- The next screen asks you to select the target hard drive and directory into which the *How Things Work* start-up files will be copied. The default path is C:\HTW. You may change the name of this directory by selecting the box and typing a new path name.
- If you have a sound board installed on your PC, select it from the list on the next screen. If your sound board is not listed, check your sound board hardware manual for compatibility with the listed sound boards. When you select OK, a new screen will appear that asks you to select certain technical settings that match those of your sound source. Check your sound source documentation to make sure these settings match. If you are not sure, use the default settings. Consult your hardware manuals for instructions.
- The sound devices supported by *How Things Work* can play both music and speech (Sound Blaster, Pro Audio Spectrum, Gravis Ultra Sound, Windows Sound System). The program automatically uses the same device for both purposes.
- The final installation screen displays your current system setup in the left column and asks you to confirm your choices. If you wish to change any of the selections, choose "NO." Then you can revise your choices. If you select "YES," the program is installed and returns you to the DOS prompt.

Installing the Floppy Disk Version of *How Things Work*

- You must install *How Things Work* onto your hard disk before you can use the program.
- *How Things Work* requires 10 megabytes of free space on your hard drive.
- Start your computer in the usual way. The Installation Program runs under both DOS and Windows as a DOS application.
- Insert *How Things Work* Installation Disk (1 of 7) into your floppy disk drive.
- Switch to the floppy drive that contains the *How Things Work* disk. If this is drive A, type A: and press ENTER.
- Type INSTALL and press ENTER.

The Installation Program will create a directory for *How Things Work*, copy the *How Things Work* files onto your hard disk drive, and guide you

through the process of selecting the program options that are right for your computer. Follow the on-screen instructions as described below. You may exit the Installation Program at any time by pressing ESC.

The Installation Program contains a series of screens with selection windows. The default choice is highlighted. Use the mouse or the up and down arrow keys to highlight your selection(s), then press ENTER. To confirm your selection(s), use the mouse or the left and right arrow keys to move to the OK or YES/NO box, then press ENTER.

Installing *How Things Work* under Microsoft Windows

- Start Windows.
- Select the window in which you wish the *How Things Work* icon to appear by clicking on it.
- From the Program Manager menu select File/New.
- Select Program Item, and click on the OK button.
- Click on the Browse button and to to the directory on your hard drive in which you have installed *How Things Work in Busytown*. (for example: C:\HTW)
- Select HTWWIN.EXE and click on the OK button.
- A new icon should appear in the selected window. Double-click on the icon to start the game.

Changing Your *How Things Work* Installation

You may change your *How Things Work* installation by re-running the Installation Program and selecting new options.

You can modify the game setup at any time during gameplay. Press F10 to get to the Studio. From the Studio, press F10 again to get the blue setup screen. Using the up and down arrow keys on the computer keyboard, move to the appropriate box. Press the right or left arrow keys to modify the option.

Starting the CD-ROM Version of *How Things Work*

- Switch to the *How Things Work* directory. If you used the default directory in the installation program type CD C:\HTW and press ENTER. If you changed the default directory, substitute the appropriate directory name.
- Type HTW and press ENTER.
- The *How Things Work* title screen will appear. After a few seconds the Main Menu screen (Busytown map) appears. The title animation can be interrupted at any time by pressing the ENTER or SPACE keys or the mouse button.
- Use the mouse or arrow keys to move Lowly in the Applecopter over the playground you want to visit.
- The name of the playground appears in the upper right corner of the screen.
- Press the mouse button (or ENTER) to visit the playground.
- Have the best computer time ever!

Starting the Floppy Disk version of *How Things Work*

- Switch to the *How Things Work* directory. If you used the default directory in the installation program

type CD C:\HTW and press ENTER. If you changed the default directory, substitute the appropriate directory name.

- Type HTW and press ENTER.
- The *How Things Work* title screen will appear. After a few seconds the Main Menu screen (Busytown map) appears. The title animation can be interrupted at any time by pressing the ENTER or SPACE keys or the mouse button.
- Use the mouse to move Lowly in the Applecopter over the playground you want to visit.
- The name of the playground appears in the upper right corner of the screen.
- Press the mouse button (or ENTER) to visit the playground.
- Have the best computer time ever!

Hints for First Time Players

- If you are playing *How Things Work* for the first time or if you are playing with a younger child, set the skill level on Easy and select one of the following playgrounds: Assembly Plant, The Garbage Truck, or Road Construction. These playgrounds are easy to master and provide practice moving the cursor and learning to use the computer.
- Each playground has a Phone Booth that serves as a Help Icon. Before you begin play, click the Help Icon to get specific directions for the playground. (Note: If you do not have a sound source installed, consult this Guide for instructions on each playground)

Musical Notes

How Things Work plays a different musical theme for each playground.

This theme will repeat throughout game play. In the Floppy Disk version, you will hear a few lines of the lyrics to the songs at the beginning of each playground. In the CD-ROM version of the program, you can listen to the full versions of *How Things Work* songs in the Studio.

- You can use the following function keys or the shade bars in the Studio to adjust the volume:
  F5: Lower Voice and Sound Effects
  F6: Raise Voice and Sound Effects
  F7: Lower Music Volume
  F8: Raise Music Volume
- When you press these keys, a volume bar appears on screen.
- Press the F5 or F7 keys several times to turn off the voice, sound effects, or music.
- You may also adjust the speed at which the mouse reacts by using F3 to slow it down and F4 to speed it up.

The lyrics for the *How Things Work* theme song are presented below.

How Things Work in Busytown

words and music by
Pat Adams,
Pat Parrish and
Chris Wiltshire

Busytown,
 Friendly faces all around.
Busytown,
 Where I'd like to settle down.
Busytown,
 Has such happy sights and sounds.
Busytown,
 Lots of secrets to be found.

8

Hook up a plow and tractor.
    Down on the farm test your
        growing skills.
    Straight from the trash compactor
    You'll be surprised at the things
        we build.
    With a "cock-a-doodle-doo,"
    You're always on the move.
    Listen to Lowly,
    He'll help you totally.

Busytown,
    Friendly faces all around.
Busytown,
    Where I'd like to settle down.
Busytown,
    Has such happy sights and sounds.
Busytown,
    Lots of secrets to be found.

    "The wheat you harvest I'll grind
        into flour."
    "That's very easy," Hilda said.
    At Able Charlie's bakery
    Roll up the dough for some hot,
        fresh bread.
    Try the assembly
    to build the things we need.
    Trucks, cars, and trailers,
    and other new machines.

Busytown,
    Friendly faces all around.
Busytown,
    Where I'd like to settle down.
Busytown,
    Has such happy sights and sounds.
Busytown,
    Lots of secrets to be found.

GETTING STARTED

MACINTOSH VERSION

There are two versions of *How Things Work in Busytown*, a Floppy Disk version and a CD-ROM version. The two versions are very similar. The CD-ROM version takes advantage of the enhanced music capabilities of the CD-ROM format and allows you to play the *How Things Work in Busytown* music from inside the Studio. The Floppy Disk version requires that you install it on your hard drive before it can be used. The CD-ROM version does not require installation.

If you have the Floppy Disk version, follow the instructions for Floppy Disk installation below. If you have the CD-ROM version, go directly to Starting *How Things Work in Busytown* in this guide.

Installing the Floppy Disk Version of *How Things Work*

- You must install *How Things Work in Busytown* onto your hard disk drive before you can use the program.
- *How Things Work in Busytown* requires 10.2 megabytes of free space on your hard drive. (If you are uncertain about how much space is available, consult your Macintosh user's guides.)
- Start your computer the usual way.
- Insert *How Things Work in Busytown* Disk 1 into your floppy disk drive.

- Double-click the *How Things Work in Busytown* Install Disk icon to view the contents of the disk.
- Double-click the *How Things Work in Busytown* Install icon.

The Install Program will create a folder for *How Things Work in Busytown* on your hard drive, copy the *How Things Work in Busytown* files onto your hard drive, and guide you through the process of selecting the program options. Follow the on-screen instructions as described below. You may exit the Install Program at any time by clicking the QUIT button.

When the installation screen appears:
- A window on the left describes the installation process and provides instructions for installing *How Things Work in Busytown*. Follow the instructions below and those on the screen to install the program.
- Click the INSTALL button to install *How Things Work in Busytown* on the hard drive volume listed in the large box below the Busytown clock tower. This box tells you how much disk space the program requires and how much space is available on your hard drive volume.
- Click the DRIVE button to select another disk drive volume for the *How Things Work in Busytown* installation. Use the DRIVE button only if you have a second hard disk drive installed on your Macintosh. After you select the hard disk drive, select INSTALL to continue the installation.
- Click QUIT to exit the installation program without installing *How Things Work in Busytown*.

Starting the Floppy Disk and CD-ROM Versions of *How Things Work*

- Start your Macintosh in the usual way.
- If you are using the Floppy Disk version, double-click the How Things Work in Busytown folder on your hard drive.
- If you are using the CD-ROM version, insert your CD-ROM in the CD-ROM drive. Then, double-click the CD-ROM icon on the desktop.
- Double-click the *How Things Work in Busytown* icon (A bug with a camera).
- The title screen will appear. Click to go directly to the Main Menu screen (Busytown map) or wait a few seconds and the Main Menu will appear.
- Use the mouse to move Lowly in the Applecopter over the playground you want to visit.
- The name of the playground appears at the top of the screen.
- Press the mouse button to visit the playground.
- Have the best computer time ever!

USING *HOW THINGS WORK*

Main Menu

Children use the map of Busytown to choose a playground they wish to visit. This aerial view of the town shows all the different sites where a number of Busytown characters can be found hard at work.

To make a selection:

- Use the mouse to move Lowly in his Applecopter to a playground location. The word that names the playground appears centered near the top of the screen.
- Click the mouse button to make a selection. Be sure that Lowly is on the location of the playground and not on the word that names it.

The Studio

Children can pick the level of play they would like to use in the other playgrounds here at the Busy News Station Studio. There are two levels of play for *How Things Work*: Easy and Advanced.

The Easy level is for younger children to become familiar with the program and practice the skills they need to complete the playgrounds. The Easy level includes flashing stars that show your child what to do next. It is recommended that children start with this level to become familiar with the expectations of each playground.

The Advanced level requires more skill and reasoning power to play. In this level, the stars are removed to add a challenge to the gameplay. The Advanced level also contains a higher level of interconnectedness between

the playgrounds, to teach children how the different jobs within a community interact with one another to better serve the entire community. Upon completion of certain playgrounds in the Advanced level, the user will automatically go to another playground that is related to the previous playground in some way.

To choose the level of play for the playgrounds:
- Move the cursor to the buttons at the lower right.
- To select, place the cursor over either the Easy or Advanced button and click the mouse. The button with white letters shows the current playground level.

In the CD-ROM version, your child can also use the Studio to change volume levels and mouse speed. And lastly, the Studio is where children can hear the full versions of the songs that go with each playground.

To change volume levels and mouse speed:
- Place the cursor over the desired control slider.
- Use the mouse button to move the slider up or down.

To hear Busytown songs:
- Place the cursor over a playground window.
- Click the mouse to hear the song associated with that playground.
- Click again to stop the song.
- To hear the Busytown theme, click the window filled with Busytown characters.

You may also click on the help button if you need help. To return to the Main Menu, click on Lowly, and watch him get into his Applecopter and take off.

The Farm

Children help Turnip Goat plow the fields, plant the wheat, water the crop, and harvest the wheat. This playground provides practice in directional skills, orientation on the screen, problem solving, observing details, sequencing, and cause and effect relationships.

To use this playground on the Easy Level:
- Follow the flashing star to the indicated machine.
- First plow the field by moving the mouse to maneuver the tractor around the field.
- Use the mouse to maneuver other pieces of farm equipment to plant the seeds, water the crops, and harvest the wheat.
- The computer will automatically finish any of these tasks when a machine is parked by the shed or the helicopter is parked on the landing pad.
- To park a machine, bring it back to its space at the top of the screen and click the mouse.

To use this playground on the Advanced Level:
- Your child must build the proper equipment or have it delivered before planting the field. The software prompts the child for each piece of machinery when it is needed for a job. For example, before plowing the field, your child can choose to go to the Assembly Plant to build a tractor or have one delivered.

- Use the mouse to move Turnip Goat to each piece of farm machinery. Click to attach the plow or the seeder as needed.
- Click the mouse to start a machine and move it onto the field.
- To park a machine, bring it back to its space at the top of the screen and click the mouse.
- Unlike the Easy level, in this mode, the computer does not automatcally finish the task. For example, the child can choose to grow a partial field of wheat. The only restriction is that the crop must produce at least one bale of wheat.

The Flour Mill

Children help build Hilda Hippo's flour mill by assembling missing parts. Once the mill is completed, they work it by filling the hopper, adjusting the flow of water over the waterwheel, operating the bran and flour sifters, and bagging the flour. This playground provides practice in part/whole relationships, problem solving, and sequencing.

To use this playground on the Easy Level:
Constructing the Mill
- Look at the silhouette shapes. They represent the missing pieces.
- Use the mouse to move Hilda to the door of the supply closet.
- Click on the door to provide Hilda with one of the missing mill parts.
- Listen to and read the word for the object.
- Use the mouse to move the mill

part to the correct place in the mill, marked by the flashing star.
- Click the mouse button to place the object.

Operating the Mill
- Move Hilda to various points in the mill, shown by flashing stars.
- At each location, click the mouse button to unload sacks from the truck, fill the hopper, start the waterwheel turning, operate the bran and flour sifter levers, and carry the full sacks of bran and flour back to the truck.

To use this playground on the Advanced Level:
  Constructing the Mill
  - Use the mouse to move Hilda to the door of the supply closet.
  - Click on the door to provide Hilda with one of the missing mill parts.
- Using the silhouette shapes as guides, move the part to where it belongs and click to lock it in place.

Operating the Mill
- Move Hilda to try out various things in the mill. Unlike the Easy level, the Advanced level has no flashing stars to sequence the steps.

The Bakery

Children help the Baker make delicious baked goods. This playground provides practice with cause and effect relationships, following directions, and sequencing.

To use this playground on the Easy Level:

- Read or listen for the word that shows what the Baker will bake.
- Watch for the flashing star and use the mouse to move the Baker to that spot in the bakery.
- Click the mouse button to have the Baker add yeast, salt, and water to the flour.
- Click the mouse to have the Baker take a shower, knead, and shape the dough.
- Follow the star to the oven, pick up the item, bake it, and remove it from the oven.
- While the baked item is cooling, some Busytown friends gobble it up. Then the next order appears.

To use this playground on the Advanced Level:
- Use the mouse to move the Baker around the bakery. Click to add the ingredients, take a shower, knead and shape the dough, and bake the item in the oven. Unlike the Easy level, the Advanced level has no flashing stars to sequence the steps. Also, in this level, the Busytown customers are more particular, e.g., they will complain if ingredients are left out or too much is added.

The Garbage Truck

Children help Davy Dog and Mr. Sweepy sweep the streets and empty the garbage cans found in downtown Busytown. In the Advanced level, they also call for emergency vehicles and services to remove obstacles or hazards found on Busytown streets. This playground provides practice in planning, maze tracing, directionality, sequencing, problem solving, and number recognition.

To use this playground on the Easy Level:
- Use the mouse to guide the garbage truck along the road and pick up the trash.
- Use the mouse to guide the garbage truck to a spot near the trash containers.
- Click the mouse button to have Mr. Sweepy empty these containers.

To use this playground on the Advanced Level:
- To begin, the user has the choice of building the garbage truck in the Assembly Plant or having it delivered by the Delivery Service. Use the phone to call for the truck.
- Use the mouse to sweep the streets and collect the trash as in the Easy level.
- To remove obstacles in the street, use the mouse to select the correct emergency service in the phone booth.
- Enter the number of the correct emergency service by clicking on the picture of the service or use the mouse to position the help bug on the keypad and then click to enter each number.

The Recycling Center & Toy Factory

Children help Huckle Cat sort trash into plastic, metal, and paper recycling machines. They then help Huckle transform the recycled materials into colored plastic toys, metal objects, paper products, and origami folded figures. This playground provides practice in classifying, simple addition and subtraction, problem solving, color mixing, and cause and effect relationships.

To use this playground on the Easy Level:
Operating the Recycling Center
- Move Huckle to the garbage truck.
- Click the mouse to load the wheelbarrow with recyclable material.
- Move Huckle to the correct recycling machine, marked by the flashing star.
- Click the mouse to dump the trash onto the machine's conveyor belt.
- Move Huckle to the red button near the base of each machine and click the mouse to activate the recycling machine.

NOTE: In the Easy level, the machine will recycle the materials even if the child has not placed any items inside of it.

Operating the Toy Factory
- Listen to and look at the labeled picture that shows what Huckle will make.
- Use the mouse to move Huckle to the correct toy-making machine, marked by the blinking green control button.
- Click on the orange triangular buttons to change the toys the machine can make.
- Click on the center green button to activate the machine.

To use this playground on the Advanced Level:
Operating the Recycling Center
- Follow the same procedures as on the Easy level to unload trash and activate the recycling machines.
- Look at the counter on each machine to determine how many pieces of trash have been loaded into the machine and how many have been recycled. The gauge

above the truck lets the user know how much trash is left in the truck.

Operating the Toy Factory
- Listen to and look at the labeled picture that shows what Huckle will make.
- Determine if the product is plastic, paper, or metal and use the mouse to move Huckle to the correct toy-making machine.
- Click on the orange triangular buttons to change the toys the machine can make.
- If making a plastic object, click the color levers to adjust the color on the plastic toy-making machine.
- Click on the green button to activate the machine.

Road Construction

Children help Chief Engineer Stompy construct a road by building and operating various types of machinery. This playground provides practice in directional skills, orientation on the screen, problem solving, observing details, and sequencing.

To use this playground on the Easy Level:
- Follow the flashing star to the indicated machine.
- First use the mouse to move the bulldozer back and forth to level the ground.
- Use the mouse to maneuver road construction equipment that crushes and spreads gravel, loads sand, makes and deposits a layer of asphalt, and rolls the asphalt smooth. Use the flashing stars to cue the sequence of steps.

- The computer will automatically finish any of these tasks when a machine is parked back in its space.
- To park a machine, bring it back to its space and click the mouse.

To use this playground on the Advanced Level:
- The child must build the proper equipment or have it delivered before building a road. The software prompts the child for each piece of machinery when it is needed for a job. For example, the child can choose to go to the Assembly Plant to build a bulldozer or have one delivered.
- Use the mouse to move Chief Engineer Stompy to each piece of road construction equipment.
- Click the mouse to start a machine and move it onto the road site. Unlike the Easy level, the Advanced level has no flashing stars to cue the sequence of steps. Children can turn on the traffic light at any time to see what happens to the Rabbit family's car when they try to drive on their road.
- To park a machine, bring it back to its space and click the mouse.
- Activate the shovel, the rock crusher, the sand loader, and the asphalt mixer by moving Stompy to each machine. Then click the mouse button to start it.

The Assembly Plant

Children help Engineer Bug build eight different machines from blueprints. This playground provides practice in directional skills, part/whole relationships, problem solving, and sequencing.

To use this playground on the Easy

Level:
- Move Engineer Bug to one of the machine blueprints.
- Click the mouse button to select which machine to build.
- Look at the machine part hanging from the overhead assembly line.
- Listen to and read the word for the machine part.
- Move Engineer Bug to the part and click the mouse to detach the part from the assembly line.
- Use the mouse to move the machine part to the correct place on the machine, marked by the flashing star.
- Click the mouse button to lock the machine part in place.

To use this playground on the Advanced Level:
- Follow the same procedures as on the Easy level to have Engineer Bug select the machine to be built.
- Look at the machine part hanging from the overhead assembly line.
- Listen to and read the word for the machine part.
- Move Engineer Bug to the part and click the mouse to detach the part from the assembly line.
- Using the picture as a guide, move the part to the correct position on the machine frame and click to lock it in place.

HOW THINGS WORK SKILLS

Educational Constructs Practiced in *How Things Work*

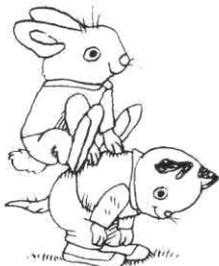|	The Farm	The Flour Mill	The Bakery	The Garbage Truck	The Recycling Plant & Toy Factory	Road Construction	The Assembly Plant
Addition					X		
Cause and effect	X	X	X		X	X	
Classification					X		
Color mixing					X		
Counting					X		
Directionality	X			X		X	
Drawing conclusions					X		
Following directions	X	X	X	X	X	X	X
Hypothesizing			X		X	X	
Machines	X	X				X	X
Maze tracing				X			
Neighborhood				X			
Number recognition				X	X		
Observing details	X	X		X	X	X	X
Part/whole relationships		X					X
Pattern matching		X			X		X
Predicting outcomes	X	X		X	X	X	
Problem solving	X			X	X	X	X
Reading		X	X				X
Relational concepts		X					X
Sequencing	X	X	X	X		X	
Simple machines					X		
Subtraction					X		

Additional Skill Areas

T he *How Things Work* program provides your child with a computer-based interactive experience that will lead to practice and mastery of many skills. All of the *How Things Work* playgrounds provide practice in the six major curriculum areas: Language/Literacy, Mathematical Concepts, Problem Solving, Social and Emotional Development, Physical and Motor Development, and Art and Music. You will find that the learning objectives contained in the playgrounds correspond to the major learning outcomes in most high quality early childhood programs. All playgrounds provide practice in the following areas.

DEVELOPMENTAL DOMAIN	SPECIFIC SKILLS
LANGUAGE & LITERACY	• listen for meaning • acquire new vocabulary • understand and respond to increasingly complex instructions • associate print with spoken language • listen for descriptive details • understand that each playground has a beginning, middle, and end
MATHEMATICAL CONCEPTS	**Spatial Relations** • match similar objects • sequence events • manipulate objects/symbols on the screen **Classification** • group objects that belong together • match objects • recognize patterns between and among objects • recognize and respond to predictable sequences
PHYSICAL AND MOTOR DEVELOPMENT	**Fine Motor Development** • develop fine muscle control • develop precise eye-hand coordination • develop facility with the computer mouse • combine several fine muscle skills to acheive goals
SCIENTIFIC THINKING/ PROBLEM SOLVING	• explore alternative approaches • acquire persistence to complete a task • develop extended concentration/attention span • learn to use others as resources • understand cause and effect • recognize and predict patterns
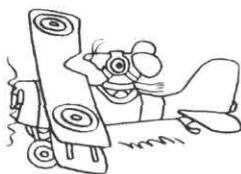
DEVELOPMENTAL DOMAIN	SPECIFIC SKILLS

SOCIAL AND PERSONAL DEVELOPMENT

Self-Concept
- gain self-confidence through active exploration
- demonstrate active curiosity
- experience successful, pleasurable learning
  Independence
- make choices and follow through
- select both new and familiar playgrounds

Self-Control
- act in a self-directed manner
- learn how to respectfully handle the computer
- engage in cooperative activities
- learn to follow the rules of each playground

Social Relationships
- recognize the value of helping others
- experience friendly and cooperative social interactions
- see oneself as part of a community
- demonstrate empathy for others
- understand community roles

ART AND MUSIC

Art
- gain an appreciation of detailed, colorful visual representations
- color recognition and matching

Music
- gain an interest in and appreciation for a variety of musical styles
- learn the lyrics and melodies to new songs
- explore rhythm and beat

The following playgrounds provide practice in these additional specialized skills:

PLAYGROUND	DEVELOPMENTAL DOMAIN	SPECIFIC SKILLS
The Farm	**SCIENTIFIC THINKING/ PROBLEM SOLVING**	• observe growing cycles • careful attention to detail • understanding sequential nature of farming
The Flour Mill	**LANGUAGE & LITERACY**	• associate printed word with pictures and sound • specialized vocabulary • understand process of making flour • follow sequential directions
	MATHEMATICAL CONCEPTS	• manipulate gears and levers on 2-dimensional machinery
The Bakery	**LANGUAGE & LITERACY**	• associate printed words with pictures and sounds • learn baking vocabulary • fun with baking • follow sequential directions
	MATHEMATICAL CONCEPTS	• one to one correspondence
The Garbage Truck	**MATHEMATICAL CONCEPTS**	• acquire a sense of directionality • recognize numerals up to 9
	PERSONAL/ SOCIAL	• understand role of garbage collector • act as a helpful member of the community

PLAYGROUND	DEVELOPMENTAL DOMAIN	SPECIFIC SKILLS
The Recycling Center & Toy Factory	**MATHEMATICAL CONCEPTS**	• one-to-one correspondence • recognize numbers • add on to a number; take away from a number — addition and subtraction • manipulate gears and levers on 2-dimensional machinery • recognize relationships between and among objects
	PERSONAL/ SOCIAL	• understand recycling process • learn relationship between materials and products
Road Construction	**MATHEMATICAL CONCEPTS**	• acquire a sense of directionality • manipulate gears and levers on 2-dimensional machinery
	SCIENTIFIC THINKING/ PROBLEM SOLVING	• observe and participate in road-building process • coordinate objects to achieve desired goal • careful attention to detail • learn natural consequences of different road-building processes
Assembly Plant	**MATHEMATICAL CONCEPTS**	• recognize patterns • part-whole relationships • create whole from parts
	LANGUAGE & LITERACY	• specialized vocabulary—parts of machinery • associate printed word with picture and sound

ACTIVITIES

This section contains activities that your child can complete independently or with you.

The *How Things Work* music was produced expressly for the CD-ROM version of this program. These delightful songs that describe the work that goes on in each playground provide a motivating introduction. Select one of the songs and play it for your child. Ask your child how the song makes him or her feel. Based on the lyrics, can he or she guess what the playground will be about? Play a song several times and invite your child to chime in as the words become familiar. Encourage him or her to move to the beat or make up dances to go with the song. In addition, you may wish to try one of more of the following suggestions.

- Ask your child to act out the lyrics. For example in "The Flour Mill," have your child pretend to turn a grindstone around and around, fill each bag, sew it shut, and load it onto a truck.
- In "Watch 'Em Grow," suggest that your child pretend to plow a field, sow the seeds, and water the plants. During the chorus, have children pantomime the start of a busy day as they wake up and get moving.
- For "Baking Bread," encourage your child to pretend he or she is baking bread and then sharing it with some good friends who have dropped by for a snack.
- You can also play the audio tracks from the CD-ROM on your audio CD player. Simply advance to track two.

The Farm

WATCH 'EM GROW

words and music by
Patrick Adams

There's a field to look after.
So roll out the tractor,
Hook up that plow.

Before any growing,
Before any sowing,
We've got to turn the topsoil down.

Turn the field row by row.
Make lots of space,
where we can plant seeds to grow.

Then watch 'em grow,
Watch 'em grow.

When you hear that first cockadoodle
doo,
Time to get movin',
Time to get movin'.

There's just so many things to do.
No time for foolin',
No time for foolin'.

I don't have to tell you,
There's no kind of schedule
to tell you when rain will fall;

But sunshine and water
are what the doctor ordered
for anything to grow at all.

There's no need to complain.
You've got the power
to make artificial rain.

Then watch 'em grow,
Watch 'em grow.

When you hear that first cockadoodle
doo,
Time to get movin',
Time to get movin'.
There's just so many things to do.
No time for foolin',
No time for foolin'.
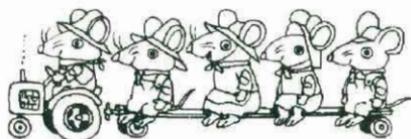
LET'S PLANT A SEED

GOAL: To plant a seed and watch it grow.
MATERIALS: A plastic cup, bean or marigold seeds, potting soil, water, drawing paper, crayons

Recalling Turnip Goat's work on the farm, talk with your child about how to plant a seed. Then help him or her fill a cup with potting soil about one inch from the top and plant several seeds. After patting the soil to cover the seeds, have your child water the soil. Place the cup on a sunny window ledge and keep the soil moist. Encourage your child to make daily observations of the seedlings and suggest that he or she keep a daily record of any observations on drawing paper. Use this opportunity to talk about what most plants need to live— light, water, and soil. Your child might want to explore what happens when a plant receives too much or too little of one of these things. For example, try placing several sprouted bean plants in a dark closet and compare them with plants that receive adequate amounts of light. Invite your child to compare the growth rates and explain why there is a difference. Make sure you do not allow the plants to die.

The Flour Mill

THE FLOUR MILL

words and music by
Patrick Adams and Pat Parrish

At the flour mill
We use special skills,
when it comes to making flour.

Wheat, rye, and barley seeds,
and other varieties,
We can turn them into flour.

Under the giant grinding wheel,
Round and around until we yield
Fine and fluffy,
Nourishing and wonderful,

Flour, so easy to use,
A basic part of many foods.

Flour, to make breakfast treats,
Pancakes, donuts, and other sweets.

We do all the work we need,
Still saving energy
because we use water power.

Able Charlie's bakery
depends on our deliveries.
There can't be daily bread without
*   flour.*

We fill each bag
and sew them shut.
Then we put them
on the truck.

Soft and sprinkly,
Positively heavenly,

Flour, for gravy thick and
*   smooth,*
Batter to dip our frying
foods.

Flour, for our baking
*   needs,*
Cakes, pie crust, and pastries.

OH, NUTS!

GOAL: To explore various types of grinders, to use a type of grinder to make peanut butter

MATERIALS: Several different types of grinders, food processor or blender, unshelled peanuts, peanut oil, measuring cup, measuring spoons, salt, table knife, crackers, drawing paper, crayons

Talk with your child about how flour is made from grain by grinding it. Then look at several different types of grinders with your child. If a pepper grinder is available, take it apart and take a close-up look at the grinding mechanism. Talk about how peanut butter is made by grinding up peanuts to form a smooth paste. Then work together to shell the peanuts to make some homemade peanut butter in a blender or food processor. Remove the brown skins from the nuts. Put about 1 tablespoon of oil in the blender and then slowly add one cup of peanuts. You may want to add a pinch of salt to taste. The peanut butter can be spread on crackers for a tasty snack. After you eat the snack, suggest that your child create a drawing of a "peanut butter mill" to illustrate the steps in the process.

The Bakery

BAKING BREAD
(Able Baker Charlie's Bakery)

words and music by
Pat Adams and Pat Parrish

Baking bread, baking bread,
At Able Baker Charlie's Bakery
We are baking bread. (Repeat)

First, we take the flour
and pour it in the mixing tub.
Add some salt and water,
A dash of yeast to fluff it up.
    I knead the dough.
    Wouldn't you know,
    In less than an hour,
    I'm covered with flour.
    I need to take a shower.

Baking bread, baking bread,
At Able Baker Charlie's Bakery
We are baking bread. (Repeat)

Next, we set the timer
and push the loaf into the oven.
When the door pops open,
we all know the bread is done.
    And now the fun,
    Our friends will come.
    How nice, how nice
    to have a slice
    of Able Baker's buns.

Baking bread, baking bread,
At Able Baker Charlie's Bakery
We are baking bread. (Repeat)

MAKING SHAPE CAKES

GOALS: To recognize and use geometric shapes
MATERIALS: Geometric shapes cut from colored construction paper, glitter, dried seeds, crayons, glue, drawing paper

Talk about the different foods that are made at a bakery and what shapes these foods have. Then invite your child to use the cutout shapes to create some pretend bakery goods. Crayons, glitter, seeds, and other materials can be used to decorate these creations. Ask your child to identify the different shapes and colors used to create these bakery goods.

The Garbage Truck

RECYCLE

words and music by
Patrick Adams

*The only way to be sure
we'll always have more
is to recycle.*

*Before you throw things away,
see what you can save,
and recycle.*

*It's so easy we all can pitch in,
and make sure things are left
in the proper bins,
to be collected and used again.*

*So many things will improve,
once we all choose
to recycle.*

*Newspapers, bottles, and cans
are all in the plan
to recycle.*

*Everything that's picked up today
becomes a part of something brand
    new, some way.
Listen, children to what I say.*

*It's so easy for any child
to separate things out into different
    piles.
Seems so natural after a while.*

*It's time that everyone learn
the things to return and recycle.*

SPRUCE-UP PROJECT

GOAL: To plan and carry out a community service project
MATERIALS: Work gloves, trash bags (Note: Other materials will depend upon the nature of the community service project you select.)

xplore various community service options with your child. Picking up litter in a vacant lot or in a nearby park, planting a flowerbed, and "adopting" a section of sidewalk near your house are all possibilities. Then do some advance planning by talking about what steps are necessary to carry out the project. Your child may want to involve friends or other family members as part of the spruce-up team. Depending on the project, try to take some "before and after" photographs to document the results of your child's effort to make a positive difference in your community!

The Recycling Plant & Toy Factory

RECYCLE
words and music by
Patrick Adams

The only way to be sure
we'll always have more
is to recycle.

Before you throw
things away.
see what you can save,
and recycle.

It's so easy we all can pitch in
and make sure things are left
in the proper bins,
to be collected and used again.

So many things will improve,
once we all choose
to recycle.

Newspapers, bottles, and cans
are all in the plan
to recycle.

Everything that's picked up today
becomes a part of something brand
new, some way.
Listen, children to what I say.

It's so easy for any child
to separate things out into different
piles.
Seems so natural after a while.

It's time that everyone learn
the things to return and recycle.

MAKE YOUR OWN PAPER

GOAL: To make and use handmade paper

MATERIALS: Newspaper, bucket, water, wire whisk, cornstarch, water, measuring spoons, piece of wire screen, rolling pin, plastic wrap, crayons, white unlined papers, stapler or yarn, safety scissors

Have your child follow this procedure to make sheets of recycled paper.

1. Tear strips of newspaper into small pieces to fill half the bucket.
2. Add water to thoroughly wet the pieces of paper. Let the paper stand for 2 hours.
3. Have children use the whisk to beat the mixture into a creamy pulp.
4. Dissolve 3 tbs. of cornstarch in 1 cup of warm water. Add the cornstarch to the pulp mixture and have children beat it again.
5. Show children how to submerge a 6-inch square of screen in the pulp mixture. Then pull it out. Repeat this process until the screen has a layer of pulp about 1/8 inch thick.
6. Place the pulp-covered screen on several layers of newspaper. Have children cover the screen with a sheet of plastic wrap.
7. Let children use the rolling pin to press out any excess water.
8. Stand the screen on one end to dry the pulp.
9. When the pulp is completely dry, carefully peel the handmade paper from the screen.

Children can use their handmade paper to make covers for their own books. Fold unlined drawing paper to fit inside the covers. Then staple the book together or bind it with string or yarn.

Road Construction

BUILDING A NEW ROAD

words and music by
Rafael Picon and Barbara Bellens-Picon

Break rock with the rock crusher,
make little stones.
Move rock with the steam shovel,
lift heavy loads.
Ride, ride, ride the bulldozer, to clear
the land.
Stompy, Stompy controls, he moves at
your command.

I can drive very fast,
on the road smooth as glass.
I cannot do that on grass,
We must build a road.

Chorus:
Building a new road,
with machines to help, oh yeah.
Building a new road,
I can travel anywhere.
Building a new road,
see the people working there.
Building a new road,
so cars and trucks can go somewhere.

Roll, roll, roll the steam roller,
to make it smooth.
Spread, spread, spread the hot
asphalt,
before it cools.
Work, work, work, you're so busy,
building a road.
Sergeant Murphy says "good job"
and trucks and cars and trucks can go.

Bulldozed road looks so fine.
think we need a yellow line,
to separate the lanes we drive,
as we come and go.

Repeat Chorus

SAFETY WHILE ON THE ROAD

GOALS: To discuss road and personal safety rules
MATERIALS: Large sheet of drawing paper, crayons

Fold a sheet of drawing paper into four parts and in each section have your child draw a simple picture of a car, a school bus, a bike, and a pair of sneakers. Using these icons, talk about safety rules that should be followed when "on the road." Stress using seat belts, avoiding the danger zone around a school bus, obeying traffic signs, riding and walking on the correct side of the street, using crosswalks, etc.

Check to make sure your child knows your address and telephone number. Talk about situations when this information might be important. Mention when and with whom this information should be shared. Help your child role play what to do in various situations if he or she became separated from you or the person in charge.

The Assembly Plant

ASSEMBLY PLANT

words and music by
Rafael Picon and Barbara Bellens-Picon

INTRO
I'd like to build a road,
but I'm so young and I don't know.
I'd like to work the farm,
but I can't do it all
   alone.

Have faith! Lift
   yourself!
In the
   Applecopter
Go to the Assembly . . . the Assembly
   Plant.

We build it all, right here
at the Assembly . . . Assembly Plant.
We build it all at the Assembly Plant.

Build a tractor, harvest machine,
How about an airplane?
Like you've never seen.
We build it all at the Assembly Plant.

Just take Lowly's Applecopter, "click"
   zoom,
You're in the blueprint room.
Fix the block in front of the
   blueprint...see!
Build, build a machine.
Pick a blueprint, please.
Can I do that?

Oh, you can do, do all that,
At the Assembly, Assembly Plant.
We build it all at the Assembly Plant.

Build a bulldozer, a steamroller,
A steam shovel, to move the rubble.
We'll build it all at the Assembly Plant.

Just take Lowly's Applecopter —
   ZOOM
You're in the blueprint room.
Now fix the block in front of the
   blueprint — see,
Build a wonderful machine.

One to plow, one to clean,
Now sing it to me!

I can do, do all that
At the Assembly, Assembly Plant.
I'll build it all at the Assembly Plant.

I've got the Gold Bug — Yes I do!
and now it's moving, moving right up
   to you.
I'll build it all at the Assembly Plant.
Can I build a tractor? — harvest
   machine?
How about an airplane? What else we
   need?
I'll build it all at the Assembly Plant.
A bulldozer...A steamroller,
A steam shovel . . . to move the
   rubble.
I'll build it all at the Assembly Plant.

MACHINE RIDDLES

GOAL: To write riddles about machines

MATERIALS: Index cards, pencils, crayons

Ask your child this riddle, "What has four wheels and flies?" (Answer: a garbage truck) Then talk about other clues that could be given in a riddle about a garbage truck. Ask your child to recall other machines used by the How Things Work characters. Then invite your child to select a machine and write or dictate a riddle about the machine on one side of an index card. Suggest he or she show the answer by drawing a picture on the opposite side of the card. Encourage your child to share the riddle with friends and other family members.

TROUBLE SHOOTING

The following is a list of problems you may encounter during installation or when you run *How Things Work in Busytown* for the first time. Each problem is listed with a possible cause and solution.

How Things Work in Busytown is designed to be compatible with almost every computer system that meets the minimum system requirements. However, every system is unique. Your system may contain hardware or software that conflicts with the operation of *How Things Work in Busytown*. Most problems can be solved by following the simple steps described below.

If you have trouble running How Things Work in Busytown, *follow these steps:*

1. Check your system to make sure that it meets the minimum system requirements stated on the outside of the package.
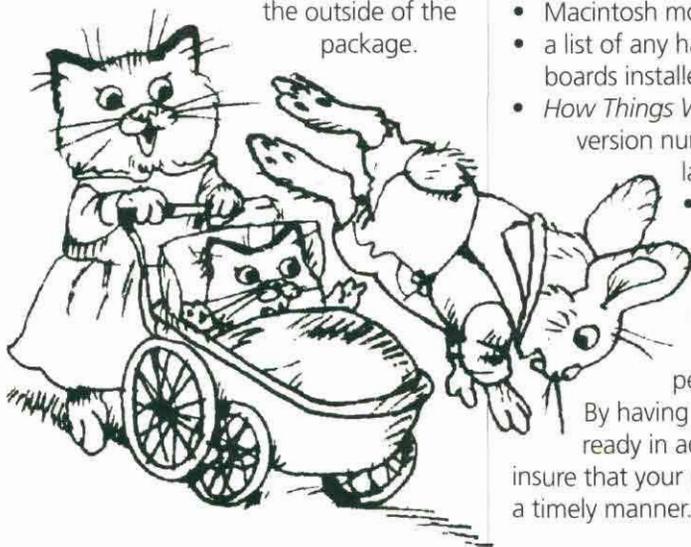
2. Read the Getting Started section of this Guide carefully and make sure that you have followed the installation instructions correctly.

3. Look at the list of Problems and Solutions below to find your specific problem and follow the directions for solving it.

4. If you have followed steps 1-3 and *How Things Work in Busytown* still does not function properly on your system, call the Viacom Technical Support Service at (303) 339-7114 from 7 a.m. to 6 p.m. (Mountain Standard Time), Monday through Friday. Fax to (303) 339-7022.

Before you call Technical Support, write down your system information.

For DOS:
- brand of PC
- a list of any hardware devices or boards installed on your system
- DOS version
- *How Things Work in Busytown* version number (from the disk label)
- Contents of your AUTOEXEC.BAT and CONFIG.SYS files

For Macintosh:
- Macintosh model
- a list of any hardware devices or boards installed on your system
- *How Things Work in Busytown* version number (from the disk label)
- System version

In addition, have your system manuals handy, including those for any peripheral devices. By having this information ready in advance, you will help insure that your problem is solved in a timely manner.
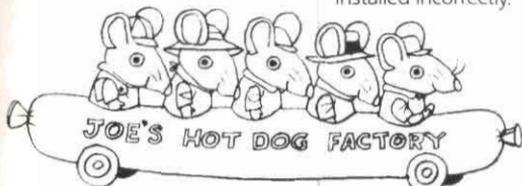
DOS

PROBLEM	POSSIBLE CAUSE	SOLUTION
Any problem with sound.	Your sound source may be installed incorrectly.	Consult the sound source manufacturer's instructions and test it using the manufacturer's sound test program. Test the sound source with another application program. If the problem persists, continue with the suggestions below.
Sound comes from the PC speaker instead of sound source.	The "No Sound" option was chosen during *How Things Work in Busytown* installation.	Press F10 from within the Studio or F10 twice from anywhere within *How Things Work in Busytown*, or rerun the *How Things Work in Busytown* installation program and select the correct sound source option.
Sound comes from the PC speaker instead of the sound source or there is no sound at all.	The configuration chosen during *How Things Work in Busytown* setup does not match the current configuration for your sound source.	Check to see that you have selected the correct sound source and that the DMA and INT selections for the sound source match those chosen during *How Things Work in Busytown* installation.
Problems with sound occur after installing a new source.	*How Things Work in Busytown* is set-up for your previous sound source.	Press F10 from within the Studio or F10 twice from anywhere within *How Things Work in Busytown*, or rerun the installation program and select the correct sound source options.
How Things Work in Busytown opens with music and sound, but freezes when a playground is selected	The incorrect DMA, INT, and/or I/O port address was selected during *How Things Work in Busytown* installation.	Press F10 from within the Studio or F10 twice from anywhere within *How Things Work in Busytown*, or rerun the installation program and set the DMA, INT, and I/O address to match those for your sound source. (Consult your manufacturer's instructions.)
How Things Work in Busytown freezes when the program loads or when you select a playground.	You have installed a new sound source and your AUTOEXEC.BAT file still contains information from the previous sound source.	Delete the lines from your AUTOEXEC.BAT file that relate to the old sound source. (Consult your sound source manual for instructions.)
The installation program reports that there is not enough hard disk space available to install *How Things Work in Busytown*.	*How Things Work in Busytown* requires at least 10 megabytes of hard disk space to install the Floppy version.	Remove other programs and files from your hard drive until you have enough free space to install *How Things Work in Busytown*.

31

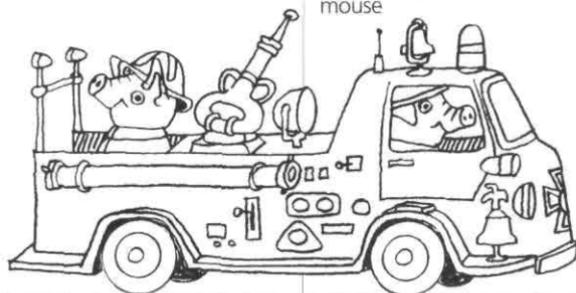| PROBLEM	POSSIBLE CAUSE	SOLUTION
Sound can be heard only faintly or not at all.	Sound source, speaker, or *How Things Work in Busytown* volume may be set to the lowest volume level.	Turn up sound source volume. (See manufacturer's instructions) Turn up speaker volume. Use the F6 and /or F8 keys to turn up the volume in *How Things Work in Busytown*. (Consult Music Notes in this guide for instructions.)
How Things Work in Busytown runs too slowly.	*How Things Work in Busytown* is running under Microsoft Windows.	Quit *How Things Work in Busytown* and exit Microsoft Windows. Then run *How Things Work in Busytown* from the DOS prompt. (See Getting Started in this Guide.)
Your computer will not read the *How Things Work in Busytown* floppy disks.	Your floppy disk drive is not a 1.4 megabyte high density floppy drive.	*How Things Work in Busytown* requires a 1.4 megabyte floppy disk drive. Install a 1.4 megabyte, high density floppy drive on your computer.
Your computer will not load one of the *How Things Work in Busytown* floppy disks or it reports that the disk is unreadable.	The disk is damaged.	Call (303) 339-7114 to obtain a replacement disk.
An image appears but some colors are missing.	Your computer's CONFIG.SYS or AUTOEXEC.BAT files may be incorrectly set up.	Check your computer manufacturer's instructions for setting up the CONFIG.SYS and AUTOEXEC.BAT files.
Your computer has trouble reading data from the *How Things Work in Busytown* CD-ROM.	The CD-ROM disk may be dirty.	Gently rub the bottom of the CD-ROM disk with a clean, dry cotton cloth.
When you run the program under Microsoft Windows you get a message that says the DMA BUFFER SIZE value is too small.	The value of the DMA Buffer is set too low.	From the Program Manager menu bar, select File. Then select Run. In the dialog box type C:\WINDOWS\SYSEDIT.EXE. The Windows System Editor will appear. (If you are unfamiliar with editting system files, consult your Windows documentation before *proceeding further.) Select the* window containing the SYSTEM.INI file. In the section labeled [386enh] enter the following line: DMABUFFERSIZE=64. Save the file and exit System Editor. Restart Windows, then run *How Things Work* again.

| PROBLEM	POSSIBLE CAUSE	SOLUTION
The mouse does not work with the *How Things Work in Busytown* cursor.	The mouse driver may not have been installed or the sound source may interfere with the operation of the mouse	Install the DOS mouse driver prior to starting *How Things Work in Busytown*. (Consult your computer's DOS manual.) Check your sound source documentation to be sure that the interrupt setting does not conflict with the interrupt setting for your mouse. (Consult your sound source and mouse documentation.) Make sure the mouse software is configured for the proper serial (COM) port.
How Things Work in Busytown malfunctions after working successfully.	Some program data may have been corrupted on your hard disk.	Reinstall *How Things Work in Busytown*.
Your computer displays a "file not found" message when you type *How Things Work in Busytown* to start the program.	You may not be in the *How Things Work in Busytown* directory.	Switch to the *How Things Work in Busytown* directory and try again.
You have only one floppy drive and cannot install or reinstall the program after using a *How Things Work in Busytown* boot disk to start up your computer. (See trouble shooting item regarding not enough memory.)	You have only one floppy drive available.	Boot your system from the hard drive and follow the *How Things Work in Busytown* installation instructions. Disregard the message that you do not have enough memory available and continue with the installation. After *How Things Work in Busytown* is installed, use your boot disk to restart your system. Start *How Things Work in Busytown* in the normal way.
When you launch the program from Windows, *How Things Work in Busytown* does not run or the music does not play.	You may not have enough conventional RAM available or *How Things Work in Busytown* may conflict with certain Windows device drivers.	Increase conventional RAM as described in the trouble shooting section and run *How Things Work in Busytown* from DOS.
Your sound source does not appear on the list of sound source choices.	You have a Tandy3 or other sound source.	Select the Sound Blaster sound source if your sound source is Sound Blaster compatible. (Consult your sound source manual.)

PROBLEM	POSSIBLE CAUSE	SOLUTION
Your computer displays a "file not found" message when you are installing *How Things Work in Busytown*.	You may not have enough files specified in your CONFIG.SYS file.	Consult your DOS manual and change your CONFIG.SYS file to include the following statement: FILES=30.
How Things Work in Busytown displays the label "playground not installed" after installing all the playgrounds.	You may not have enough files specified in your CONFIG.SYS file.	Consult your DOS manual and change your CONFIG.SYS file to include the following statement: FILES=30.
How Things Work in Busytown crashes after starting up or reports that there is not enough memory free to run the program.	You need at least 520KB (530,000 bytes) of conventional memory free to run *How Things Work in Busytown*.	Type CHKDSK at DOS prompt. The number in the last line of CHKDSK information must be greater than 530,000 bytes. If it is less than this number, delete any unnecessary Terminate and Stay Resident or other programs that load when you start your computer. You may have to create a system boot disk for *How Things Work in Busytown*. Consult your DOS manual for instructions. Use this boot disk to start your computer. Then start *How Things Work in Busytown* in the normal manner.
The mouse does not work with *How Things Work in Busytown*.	You may not have a mouse driver installed. Some programs, including Microsoft Windows, have their own mouse drivers. Your mouse may work with *How Things Work in Busytown* unless you install a mouse driver from DOS.	Install the mouse driver according to the instructions in your DOS manual.
The volume controls jump several numbers at a time or have only two settings when you adjust the voice or music volume.	Your sound source supports only a limited number of sound levels.	No correction is required.
The program stops running abruptly when you have Sound Blaster emulation software installed.	The Sound Blaster emulation software causes a conflict with the *How Things Work* program.	Try one or both of these ways to solve the problem. First, try selecting Sound Blaster as the sound card option in the *How Things Work* setup program. Select Sound Blaster even if your sound card is of another type. If this does not correct the problem, edit your CONFIG.SYS file by typing REM in front of the line WSSXLAT.SYS. Save the new CONFIG.SYS file and restart your computer. (If you are unfamiliar with editing system files, consult your computer's documentation.)

MACINTOSH

| PROBLEM	POSSIBLE CAUSE	SOLUTION
The installation program reports that there is not enough hard disk space available to install *How Things Work in Busytown*.	*How Things Work in Busytown* requires at least 10.2 megabytes of hard disk space to install the Floppy version.	Remove folders, programs, and files from your hard drive until you have enough free space to install the playgrounds you wish.
Sound can be heard only faintly or not at all.	Speaker or *How Things Work in Busytown* volume may be set too low.	Turn up the speaker volume in the Sound Control Panel. Click the Control Panel under the Apple menu. Double-click the Sound Control Panel icon. Click and drag the volume slider to the maximum setting. Close the Sound Control Panel and Control Panel windows. Use the F6 and/or F8 keys to turn up the volume in *How Things Work in Busytown*. Use the F5 and/or F7 keys to turn down the volume. (Consult Music Notes in this guide for instructions.)
Your computer will not load one of the *How Things Work in Busytown* floppy disks or it reports that the disk is unreadable.	The disk is damaged.	Call (303) 339-7114 to obtain a replacement disk.
Your computer has trouble reading data from the *How Things Work in Busytown* CD-ROM.	The CD-ROM disk may be dirty.	Gently rub the bottom of the CD-ROM disk with a clean, dry cloth.
How Things Work in Busytown malfunctions after working successfully.	Some program data may have been corrupted on your hard disk.	Reinstall *How Things Work in Busytown*.
How Things Work in Busytown crashes after starting up or reports that there is not enough memory free to run the program.	You need at least 2 megabytes (2049 K) of memory free to run *How Things Work in Busytown*.	Close all other applications before running *How Things Work in Busytown*.

35
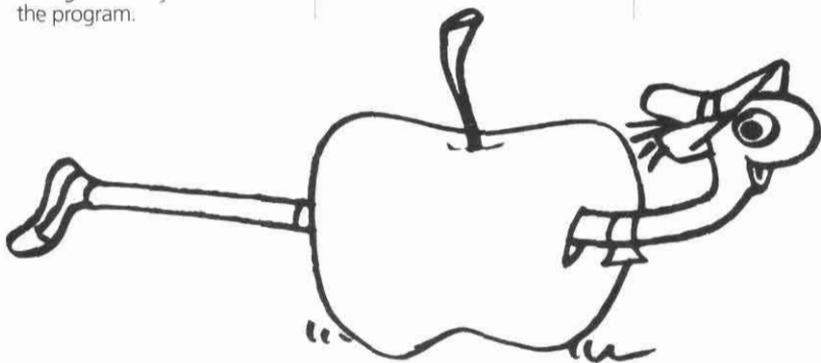
STICKERS
to cut out and color for certificate.

The
Farm

The
Recycling
Plant &
Toy Factory
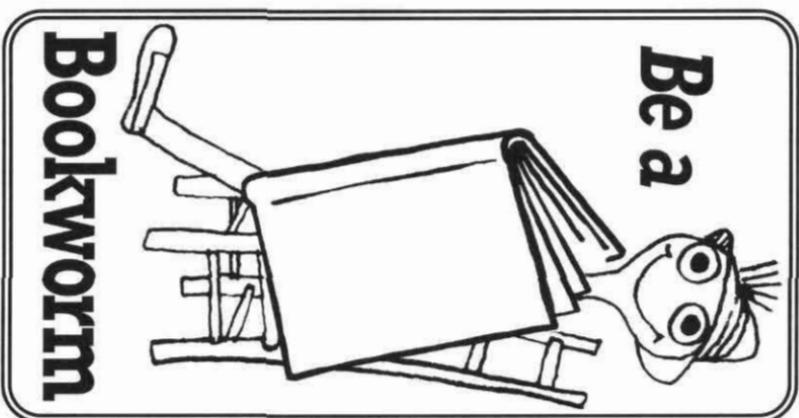
The
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Plant
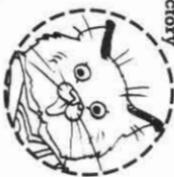
Road
Construction
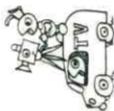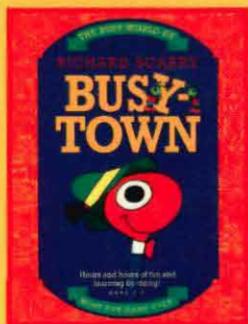
The
Flour
Mill

The
Bakery

The
Garbage
Truck

BOOKMARK

Be a

Bookworm

This is to certify that

_____
(Name)

has completed these *How Things Work* Playgrounds:

- The Assembly Plant
- Road Construction
- The Recycling Plant & Toy Factory
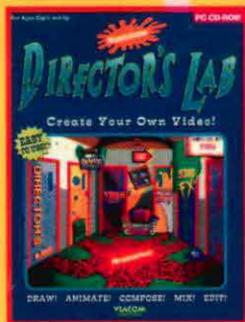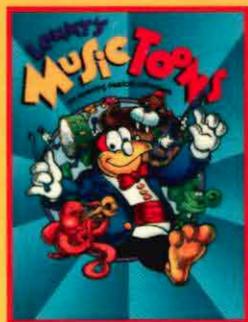- The Garbage Truck
- The Bakery
- The Flour Mill
- The Farm

and is now a Busytown star!

_____
(Signature, Date)

Look for these other exciting titles!
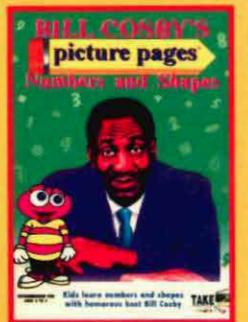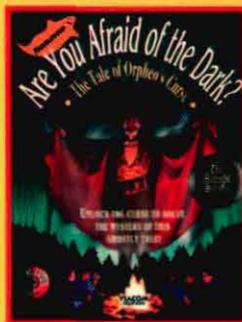
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