

# Pipeline™

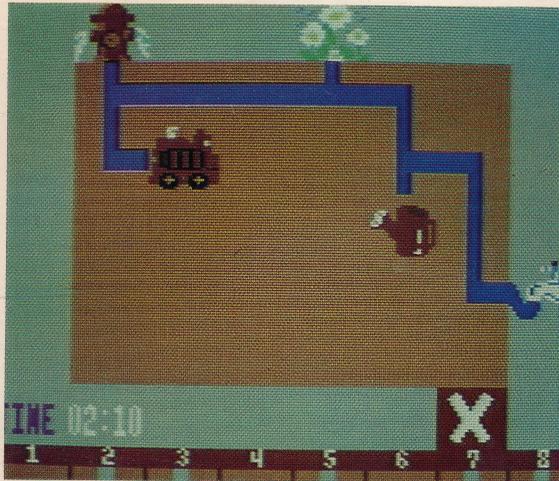
Thinking Strategies Series: Problem Solving  
Ages 8 & Up



# Pipeline™

Develops thinking skills such as defining a problem, experimenting with possible solutions, evaluating outcomes, recognizing patterns and determining part-whole relationships.

There are all kinds of problem-solving strategies that flow out of this challenging exercise. Learners from ages eight and up can practice important skills such as problem analysis, information gathering, and experimenting with possible solutions. Best of all, they'll get the connection between learning and fun.



Help! Someone forgot to connect the pipes to get the water flowing in the right direction. Experiment with various combinations of pipe shapes so that everything will get the water it needs. In the process, you'll get plenty of practice in problem solving. Want to increase the challenge? Set a time limit and connect all the pipes before the water flows. There are three levels of difficulty, so go ahead and take the plunge!

A Litag A.G. Software Product  
© 1985 by Educational Technologies, Ltd.  
Made in U.S.A.

# Pipeline™

For Apple II, II+, IIe, IIc/48K/3.3 DOS

© 1985 Learning Technologies, Inc.®  
Made in U.S.A.

Product No. P-A 07122A

ISBN: 0-926071-22-X





## DISKETTE CARE AND HANDLING INFORMATION



Protect  
Protéger

Protéger  
Schützen

保護



No  
Non

No  
Falsch

注意



Insert Carefully

Insertar

Inserer avec soin

Sorgfältig Einsetzen

挿入注意



Never  
Jamais

Nunca  
Nie

絶対禁止



10°C-52°C  
50°F-125°F



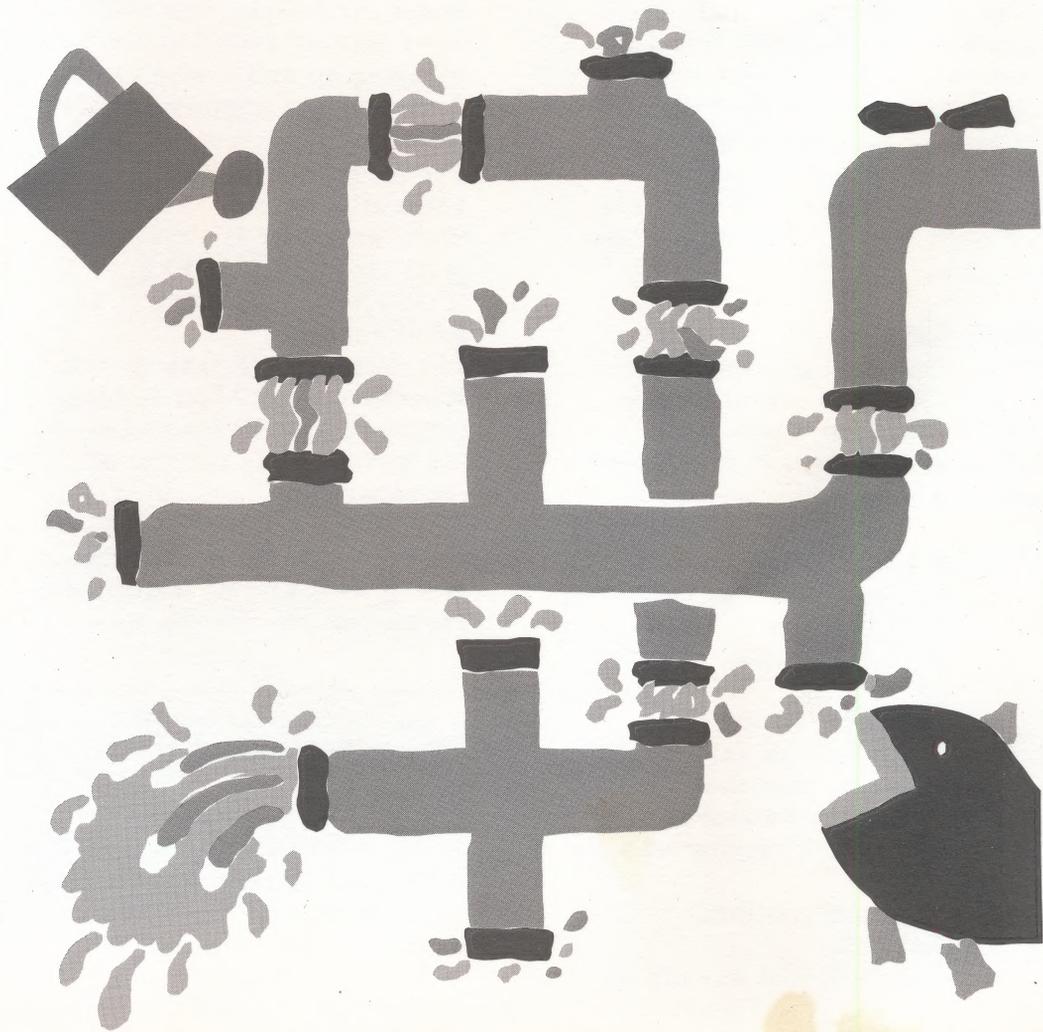
Never  
Jamais

Nunca  
Nie

絶対禁止

# Pipeline™

How to load it.  
How to use it.  
How to learn  
from it.



## ALL ABOUT IT

Help! Someone forgot to connect the water. Your job is to connect the various pipe segments so the water can flow in the right direction. Practice problem-solving in three (3) different levels or increase the challenge by trying to connect all the pipes within a time limit that you can set yourself. Either way, *Pipeline*™ will have you overflowing with imaginative solutions.

## YOUR GOAL

Experiment with pipe segments of various shapes to connect all the objects that need water. Race against a time limit or take all the time you need.

## HOW TO LOAD IT

Instructions for loading  
the Apple II, II+, IIe, and IIc

### **For the Apple II and II+:**

1. Insert the diskette into the disk drive making sure that the label is facing up and towards you.
2. Switch on the computer and the monitor.
3. The program will load automatically.
4. If the computer is already on, press **RESET** to restart the

program or type PR#6 and press **RETURN**.

### **For the Apple IIe and IIc:**

1. Insert the diskette into the disk drive making sure that the label is facing up and towards you.
2. Switch on the computer and the monitor.
3. The program will load automatically.
4. If the computer is already on, press the **OPEN APPLE**, **CONTROL** and **RESET** keys simultaneously.

The program will take several seconds to load. After it does, simply follow the directions on the screen to run the rest of the program.

On the Apple IIe and IIc, make sure **CAPS/LOCK** is depressed before you run the program.

Instructions for loading  
the Commodore 64 and 128

### **For the Commodore 64:**

1. Insert the diskette into the disk drive making sure that the label is facing up and towards you.
2. Switch on the computer, the disk drive and the monitor.
3. The screen will display the word **READY**.

4. Type the following:  
LOAD "LTI",8,1
5. Press **[RETURN]**. The program will take several seconds to load. After it does, simply follow the directions on the screen to run the rest of the program.

**For the Commodore 128:** If you are using a Commodore 128, you can use it just as if it were a Commodore 64. You may enter the C64 mode in one of two ways:

1. **With the power OFF**, hold down the **[COMMODORE]** key and press the ON/OFF switch. The familiar blue C64 screen display will appear with the word **READY**. From there, simply load the program as you would on the C64.
2. **When the computer is running in the C128 mode**, type the BASIC command and **GO 64**. Then, press **[RETURN]**. The computer will then respond with the words: **ARE YOU SURE?** Press **[Y]** and **[RETURN]** simultaneously and you will automatically enter the C64 mode. Now load the program as you would with a Commodore 64.

### Instructions for loading the IBM PC and PCjr

1. The IBM or compatible machine you are using should have the following:
  - \* A minimum of 128K memory.
  - \* A 2.0 or higher version of DOS.
  - \* A color graphics adapter card.
2. Insert the Disk Operating System (DOS) master diskette into drive A. Switch on the computer and monitor.
3. Press the **[ENTER]** key until the A> prompt appears. Remove the DOS diskette and insert the LTI program diskette. Type LTI and then press **[ENTER]**.
4. The program will load in a few seconds. When it does, simply follow the directions on the screen.
5. To leave the program at any time to return to DOS or to choose another program option, press **[ESC]**.

### HOW TO USE IT

1. **Select Options:**
  - A. **Sound** - When the screen reads, **DO YOU WANT SOUND?** do either of the following:  
Press **[Y]** to hear all sound effects.

Press  N to turn off all sound effects

**B. Directions** - When the screen reads, DO YOU WANT DIRECTIONS?, do either of the following:

Press  Y to see directions.

Press  N to not see directions.

**C. Level of Play** - The difficulty level is based on the number of the objects placed in and outside the square. The more objects there are, the more difficult the solution becomes. Select from the following:

**CHALLENGING:** Press  1 for the easiest level.

**MORE CHALLENGING:** Press  2 for more objects.

**A REAL CHALLENGE:** Press  3 for the most difficult level.

**D. Beat the clock!** - You can increase the challenge of *Pipeline*™ by setting a time limit to complete the program. After choosing the level of play, the next option screen will ask if you want to "Set Time?" Simply press  Y if you want this option. The program will then take you to a screen that will allow you to enter the time in minutes and seconds.

MINUTES                      SECONDS  
 0     2                      :     3     0

To enter the time you want, first enter the seconds and then the minutes. For example, to enter 2 minutes, 30 seconds, you would first enter a 0 in the box to the extreme right. When the 0 has been entered, then enter a 3 in the second box from the right. Each box that requires a number to be entered will flash until a number is entered. Then, enter a 2 in the third box from the right and finally a 0 in the last box from the right. To erase your entry, press the

SPACE BAR and enter again.

Press  RETURN to enter the time.

The time will begin to count down to 0 as soon as you press  RETURN and the program begins. When the time runs out, the water will begin to flow even if you don't have all the objects connected. So, be careful and work fast. If you would rather not work against a time limit, simply press  N.

2. **Connect the water:** At each level, you will see a specific number of objects that must be connected to the water tap. To connect them, use the various pipe segments which are pictured in the eight squares at the bottom of the screen (see Figure 1). Experiment with

various combinations of segments but make sure all objects are connected to the water spout. Be careful connecting the objects on the inside, however. Water can flow to those objects, but water will not flow *through* them.

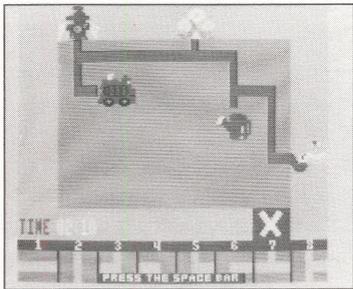


Figure 1

3. **Moving and positioning the pipe segments:** To properly position the pipe segments, you will have to move the flashing square that appears on the screen. To move it, use the following keys:

**Apple:**

Press **A** to move the square up.

Press **Z** to move the square down.

Press **→** to move the square right.

Press **←** to move the square left

**Commodore:**

Press **A** to move the square up.

Press **Z** to move the square down.

Press **>** to move the square right.

Press **<** to move the square left.

**IBM:**

Press **↑** to move the square up.

Press **↓** to move the square down.

Press **→** to move the square right.

Press **←** to move the square left.

4. **Erasing and replacing the pipe segments:**

**A. To erase a pipe segment -**

Move the flashing square to the pipe segment you want to erase and press the **SPACE BAR**.

**B. To replace a pipe segment -**

Move the flashing square to the pipe segment that is already in place. Then, press the number key that corresponds to the new segment you want in place. The new pipe segment will automatically replace the existing one.

5. **Watch the water flow:** Once you have connected all the objects to the water tap, press **RETURN** and watch the water flow.

6. Interpret feedback:
- A. If you have correctly connected all the objects to the tap, the water will flow to all the items and they will flash.
  - B. If you have not connected them correctly, the water will flow as far as it can and all the objects you have not connected will turn into an X. If there is an open pipe somewhere, the water will overflow.
7. Can't solve it? If you can't discover how to connect all the objects, press either **RETURN** to see the water flow or press:
- Apple: **ESC**  
Commodore: **F7**  
IBM: **ESC**
- After pressing the **SPACE BAR** you will return to the main menu where you may either choose a new level of play or quit the program completely.

### HOW TO LEARN FROM IT

*Pipeline*™ will provide learners 8 and older with practice in critical problem-solving skills such as:

- \* Analyzing problems
- \* Experimenting with multiple solutions
- \* Looking for patterns
- \* Determining whole-part relationships
- \* Using rules and models

Problem-solving strategies apply to all school subjects and generate life-long learning skills. Development of such high-level, non-verbal thinking leads to greater understanding, increased awareness and expanded powers of creativity.

Apple Product No. P-A07122A  
Commodore Product No. P-C07121A  
IBM Product No. P-I 07151A  
© 1985 Learning Technologies, Inc. made in USA

This software is copyrighted and all rights are reserved by Learning Technologies, Inc. and its affiliates. The sale or distribution of this software product is intended for the use of the original purchaser only and for use on Apple, Commodore 64 or IBM microcomputers. Copying, duplicating, selling or otherwise distributing this software product is hereby expressly forbidden.

Apple is a registered trademark of Apple Computer, Inc.

Commodore is a registered trademark of Commodore Business Machines, Inc.

IBM is a registered trademark of International Business Machines, Inc.

Neither Apple, Commodore nor IBM makes any warranties, either expressed or implied, regarding the enclosed software package or DOS as modified, its merchantability, or its fitness for any particular purpose.

Learning Technologies, Inc.  
4255 LBJ Freeway, Suite 131  
Dallas, TX 75244  
(214) 385-2351  
1-800-238-4277

ISBN: Apple 0-926071-22-x  
ISBN: Commodore 0-926071-21-1  
ISBN: IBM 0-926071-51-3