SCHOOL VERSION

THINKIN' THINGS COLLECTION 2™

Strengthen Students' Thinking with Five Innovative Activities!

1st to 6th Grade

Special Features:

Offers a unique assortment of tools and toys for the mind

Develops higher-level thinking skills

"Grow Slides" allow teachers and students to set difficulty levels

EDMARK®

SCHOOL VERSION

The Edmark Story

In the late 1960's, a group of educators at the University of Washington developed a dramatically different way to teach reading. This new method was remarkably effective with students who were unsuccessful using other programs. By slowly building skills, it ensured success and a feeling of confidence. The students who used this method began to believe in themselves and in their ability to read.

In 1970, the Edmark Corporation was formed to make the reading method and other quality educational products available to a broader market. Edmark's mission was to apply advanced educational concepts to the development of quality classroom materials. Since then, Edmark products have been used extensively in classrooms nationwide, and teachers have been vocal in their praise. "So much magic in one box!" wrote one.

Twenty-five years later, Edmark continues to find new ways of empowering children to learn. Computers provide an exciting tool for learning. Managed by educators, Edmark is leading the way in developing engaging, creative software based on proven educational concepts.

Now you can possess the same Edmark expertise that teachers have relied on for more than two decades. Edmark software provides a captivating method for using the computer to help your students to learn. Our first products for Macintosh and IBM/Compatible computers—*Millie's Math House, Bailey's Book House, Sammy's Science House, KidDesk,* and *Thinkin' Things Collection 1*—have received critical acclaim and major awards from educators and software experts. *Thinkin' Things Collection 2* and the *Imagination Express* series—*Neighborhood*, *Castle*, and *Rain Forest*—are the latest additions to our growing family of products designed specifically for students in the elementary grades.

At Edmark we are driven by the wondrous look of children learning something new. Our goal is to ensure that if Edmark's name is on the product, there's a world of learning inside.

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Table of Contents

Welcome to Thinkin' Things Collection 2

Today's students will live and work in an Information Age that we can only imagine. They will need basic skills, but they will also need a broader, higher level set of skills that will allow them to approach and master the content of the future. Given appropriate opportunities, the young mind is amazingly capable. *Thinkin' Things Collection 2* (for grades 1–6) is the second in a family of Edmark products designed to provide unique, engaging experiences that develop a variety of thinking skills: **memory, critical thinking, problem solving, and creativity**.

Thinkin' Things Collection 2 rewards and encourages intellectual diversity. Society's traditional view of intelligence as a single, measurable factor that will predict future success is broadening to include a view of human potential as a composite of multiple intelligences. You may notice strength in musical/rhythmic intelligence as your students learn Toony's Tunes or create rhythmic compositions for Oranga Banga's Band to play. You may observe visual/spatial intelligence as your students explore with 2-3D BLOX or Snake BLOX. Each activity is designed as a powerful mind toy that will stimulate your students' intellectual growth. In each Thinkin' Thing activity, self-confidence is enhanced; exploration, experimentation, and creativity are fostered; and persistence is rewarded with success.

Thinkin' Things Collection 2 also focuses attention on "how children learn." How do your students approach the new tools found in 2-3D BLOX and Snake BLOX? After discovering the function of one tool, do they combine that tool with another "to see what happens?" When playing Frippletration, is one student more likely to remember what is seen (visual matching) and another more likely to remember what is heard (auditory matching)? Progress can be monitored using the "See" and "Hear" Grow Slides.

At Edmark, we believe in the combination of solid educational methods with innovative technology to provide stimulating, unique educational experiences. *Thinkin' Things Collection 2* reflects our love of learning and our respect for diverse learning styles and the intellectual potential of children.

Our goal is to place the very best educational software in the hands of your students — to provide consistent quality that you can count on. Listening is a vital part of our development process. We listen to parents, children, teachers — and we would love to hear from you. What kind of software do you "wish we would make?" What did your students discover using 2-3D or Snake BLOX? What should *Thinkin' Things Collection 3* include? Please drop us a line, describe your needs, and join us in helping children discover the joy of learning.

The Edmark Development Team

SCHOOL VERSION

Teacher's Guide

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What's in this Guide?

Introductory Information (pages 3–10)

- Steps to start information
- Visual overview of the program
- Brief descriptions of each activity
- *Learning Opportunities* matrix
- Suggestions for introducing *Thinkin' Things Collection 2* to your students
- Reproducible pages for your students to use as Guided Tours of BLOX

Using Thinkin' Things Collection 2 (pages 11–28)

- **Overview** — gives a summary of the activity, learning opportunities, developmental information, and corresponding *Classroom Connections*.
- **Create Mode** — explains how your students can learn by exploring, experimenting, and creating.
- **Question & Answer Mode and Learn-A-Song Mode** — explains how a character takes charge and is looking for a "correct" response. The character also offers gentle help and fun rewards.

Adult Section (pages 29–33)

- How to customize the software for students
- How to adapt the program for students with special needs
- How to access additional features if *Thinkin' Things Collection 2* is run from *KidDesk*

Classroom Connections (pages 34–73)

- Suggested "away from the computer" activities which can be integrated within many curricular areas. These activities strengthen the learning opportunities found in *Thinkin' Things Collection 2*.
- Additional suggestions for students (individually or in small groups) to try at the computer.
- "Hints" for you to share with students as they work with BLOX software activities.
- "How Did They Do That?" pages which offer tips to help students understand how the BLOX Ideas were created.
- Suggestions for using *Thinkin' Things Collection 2* with students who have special needs.

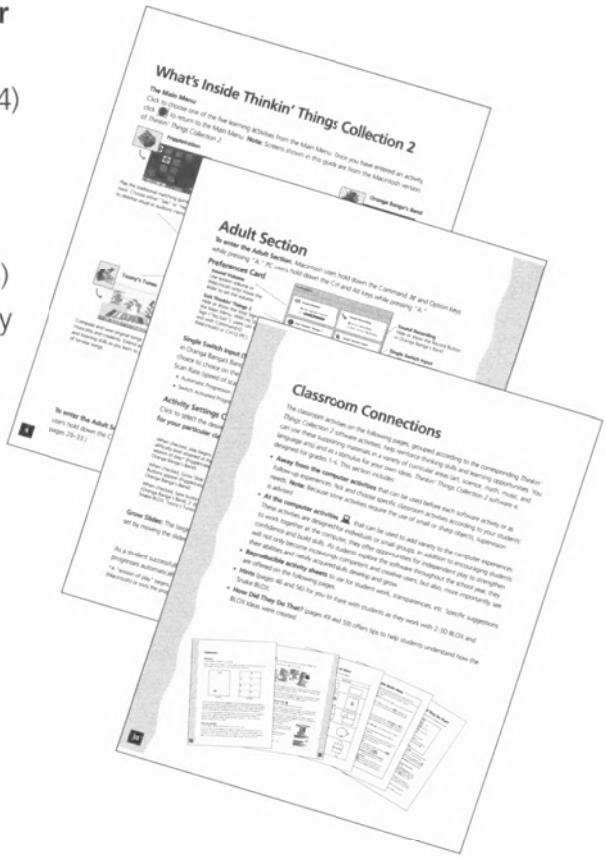
Technical Information for Macintosh and PC/Compatibles (pages 74–84)

- Separate technical sections for Macintosh and PC/Compatible users: installation instructions, technical support, and troubleshooting
- Warranty information

Steps to Start

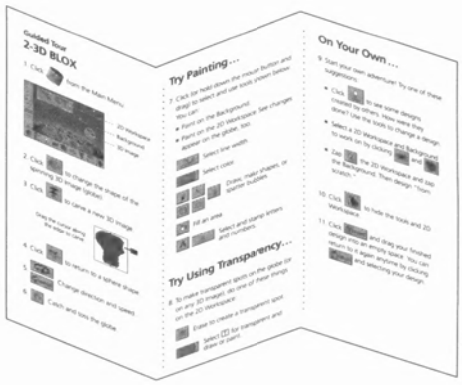
1. Check to be sure Thinkin' Things Collection 2 is installed.

- If the software has not been installed, see *Installation* (page 75 for Macintosh users; pages 79–80 for PC/Compatible users).



2. Read the Teacher's Guide and become familiar with the program.

- *What's Inside Thinkin' Things Collection 2* (page 4) and the *Learning Opportunities* matrix (page 5) will give you a brief overview. Before you introduce the program to your students, read *Using Thinkin' Things Collection 2* (pages 11–28) as you try each activity at the computer. You may find the Guided Tours, pages 9 and 10, helpful when you try the BLOX activities.
- See the *Adult Section* of the *Teacher's Guide* (pages 29–33) to customize the program. (You can adjust the Grow Slides, turn scanning on/off, etc. If students will be running *Thinkin' Things Collection 2* from *KidDesk*, explore the additional features available.)
- Skim *Classroom Connections* (pages 34–71) and decide which of these additional computer activities and "away from the computer" activities you wish to use.



3. Introduce Thinkin' Things Collection 2 to your students.

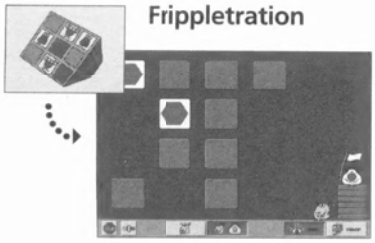
- See *Introducing Thinkin' Things Collection 2 to Your Students* (pages 6–8) for suggestions.
- Reproduce pages 9 and 10 for students to use as Guided Tours of the BLOX activities.

What's Inside Thinkin' Things Collection 2

The Main Menu

Click to choose one of the five learning activities from the Main Menu. Once you have entered an activity, click STOP to return to the Main Menu. **Note:** Screens shown in this guide are from the Macintosh version of *Thinkin' Things Collection 2*.

Frippletration



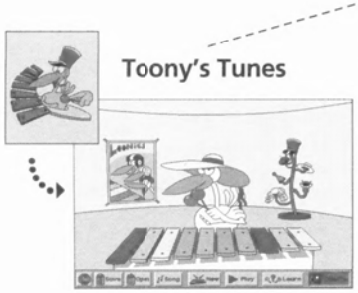
Play the traditional matching game with a new twist. Choose either "See" or "Hear" problems to develop visual or auditory memory.

Oranga Banga's Band

Develop rhythmic creativity and awareness of rhythmic notation as you create one-, two-, or three-part patterns and are challenged to match what you see to what you hear.

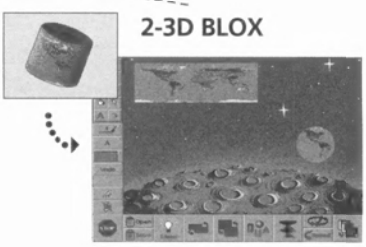
Main Menu

Toony's Tunes



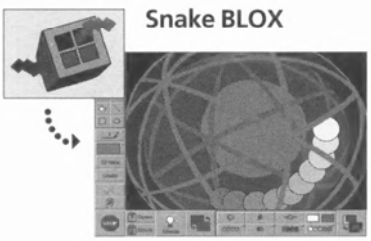
Compose and save original songs to develop musicality and creativity. Extend auditory memory and listening skills as you learn to play a variety of familiar songs.

2-3D BLOX



Create and map two-dimensional pictures onto three-dimensional shapes. Build visual awareness as you experiment with positive and negative space.

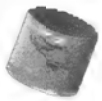
Snake BLOX



Use a "masking" tool to separate pictures into foreground and background layers. Make paths over and under the layers with a "snake" of trailing shapes as you explore illusions and create dynamic visual effects.

To enter the Adult Section, PC users hold down the Ctrl and Alt keys while pressing "A." Macintosh users hold down the Command ⌘ and Option keys while pressing "A." (For more information, see pages 29–33.)

Learning Opportunities

	 Oranga Banga's Band	 2-3D BLOX	 Snake BLOX	 Toony's Tunes	 Frippletration
Read and write rhythm patterns	X				
Experiment with notation and symbol/sound relationships	X				
Enhance creativity	X	X	X	X	
Strengthen auditory discrimination	X			X	X
Foster observation and analysis	X	X	X	X	X
Experiment with mapping two-dimensional pictures onto three-dimensional images		X			
Work with visual perception, dimension, and spatial awareness		X	X		
Create unique optical effects and animated art		X	X		
Apply concepts of positive and negative space		X	X		
Use a variety of tools to manipulate visual images		X	X		
Work with illusion of depth based on overlapping			X		
Learn to play familiar songs				X	
Compose songs				X	
Strengthen auditory memory				X	X
Remember or repeat patterns				X	X
Identify matching attributes					X
Strengthen visual discrimination and memory					X
Recognize preference for visual or auditory input					X

Introducing Thinkin' Things Collection 2 to Your Students

Thinkin' Things Collection 2 was carefully field-tested with a wide variety of students. The tips that follow will allow you to benefit from what we learned in our field testing.

Your Introduction Counts!

Students benefit enormously from an effective introduction to *Thinkin' Things Collection 2*. *Thinkin' Things Collection 2* is easy to use, but without your introduction, students may miss important features. The Guided Tours (pages 9 and 10) are particularly helpful for explaining the BLOX activities' main features. Think of your introduction as the key to maximizing learning possibilities.

Share Helpful Hints

Observe students as they work at computers, giving timely hints. For example, you might suggest that a student wanting to mask all the blue areas in a Snake BLOX design use the  instead of the  . Or, you might challenge a student to pick a design using  , analyze it, and create a variation of it.

Maximize Learning Opportunities

Students can use *Thinkin' Things Collection 2* for months without exhausting all of its possibilities. Each time students return to an activity, they make new discoveries and work at higher levels. Allow students repeated, spaced blocks of computer time over several months to build their skills. Our field testers found that *Thinkin' Things Collection 2* could be used successfully with many types of learners (visual learners, the musically inclined, students interested in spatial reasoning, autistic students, students with Down's syndrome, students requiring stimulating challenges, and others).

Enrich the Computer Experiences

Pages 34–70 of this guide are filled with ideas that complement each of the five software activities of *Thinkin' Things Collection 2*. Some are intriguing computer ideas; others are activities for the classroom. Each idea is designed not only to educate, but to add fun to the day. The activities can be done by the whole class or can be adapted for use with individuals (or small groups) who could benefit from enrichment or extension activities. You may want to use some of these ideas as preliminary activities **before** students work at the computer. For example, "Snake Weaving" (page 52) could be used prior to playing with Snake BLOX at the computer.

So let's begin . . .

Specific ideas for introducing each *Thinkin' Things Collection 2* activity to your students follow. Demonstrate on a computer with a large screen monitor if possible. Be sure the Grow Slides (pages 29–30) are set at appropriate levels for your students. (If students will be running *Thinkin' Things Collection 2* from *KidDesk*, see *KidDesk Aware*, pages 31–33.) Begin by naming each activity on the Main Menu and pointing out the Stop Sign.

Oranga Banga's Band (pages 11–14)

In Create Mode, demonstrate how to hear the whole band play and how to hear individual musician's rhythm lines. Click the arrows under the musicians to show how to change the instruments. Demonstrate how to create rhythms by clicking the squares (to turn the dots on or off). Encourage students to use the Idea Button for inspiration, pointing out that they can create rhythms like these or alter the rhythms to suit themselves.

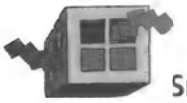
Later, click New to demonstrate how to select wacky sounds or record new sounds My Sound. Show students how to save rhythms they have created. Younger students may need an explanation of OK and Cancel.

Also, show students how to switch to the Question & Answer Mode. Select Which and explain that they should click **which** rhythm line the musician played; select Who and explain that they should click **who** played the highlighted rhythm line. Demonstrate how to adjust the Grow Slides to change the difficulty levels (unless the Grow Slides have been turned off in the Adult Section).

2-3D BLOX (pages 15–18)

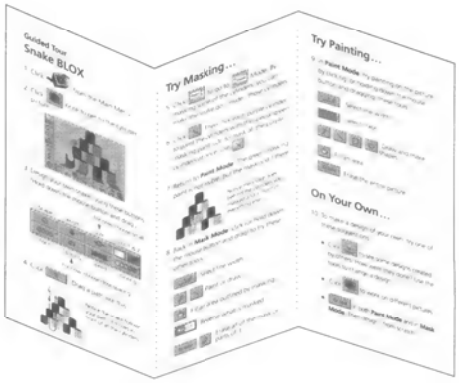
Make copies of page 9 for the students and fold them accordion style. **Use this Guided Tour to introduce 2-3D BLOX**. Older students may be able to follow this tour independently. For younger students, you can make the tour page into a transparency and guide the students through each step as they work at their computers.

Encourage students to cycle through the designs accessed with and explain that these designs can be made using 2-3D BLOX.



Snake BLOX (pages 19–22)

Explain to students that this activity allows them to separate a picture into foreground and background layers. Then they can make a path for a "snake" of shapes to go between the layers. Make copies of page 10 for the students and fold them accordion style. **Use this Guided Tour to introduce Snake BLOX**. Older students may be able to follow this tour independently. For younger students, make the tour page into a transparency and guide them step by step as they work at their computers.



Encourage students to cycle through the designs accessed with  and explain that each can be made using Snake BLOX. Explain how students can save and open designs they have created.

If further explanation of masking is needed, use a pencil and sheet of paper to demonstrate as shown below:

1. Hold up a piece of paper and ask students to pretend that the paper is the background.

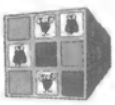
2. Hold a pencil (to represent the snake) in front of the paper. Wiggle the pencil in front of the paper and explain that the snake is in front of the background.

3. Tear the paper and have a volunteer hold the torn piece in front of the background. Wiggle the pencil behind the "mask" (foreground) and in front of the background to demonstrate how the mask hides part of the snake.

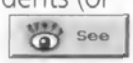
Toony's Tunes (pages 23–26)

In the Create Mode, briefly demonstrate how to play the xylophone, choose different xylophones, and listen to songs. Then allow time for students to experiment in this mode and to compose tunes. Younger students may need some help, but older students can explore on their own. Show students how to save their songs and open saved songs.

Demonstrate the Learn-A-Song Mode. Explain that in this mode, Toony teaches one part of a song at a time until the whole song is learned. Encourage students to take time to learn an entire song.



Frippletration (pages 27–28)

Point out that Frippletration is a matching game that can be played by one or two students (or teams). Explain that the goal is to match two squares. Encourage students to try both 

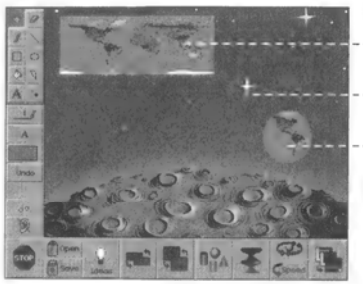
and 

games. Explain that the Grow Slides will move up automatically as the players are successful. Demonstrate how students can adjust the Grow Slides to change the difficulty level (unless the Grow Slides have been turned off in the Adult Section). You may want to suggest that students work as teams to tackle the more difficult levels.

Guided Tour

2-3D BLOX

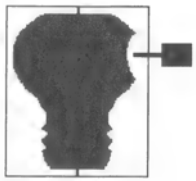
1. Click  from the Main Menu.



2. Click  to change the shape of the spinning 3D Image (globe).

3. Click  to carve a new 3D Image.

Drag the cursor along the edge to carve.



4. Click  to return to a sphere shape.

5.  Change direction and speed.

6.  Catch and toss the globe.

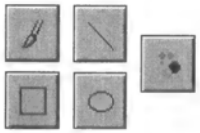
Try Painting...

7. Click (or hold down the mouse button and drag) to select and use tools shown below. You can:

   - Paint on the Background.
   - Paint on the 2D Workspace. See changes appear on the globe, too.

 Select line width.

 Select color.

 Draw, make shapes, or spatter bubbles.

 Fill an area.

 Select and stamp letters and numbers.

Try Using Transparency...

8. To make transparent spots on the globe (or on any 3D Image), do one of these things on the 2D Workspace:

 Erase to create a transparent spot.

 Select [T] for transparent and draw or paint.

On Your Own...

9. Start your own adventure! Try one of these suggestions:

   - Click  to see some designs created by others. How were they done? Use the tools to change a design.
   - Select a 2D Workspace and Background to work on by clicking  and  .
   - Zap  the 2D Workspace and zap the Background. Then design "from scratch."

10. Click  to hide the tools and 2D Workspace.

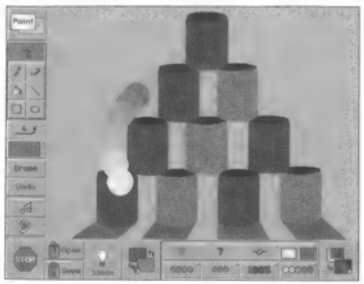
11. Click  and drag your finished design into an empty space. You can return to it again anytime by clicking  and selecting your design.

Guided Tour

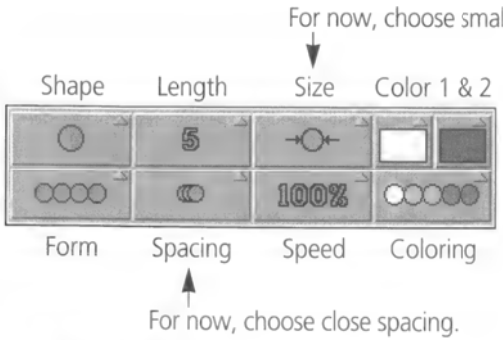
Snake BLOX

1. Click  from the Main Menu.

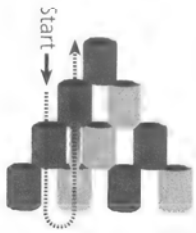
2. Click  once to get to the cylinder picture:



3. Design your own snake, using these buttons. (Hold down the mouse button and drag.)



4. Click  . Drag a path like this:



Notice the snake follows your path. It moves in front of all the cylinders.

Try Masking...

5. Click  to go to  Mode. By masking some of the cylinders, you can make the snake go "inside" those cylinders.

6. Click  . Then click each purple cylinder to paint the cylinders with the special green masking paint. (Or, to mask all the purple cylinders at once, use  .)

7. Return to **Paint Mode**. The green masking paint is not visible, but the mask is still there.

Notice the snake goes behind the cylinders you masked and in front of everything else.

8. Back in **Mask Mode**, click (or hold down the mouse button and drag) to try these other tools:

 Select line width.

 Paint or draw.

 Fill an area outlined by masking.

 Reverse what is masked.

 Erase all of the mask or parts of it.

Try Painting...

9. In **Paint Mode**, try painting on the picture by clicking (or holding down the mouse button and dragging) these tools:

 Select line width.

 Select color.

 Draw and make shapes.

 Fill an area.

 Erase the entire picture.

On Your Own...

10. To make a design of your own, try one of these suggestions:

- Click  to see some designs created by others. How were they done? Use the tools to change a design.
- Click  to work on different pictures.
-  in both **Paint Mode** and in **Mask Mode**. Then design "from scratch."

Oranga Banga's Band Overview

In the Create Mode, students write one-, two-, and three-part rhythms for Oranga Banga's Band. They use original sounds, select wacky voices, or record their own sounds for each of the three instruments that Crocker, Oranga, and Punkie play. In the Question & Answer Mode, students are challenged to match band members to the rhythm lines they play.

Learning Opportunities

- Read and write rhythm patterns
- Experiment with one-, two-, and three-part rhythmic notation
- Develop rhythmic creativity
- Enhance auditory discrimination
- Strengthen symbol/sound relationships
- Strengthen observation skills

About Kids

Rhythms are naturally appealing. Children of every culture play games accompanied by clapping or chants. Oranga Banga's Band offers an opportunity to explore rhythmic creativity while building an understanding of the sight-to-symbol relationships underlying the writing of music. For students who have not been involved in any type of musical group, the concept of a separate line of music for each instrument may be new. For young children who are still acquiring reading skills, the "left to right" eye movement involved can be beneficial. Any student, regardless of musical talent, can create interesting rhythmic compositions for Oranga Banga's Band. Instead of thinking of a student's creative ability as a "gift," try thinking of it more like a muscle that needs exercise to grow. Encourage students to create frequently—rhythms for Oranga's Band, tunes for Toony to play, or works of art using Snake BLOX or 2-3D BLOX. The time you take to enjoy these creations is a great investment in each student's self-esteem.

Classroom Connections (pages 35–39)

Create Mode

- Click  from the Main Menu to play with Oranga Banga's Band.

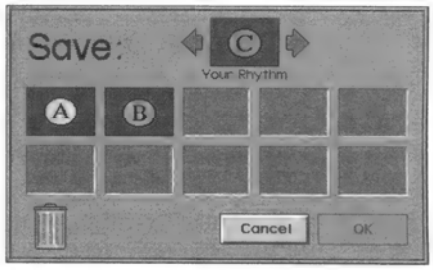
"Click Play and listen to us."

- Click Play to listen to the whole band play.
- Click  to change instruments. Each musician plays three different instruments.
- Click Idea to hear some rhythmic compositions. Use these ideas to help create your own rhythms, or listen to them just for fun!
- Click Crocker Rocker  , Oranga Banga  , or Punkie Poodle  to hear each musician's rhythm line.
- Click  to erase a rhythm line.
- Click the squares (turning dots on or off) to write a rhythm line for each musician to play.

- Click New to change the sound of the instruments. Then click preset sound , wacky voice , or My Sound . Click Record to record your own sound.
- Click Q&A for the Question & Answer Mode, or click STOP to choose another Thinkin' Thing.

Saving Your Rhythm

Save To save your rhythm:

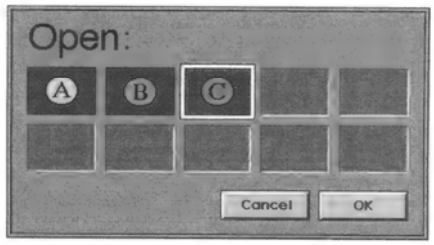


- Use ◆ C ◆ to select a colored letter to represent your rhythm.
- Drag the letter that represents your rhythm to an empty rectangle.
- Click OK to save your rhythm.

To delete a previously saved rhythm:

- Drag the letter that represents your rhythm to the trash can.
- Click OK to empty the trash can.

Open To open a previously saved rhythm:



- Click the rhythm you want to hear.
- Click OK to hear the Band play your rhythm.

Question & Answer Mode

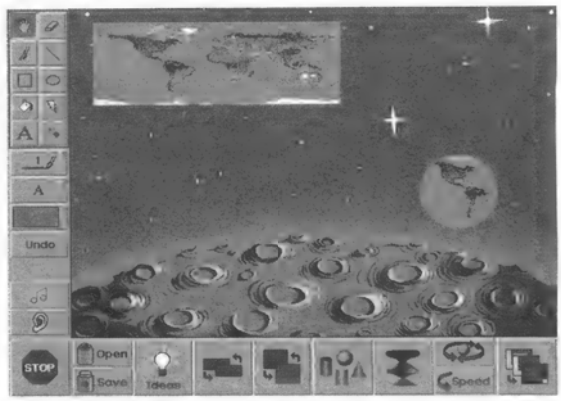
- Click Q&A to enter the Question & Answer Mode.
- Click ? Which or ? Who. Characters will ask, "**Which** line did I play?" or "**Who** played that?"
- Oranga says, "Click 'Play' and listen to me."

"Click ▶ Play and listen to me."

- Oranga plays and then asks, "Which line did I play?"
- Click the rhythm line that matches the rhythm you heard.
  - If you answer correctly, Oranga and the Band will congratulate you.
  - If you do not answer correctly, click "Play" and listen to Oranga again.
- Click ? Who to try "Who played that?" problems.
- Click ▶ Play to hear two or three of the musicians play a rhythm. A rhythm line is highlighted, and Oranga asks, "Who played that line?"
- Click the musician who played the rhythm line.
- Click the Grow Slide button to change the difficulty level of the problems.
- Click Create for the Create Mode, or click STOP to choose another Thinkin' Thing.

From the Adult Section, you can turn students' access to the Grow Slide on/off **or** adjust the difficulty level after assessing students' abilities (see pages 29–33).

2-3D BLOX Overview



2-3D BLOX offers a powerful environment in which to experiment with and explore dimension and optical illusion. Pictures from the 2D Workspace are instantly mapped onto the 3D Image that spins in front of a Background. Students select 2D Workspace pictures and Background pictures from prepared sets to create interesting designs. Students can also paint original 2D Workspace pictures and Background pictures using paint, shape, lettering, and numbering tools.

Learning Opportunities

- Experiment with mapping two-dimensional pictures onto three-dimensional images
- Work with visual perception, dimension, and spatial awareness
- Create unique optical effects
- Encourage visual creativity
- Apply concepts of positive and negative space
- Use a variety of tools to manipulate visual images

About Kids

Students will choose to explore 2-3D BLOX in a variety of ways, depending upon age, experience with other tools (such as paint programs), visual maturity, and comfort with experimentation. One student may focus on creating pictures in the 2D Workspace to map as a 3D Image. Another will invest more time exploring the Lathe Tool, carving unique 3D Images. A third student may be intrigued by erasing one part of the 2D Workspace picture in order to look into the hollow 3D Image, while a fourth student becomes fascinated using the transparent color in exploring positive and negative space. Many students will experiment with prepared pictures for both the 3D Image and the Background before they begin creating their own original designs. Observing as students work with this environment can provide valuable insight into the way they approach new things, explore options, learn what is possible, and then apply what was learned to create something new.

2-3D BLOX Guided Tour (page 9)
Classroom Connections (pages 40–51)
2-3D BLOX Hints (page 46)
2-3D BLOX: How Did They Do That? (page 49)

Create Mode

- Click  from the Main Menu to play with the 2-3D BLOX.

Exploring 2-3D BLOX

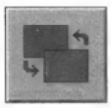
Cycle through design ideas created by others.

Change the shape of the 3D Image.

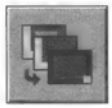
Choose music to complement your visual design.

Switch the music on or off.

Cycle through prepared 2D Workspace pictures. (Hold down the Alt or Option key to cycle in reverse order.)



Cycle through prepared Background pictures. (Hold down the Alt or Option key to cycle in reverse order.)



Hide or show the 2D Workspace, tools, and controls.

Moving the 2D Workspace and 3D Image

Use the Hand Tool to drag the 2D Workspace or 3D Image to a new location.

The 3D Image can be "tossed" by releasing the mouse button while dragging, and "caught" by holding the mouse button down while the mouse is in the path of the moving image.

Painting in the 2D Workspace and Background


Erase paint from the picture. If you erase paint from the 2D Workspace picture, it will create a transparent area on the 3D Image. (Try erasing part of the world.)


Paint on the picture.


Draw a rectangle or square.
(Hold down the Alt or Option key for a filled shape.)


Fill a continuous area of the picture with paint.


Stamp letters or numbers onto the picture.


Choose the width of the brush used for the paint brush, lines, shapes, and bubbles.


Choose the letter or number to stamp on the picture.


Draw a straight line.


Draw an ellipse or circle.
(Hold down the Alt or Option key for a filled shape.)


Fill the entire picture with paint.


Spatter randomly colored bubbles.


Choose the paint color.
The transparent "color" [T] is white in the 2D Workspace and transparent on the 3D Image.

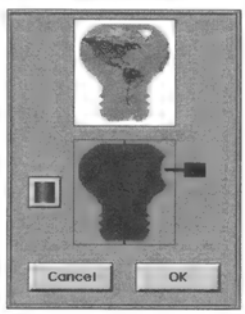
Undo (or redo) the last action.

3D Image Controls


Change the shape of the 3D Image.

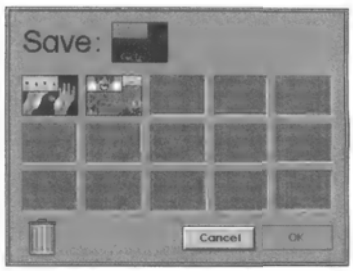

Switch the direction of rotation.

Change the speed of rotation.



Lathe Tool: drag the cursor along the edge of the shape to carve a new 3D Image.

Saving Your Design



To save your design:

- Drag the miniaturized version of your design (thumbnail) to an empty rectangle.
- Click OK to save the design.

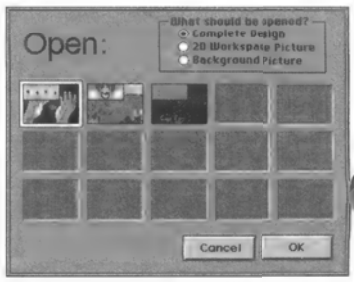
To delete a previously saved design:

- Drag the thumbnail of the unwanted design to the trash can.
- Click OK to empty the trash can.

To open a previously saved design:

- Click the thumbnail of the design you wish to open.
- Click OK to open and view the design.

Macintosh users can also choose to open only the 2D Workspace or Background picture.

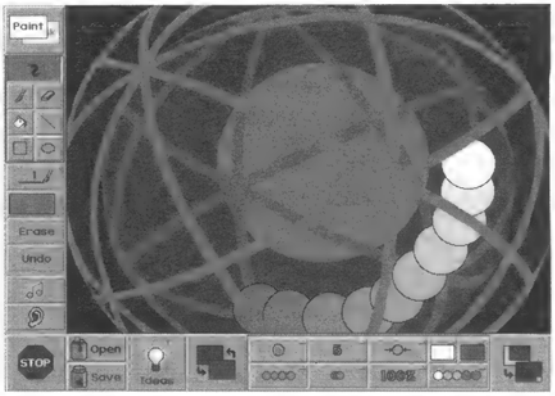


Macintosh users can access special save and open features (such as importing a picture from another program) by holding down the Option key when clicking Save or Open. For more information on importing pictures, see "2-3D BLOX Hints," (page 46).

KidDesk Aware

If *Thinkin' Things Collection 2* is run from *KidDesk*, each student can individually save ideas. See *KidDesk Aware*, pages 31–33.

Snake BLOX Overview



Students use a "masking" tool to separate prepared pictures or their own drawings into foreground and background layers. Then they set a "snake" of trailing shapes in motion under or over the layers to create a powerful three-dimensional illusion. The mask can be "inverted," and instantly what was once the foreground is the background.

Learning Opportunities

- Work with an illusion of depth based on overlapping
- Create and conduct experiments with the Snake and Mask Tools
- Create an animated piece of art
- Foster observation, visual analysis, and visual synthesis
- Enhance visual creativity

About Kids

Artistically, the Snake BLOX tools empower creation of a wide variety of images and visual effects. Amazing designs can be constructed. Even students who do not consider themselves to be particularly creative may well become caught up in the creative process if you ask a few questions to encourage investigation. "How does this tool work?" "What can you do if you use these two tools together?" "What if you took one of the Ideas (Ideas Button) and changed it?"

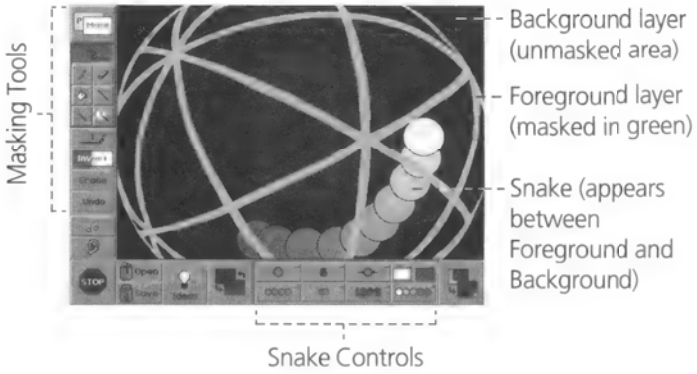
Scientifically, the Snake BLOX tools afford a rich environment for experimentation. Trial and error, cause and effect, and manipulation of independent and dependent variables become natural extensions of "play." Snake BLOX is a **new** environment. No one has mastered these tools—no one "knows it all." There is great opportunity for authentic learning and for "learning how to learn." Students can pose real problems and work out real solutions to those problems. Each student can become the expert. Let your students share discoveries with classmates, teaching each other as they learn. Over time, this will strengthen self-confidence, enhance communication skills, and help build a foundation for visual literacy.

Snake BLOX Guided Tour (page 10)
Classroom Connections (pages 52–59)
Snake BLOX Hints (page 56)
Snake BLOX: How Did They Do That? (page 59)

Create Mode

- Click  from the Main Menu to play with Snake BLOX.

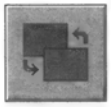
Paint Mode



Mask Mode

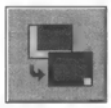
Exploring Snake BLOX

Cycle through design ideas created by others. (Switch to Mask Mode to see the mask.)



Cycle through prepared pictures. (Hold down the Alt or Option key to cycle in reverse order.)

Choose music to complement your visual design.



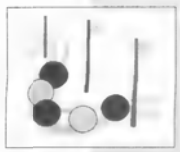
Hide or show the tools and controls.

Switch the music on or off.

Select Snake Tool. Drag the snake cursor across the picture to create a path of dots for the "snake of shapes" to follow. The snake follows your path at a speed proportionate to that at which you moved the mouse. Hold down the Alt or Option key to see the snake path.

Switch between Paint Mode and Mask Mode.

- In Paint Mode, you paint directly on the picture.
- In Mask Mode, you cover portions of the picture with a green colored masking paint. The mask separates the picture into a foreground layer and background layer. The snake will move between the two layers.



Paint Mode  Painting Tools

Use the painting tools to paint directly on the picture.

- Paint freehand on the picture.
- Fill a continuous area of the picture with paint.
- Draw a rectangle or square. (Hold down the Alt or Option key for a filled shape.)
- Choose the width of the brush used for the paint brush, lines, and shapes.
- Choose the paint color.
- Erase paint from the picture.
- Draw a straight line.
- Draw an ellipse or circle. (Hold down the Alt or Option key for a filled shape.)
- Erase — Erase the entire picture.
- Undo — Undo (or redo) the last action.

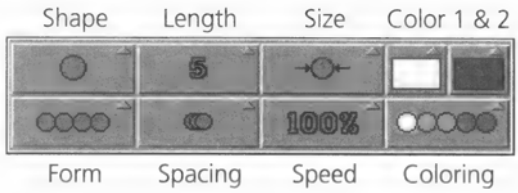
Mask Mode  Masking Tools

Use the masking tools to put special green masking paint on your picture. The green masking paint is visible only in Mask Mode. The mask separates the picture into a foreground layer (masked in green) and a background layer. The snake is drawn between the two layers.

- Paint masking paint on the picture.
- Fill empty area of the mask with masking paint.
- Mask a continuous area of color in the picture.
- Choose the width of the masking brush and line tools.
- Invert — Invert the entire mask.
- Erase masking paint from the picture.
- Draw a straight line of masking paint.
- Mask a color in the picture everywhere the color appears.
- Erase — Erase the entire mask.
- Undo — Undo (or redo) the last action.

Snake BLOX

Snake Controls



Shape
Choose the kind of shapes used to draw the snake.

Form
Choose the form of your snake. Several of the forms can be used to simulate 3D perspective:

 Shapes in the snake are larger when closer to the bottom of the screen.

 Shapes in the snake are *smaller* when closer to the perspective point.

 Shapes in the snake are *larger* when closer to the perspective point.

The perspective point is normally in the center of the picture. To change the perspective point, select the Snake Tool, hold down the Alt or Option key, and click on a new position.

Length
Choose the number of shapes in the snake.

Size
Choose the size of the shapes in the snake.

Spacing
Choose the spacing between shapes in the snake.

Speed
Choose the speed of the snake (as a percentage of the speed at which you drew the snake path).

Color 1 & 2, Coloring
Choose the colors and coloring options for your snake. The following coloring option is particularly effective with the "perspective" snake forms:

 Color of each shape in the snake is based on the shape's size.

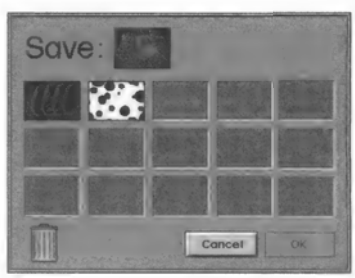
Saving Your Design

To save your design:

- Drag the miniaturized version of your design (thumbnail) to an empty rectangle.
- Click OK to save the design.

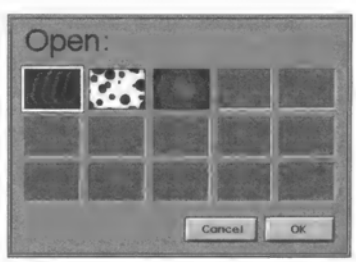
To delete a previously saved design:

- Drag the thumbnail of the unwanted design to the trash can.
- Click OK to empty the trash can.



To open a previously saved design:

- Click the thumbnail of the design you wish to open.
- Click OK to open and view the design.



Macintosh users can access special save and open features (such as importing a picture from another program) by holding down the Option key when clicking Save or Open. For more information on importing pictures, see "Snake BLOX Hints," (page 56).

KidDesk Aware

If *Thinkin' Things Collection 2* is run from *KidDesk*, each student can individually save ideas. See *KidDesk Aware*, pages 31–33.

Toony's Tunes Overview

In the Create Mode, students improvise and compose on one of four unique xylophones and can save their original musical patterns and songs. They also listen to favorite songs included with the program. In the Learn-A-Song Mode, Toony helps students extend auditory memory as they learn a favorite song.

Learning Opportunities

- Learn to play a variety of familiar songs
- Strengthen auditory memory
- Compose songs
- Remember and repeat patterns
- Develop creativity and musicality
- Strengthen auditory discrimination of pitch
- Discover that a song is made of separate parts which combine to create the whole song

About Kids

Students take great pride in being able to play favorite tunes. In the Create Mode, composing, saving, and sharing original songs will foster creativity. In the Learn-A-Song Mode, Toony encourages students to listen and remember, patiently helping them learn favorite tunes part by part. Do not underestimate the difficulty in learning and correctly performing these tunes. For all except those who have outstanding musical talent or exceptional auditory memory, mastering a tune may be a very challenging task. Allow students to play their favorite tunes for each other. By observing, you may discover that they have special talents and are interested in learning more about music.

Classroom Connections (pages 60–65)

Create Mode

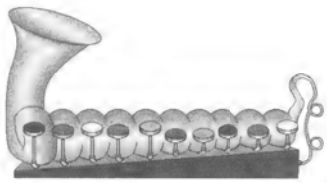
• Click  from the Main Menu to play with Toony's Tunes.

"Make a song or listen to one."

- Click the bars of the xylophone to hear the sounds they make and create your own tunes. You can also use the computer keyboard keys from 1 to 0 to play the xylophone.
- Click  or click Toony. Toony plays what you played.
- To listen to one of Toony's Tunes, click  .
- Click the song you want to hear. Click  to hear Toony play the song.

- Click New to play on other xylophones.
- Explore the different xylophones and make up tunes as long as you like.





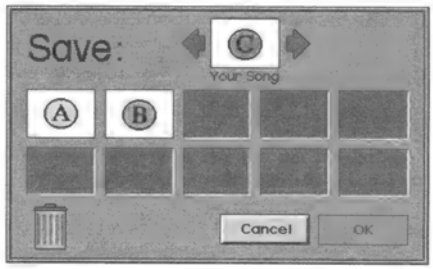
- Click Learn for the Learn-A-Song Mode, or click STOP to choose another Thinkin' Thing.

Saving Your Song

Save

To save your song:

- Use C to select a colored letter to represent your song.
- Drag the letter that represents your song to an empty rectangle.
- Click OK to save your song.



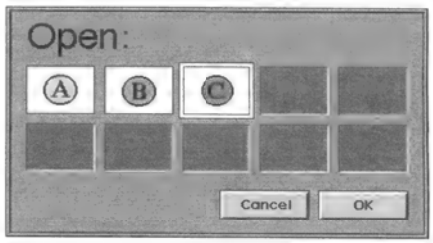
To delete a previously saved song:

- Drag the letter that represents your song to the trash can.
- Click OK to empty the trash can.

Open

To open a previously saved song:

- Click the song you want to hear.
- Click OK to hear Toony play your song.



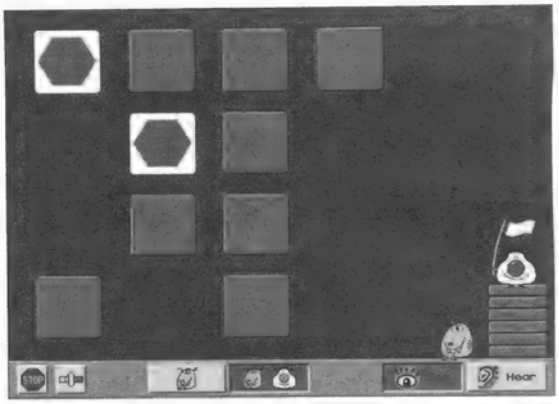
Learn-A-Song Mode

- Click Learn to enter Learn-A-Song Mode.
- Click Song to choose a song to learn.

"Click Song to learn a song."

- To hear a sample of a song, click a song icon, for example, . Click OK to learn that song. If you change your mind, click Cancel.
- Toony plays the whole song and then helps you to learn the song one part at a time.
- Click the xylophone bars or press the computer keyboard keys from 1 to 0 to play the part of the song you heard. If you want to hear that part of the song again, click Toony.
  - If you repeat the part of the song correctly, Toony will go on to the next part. Wait for Toony to play, or click Toony to hear the next part.
  - If you do not repeat the part of the song correctly, keep trying. Toony will help you learn each part.
- If you play ahead correctly, Toony will keep up with you.
- To interrupt Toony, click the screen.
- Keep working to learn the whole song.
- Click Create for the Create Mode, or click STOP to choose another Thinkin' Thing.

Frippletration Overview



Students click one tile and then another until two matching tiles are found, continuing until all the tiles are matched in pairs. Frippletration may be played with one or two players or with small teams. "See" and "Hear" Buttons allow a choice of either visual or auditory challenges. A student can use the Grow Slides to adjust the level of difficulty and self-monitor progress (unless this option has been turned off in the Adult Section).

Learning Opportunities

- Identify matching attributes
- Strengthen auditory memory
- Strengthen auditory discrimination
- Strengthen visual memory
- Strengthen visual discrimination
- Recognize preference for visual or auditory input

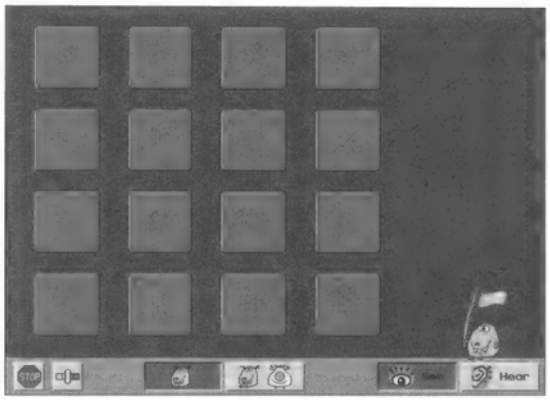
About Kids

Children have enjoyed various forms of this classic memory matching game for generations. Frippletration offers a unique twist by allowing a choice of either auditory or visual challenges, with a wide range of difficulty (controlled by a Grow Slide) for each type. As a student is successful, more difficult challenges are offered, and the slider on the Grow Slide automatically moves up. Since progress is recorded on two separate Grow Slides (one for visual challenges, one for auditory challenges), you may notice that a student strongly prefers or is more proficient with one or the other. This observation can provide valuable insight into each student's individual learning style.

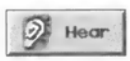
Classroom Connections (pages 66–71)

Question & Answer Mode

Click  from the Main Menu to play Frippletration.



"Match what you see."

- Click one tile and then another, continuing until two matching tiles are found.
- Click  to play by yourself. When you make a match, two tiles are added to your stack. 
- Click  to play Frippletration with a friend. The Fripples will keep track of how many matches each player makes by adding tiles to the stacks. 
- Click  for auditory challenges.
- Click  for visual challenges.
- Click the Grow Slide Button  to change the difficulty level of the problems.
- Click  to choose another Thinkin' Thing.

From the Adult Section, you can turn students' access to the Grow Slide on/off **or** adjust the difficulty level after assessing students' abilities (see pages 29–33).

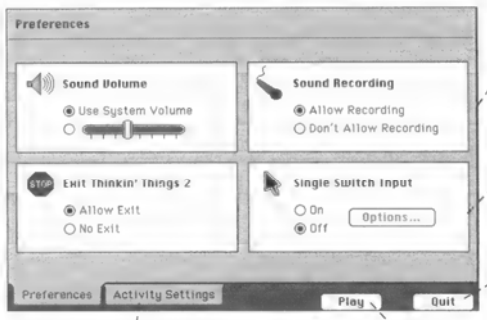
Adult Section

To enter the Adult Section, Macintosh users hold down the Command ⌘ and Option keys while pressing "A." PC users hold down the Ctrl and Alt keys while pressing "A."

Preferences Card

Sound Volume
Use system volume or (Macintosh only) move the slider to set the volume.

Exit Thinkin' Things 2
Hide or show the Stop Sign on the Main Menu. With no Stop Sign ("No Exit"), users can still exit with Command-Q (Macintosh) or Ctrl-Q (PC).



Sound Recording
Hide or show the Record Button in Oranga Banga's Band.

Single Switch Input
See "Single Switch Input (Scanning)" below.

To exit *Thinkin' Things Collection 2*

To go to Activity Settings Card (see below)

To go to Main Menu

Single Switch Input (Scanning): For students with special needs, single switch input is available in Oranga Banga's Band, Frippletration, and Toony's Tunes. A scanning arrow will move from choice to choice on the screen. Turn "Single Switch Input" on and click Options... to choose the Scan Rate (speed of scanning arrow movement) and the type of Scan Progression:

- Automatic Progression: Scanning restarts automatically after each selection.
- Switch Activated Progression: Switch required to restart scanning after each selection.

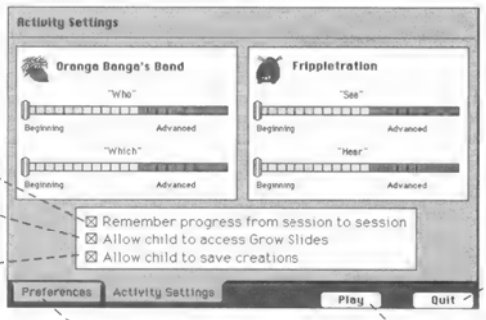
Activity Settings Card

Click to select the desired settings. **See the chart on the next page for details on settings for your particular classroom situation.**

When checked, play begins at the difficulty level attained at the previous session of play* (Frippletration, Oranga Banga's Band).

When checked, Grow Slide Buttons appear (Frippletration, Oranga Banga's Band).

When checked, Save buttons appear (Oranga Banga's Band, 2-3D BLOX, Snake BLOX, Toony's Tunes).



See "Grow Slides" below.

To exit *Thinkin' Things Collection 2*

To go to Preferences Card (see above)

To go to Main Menu

Grow Slides: The beginning difficulty levels for Frippletration and Oranga Banga's Band can be set by moving the sliders on the Grow Slides.

As a student successfully solves problems, more difficult problems are offered and the slider progresses automatically.

*A "session of play" begins when a student enters an activity and ends when the student goes to the Main Menu (Macintosh) or exits the program (PC).

Activity settings	...for a single user	...for multiple users
☒ **Remember progress from session to session** ☒ **Allow child to access Grow Slides**	The teacher can set the starting difficulty level using the Grow Slides on the Activity Settings Card. **Grow Slides will track and show** progress in a single session and from session to session. However, if the **student manually adjusts the Grow Slides** while playing, progress will then be tracked from the student's readjusted setting. Play always begins at the difficulty level attained during the previous session of play.	Because "Remember progress . . ." is designed to track progress of an individual student, we **do not recommend this choice** for multiple users (unless the program is being run from *KidDesk**).
☐ **Remember progress from session to session** ☐ **Allow child to access Grow Slides**	The teacher can set the starting difficulty level using the Grow Slides on the Activity Settings Card. As the student is successful in an activity, the **difficulty level will increase during that session of play, but the progress record will not be preserved**. Therefore, the next session of play will always begin at the difficulty level set on the Activity Settings Card.	The teacher can set the starting difficulty level using the Grow Slides on the Activity Settings Card. As a student is successful in an activity, the difficulty level will increase during that session of play. **The level achieved by one student will not affect the starting level of another student**. The setting will revert to the level on the Activity Settings Card at the next session of play.
☒ **Remember progress from session to session** ☐ **Allow child to access Grow Slides**	The teacher can set the starting difficulty level using the Grow Slides on the Activity Settings Card. Grow Slides will track and show progress in a single session and from session to session. Play always begins at the difficulty level attained during the previous session of play. The **record will be preserved** because the student will not be able to adjust the Grow Slide manually.	Because "Remember progress . . ." is designed to track progress of an individual student, we **do not recommend this choice** for multiple users (unless the program is being run from *KidDesk**).
☐ **Remember progress from session to session** ☒ **Allow child to access Grow Slides**	The teacher can set the starting difficulty level using the Grow Slides on the Activity Settings Card. However, **students can manually change the setting as they play** in an activity. If the student returns to the activity at a later session of play, **the setting reverts to the difficulty level set on the Activity Settings Card**. The progress record will not be preserved.	The teacher can set the starting difficulty level using the Grow Slides on the Activity Settings Card. **Individual students can also manually adjust the Grow Slides** as they play. In the next session of play, the difficulty level will revert to the level on the Activity Settings Card. Therefore, **one student's adjustments of the Grow Slides will not affect the settings for another student** using the program at a later session.

* If you are running *Thinkin' Things Collection 2* from *KidDesk*, you can customize settings for each student in your class. See *KidDesk Aware*, pages 31–33.

KidDesk Aware

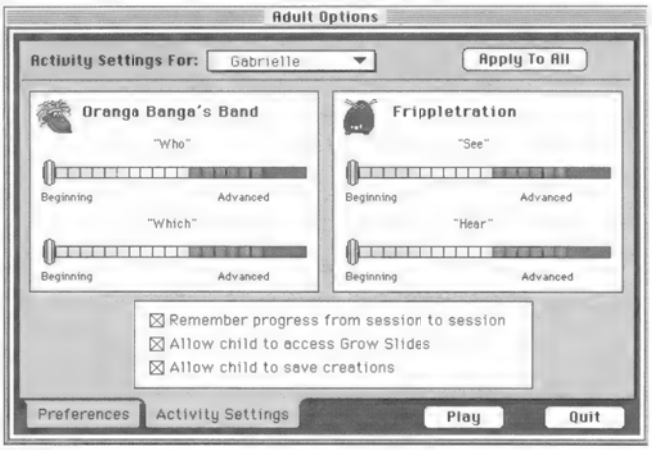
What is KidDesk?

KidDesk, a separate program published by Edmark, gives students a place of their own on the computer—a personalized, colorful desktop that provides hard drive security by letting them run only those programs that you, the teacher, select for their use. Each desk includes useful, fun accessories such as a 13-month calendar, a calculator, a message machine, and a talking clock.

Using KidDesk to Customize Thinkin' Things Collection 2

(Macintosh users: System 7 or higher required)

Running *Thinkin' Things Collection 2* from *KidDesk* allows you to control and monitor each student's progress from the Adult Section of *Thinkin' Things Collection 2*. Using the pop-up menu [Gabrielle ▾] and the [Apply To All] button that appear on the Activity Settings Card, you can adjust the Grow Slides and/or "Remember Progress . . ." setting for students individually or as a group.



- To start all students at the **same** difficulty levels and monitor progress individually:
  1) Make sure that all students have been added to *KidDesk* and that *Thinkin' Things Collection 2* has been added to their desks.
  2) Run *Thinkin' Things Collection 2* from a student's *KidDesk* desk.
  3) Go to the Adult Section of *Thinkin' Things Collection 2*.
  4) Click the tab of the Activity Settings Card.
  5) Set the desired difficulty levels for your students on the Grow Slides.
  6) Make sure an "X" appears in the "Remember Progress . . ." check box.
  7) Click [Apply To All].

Monitor progress at any time using the pop-up menu to select a student. The student's Grow Slides are displayed with the difficulty levels achieved by that student.

KidDesk Aware (cont.)

- To start each student at **different** difficulty levels and monitor progress individually:
  1) Make sure that all students have been added to *KidDesk* and that *Thinkin' Things Collection 2* has been added to their desks.
  2) Run *Thinkin' Things Collection 2* from a student's *KidDesk* desk.
  3) Go to the Adult Section of *Thinkin' Things Collection 2*.
  4) Click the tab of the Activity Settings Card.
  5) Select the student's name from the pop-up menu [Gabrielle ▾].
  6) Drag the sliders on the Grow Slides to the desired difficulty levels for the student.
  7) Make sure an "X" appears in the student's "Remember Progress . . ." check box.
  8) Repeat steps 5, 6, and 7 for each student.

Monitor progress at any time using the pop-up menu to select a student. The student's Grow Slides are displayed with the difficulty levels achieved by that student.

Additional features when running Thinkin' Things Collection 2 from KidDesk

- The Stop Sign on the *Thinkin' Things Collection 2* Main Menu is replaced with a *KidDesk* icon 

. Click this icon to return to *KidDesk*.
- Each student can save rhythms in Oranga Banga's Band, designs in 2-3D BLOX and Snake BLOX, and songs in Toony's Tunes. To see or hear a student's saved creations, run *Thinkin' Things Collection 2* from that student's desk.
- Each student can record and save sounds for Oranga Banga's Band. To hear a student's saved sounds, run *Thinkin' Things Collection 2* from that student's desk.
- In the Adult Section, use the pop-up menu [Gabrielle ▾] on the Activity Settings Card to show the settings for each *KidDesk* user. Changes affect only the selected user.
- In the Adult Section, click this button [Apply To All] to apply the current settings shown on the Activity Settings Card to all *KidDesk* users.
- *Thinkin' Things Collection 2* uses the *KidDesk* scanning settings. You can temporarily change the settings, however, on the Preferences Card in the Adult Section using Single Switch Input. Changes remain in effect until the student returns to *KidDesk*.

KidDesk Aware (cont.)

PC Users: Running Thinkin' Things Collection 2 through KidDesk or KidDesk Family Edition

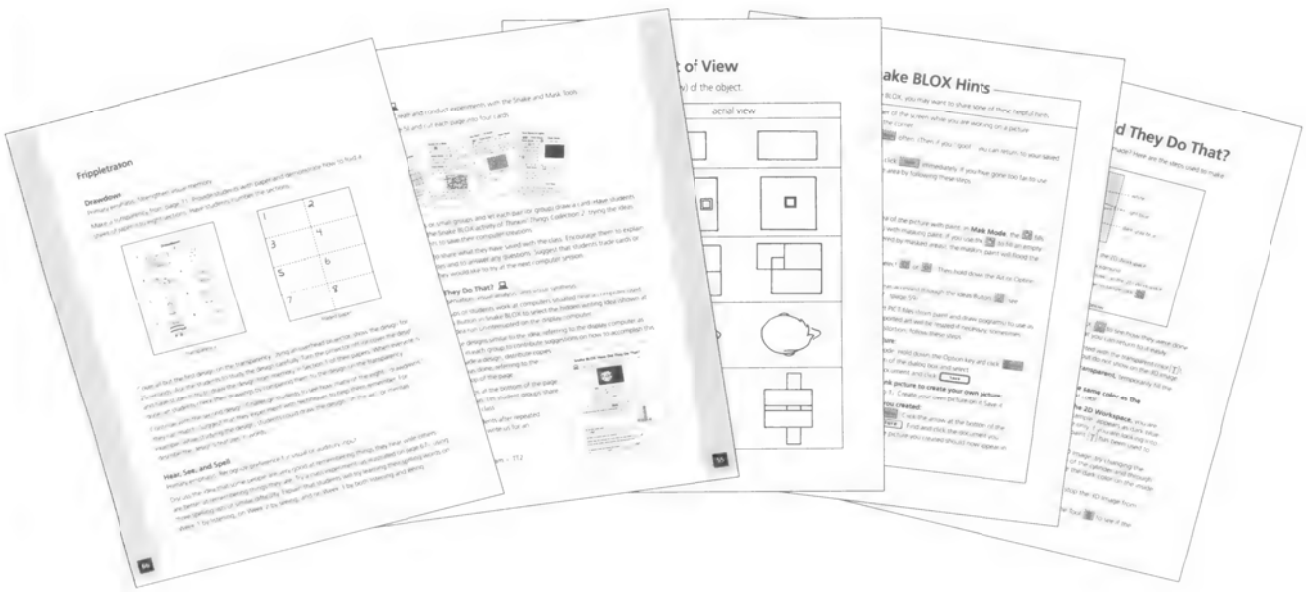
- To run *Thinkin' Things Collection 2* through *KidDesk* (DOS version): add **c:\tt2\tt2.exe**. (If using the CD-ROM version, add **c:\edmark\cd\tt2\tt2.exe**.)
- To run *Thinkin' Things Collection 2* through *KidDesk Family Edition*, do one of the following (depending upon which configuration worked when you originally installed *Thinkin' Things Collection 2*):
  - Using your Windows sound configuration: add **c:\tt2\tt2w.exe**. (If using the CD-ROM version, add **c:\edmark\cd\tt2\tt2w.exe**.)
  - Suspending Windows: add **c:\tt2\tt2.exe** and then select the "Run from DOS" option. (If using the CD-ROM version, add **c:\edmark\cd\tt2\tt2.exe** and then select the "Run from DOS" option.)
  - Running directly from Windows: add **c:\tt2\tt2.exe**. (If using the CD-ROM version, add **c:\edmark\cd\tt2\tt2.exe**.)
- If you choose to run *Thinkin' Things Collection 2* from a *KidDesk Family Edition* desktop accessory, use **DOS c:\tt2\tt2.exe** in the accessory run line. (If using the CD-ROM version, use **DOS c:\edmark\cd\tt2\tt2.exe**.)

Note: If the hard disk to which you installed *Thinkin' Things Collection 2* disk version is other than **c:**, substitute the appropriate information.

Classroom Connections

The classroom activities on the following pages, grouped according to the corresponding *Thinkin' Things Collection 2* software activities, help reinforce thinking skills and learning opportunities. You can use these supporting materials in a variety of curricular areas (art, science, math, music, and language arts) and as a stimulus for your own ideas. *Thinkin' Things Collection 2* software is designed for grades 1–6. This section includes:

- **Away from the computer activities** that can be used before each software activity or as follow-up experiences. Pick and choose specific classroom activities according to your students' needs. **Note:** Because some activities require the use of small or sharp objects, supervision is advised.
- **At the computer activities**  that can be used to add variety to the computer experiences. These activities are designed for individuals or small groups. In addition to encouraging students to work together at the computer, they offer opportunities for independent play to strengthen confidence and build skills. As students explore the software throughout the school year, they will not only become increasingly competent and creative users, but also, more importantly, see their abilities and newly acquired skills develop and grow.
- **Reproducible activity sheets** to use for student work, transparencies, etc. Specific suggestions are offered on the following pages.
- **Hints** (pages 46 and 56) for you to share with students as they work with 2-3D BLOX and Snake BLOX.
- **How Did They Do That?** (pages 49 and 59) offers tips to help students understand how the BLOX Ideas were created.



Oranga Banga's Band

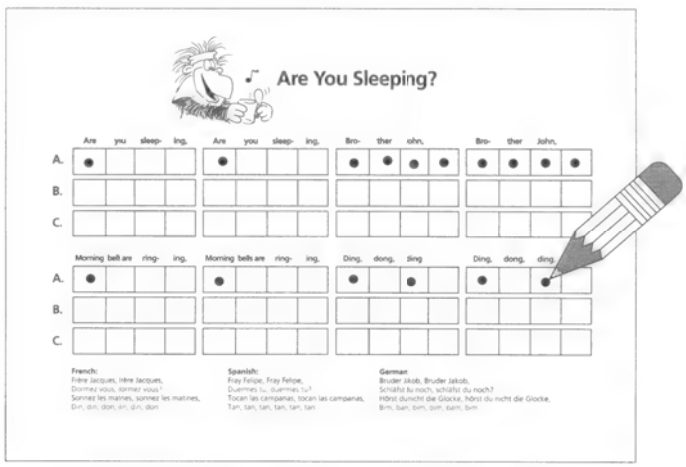
We've Got Rhythm

Primary emphasis: Experiment with one- and three-part rhythmic notation

Divide the class into four groups (one group of singers, three groups of instrumentalists). All students in an instrumental group will play the same instrument, but each group should choose a different instrument. Let students invent their own instruments or use one of these ideas:

- Run an unsharpened pencil along the teeth of a comb.
- Stretch a rubber band around a book and snap it.
- Tap the bottom of a milk carton with a pencil.
- Tap a jar or mug with a spoon or the metal band of a pencil.

On copies of page 38, have each instrumental group compose a rhythm for "Are You Sleeping?" by placing dots in the rectangles of Line A. Before combining the groups for a three-part rhythm, have the groups practice their rhythms separately, making sure that they keep a steady beat. The singers should practice their part, too, in one or more of the languages on the Activity Sheet.



Enlist a volunteer to act as conductor and combine the singers and the instrumental groups for a classroom performance. Discuss the results together and let the groups make revisions, using Line B on the Activity Sheets. Try out the new three-part rhythm. Discuss the results and, if desired, use Line C to make a final revision.

Older students may want to perform the song as a round. (Divide each group in half. One half begins on the first measure; the other half comes in on the third measure.) Your class may also enjoy experimenting with other songs and instruments.

Your Own Kind of Music

Primary emphasis: Develop rhythmic creativity

Encourage students to make up their own sounds for the instruments in Oranga Banga's Band. Ask them to look at each instrument (each musician has three different instruments) and decide what they THINK it should sound like. Ask, for example, "What would the moon sound like if you could play the moon?" Then students can record new sounds for the instruments. Give a few suggestions of the types of "equipment" they could use to make new sounds:

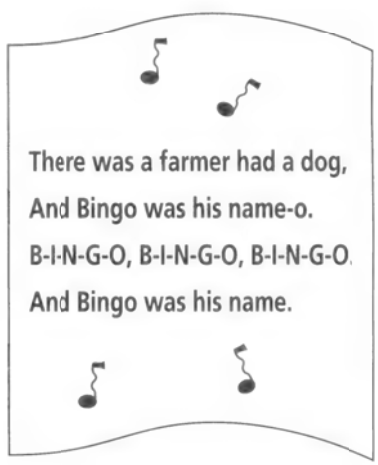
- different rhythm instruments
- band or orchestra instruments (trying a variety of notes)
- mouth or hands — to make clicks, pops, hollow sounds, etc.
- pots, pans, jars, etc.
- pencils and rulers — to click together or to snap on a desktop
- their own vocal chords — to hum or make unusual sounds
- bells, whistles, etc.

For a twist on this activity, have students record an "unexpected sound" for each instrument. For example, students could record a "meow" for the cow bell. They may enjoy recording students' names, interesting words, or different animal sounds.

B-I-N-G-O

Primary emphasis: Enhance auditory discrimination and memory

Sing (or read in chorus) the words to the folk song "B-I-N-G-O." Continue in the traditional manner, clapping (not singing) on "B" the second time through, on "B" and "I" the third time through, etc.



Try this "Bingo" technique on other familiar songs, substituting clapping for words in the song. Each time you repeat the song, clap on an additional word until all the words of the phrase are clapped instead of sung.

Songs with repeating phrases work best, for example:

"Oh, Dear, What Can the Matter Be?" . . . . . clap on "what can the matter be"
"Are You Sleeping?" . . . . . clap on "morning bells are ringing"
"The Old Gray Mare" . . . . . clap on "ain't what she used to be"
"For He's a Jolly Good Fellow" . . . . . clap on "for he's a jolly good fellow"

After the students have worked on several songs, ask them to listen carefully as you clap out one of the rhythm patterns. Can they identify the song?

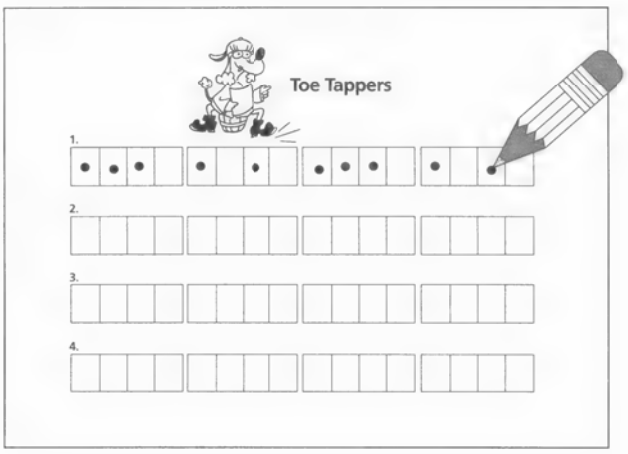
Toe Tappers

Primary emphasis: Read and write rhythm patterns

Make a copy of page 39 for each student. Point out to students that the rows of squares on the page are like the rhythm lines in the Oranga Banga's Band activity of *Thinkin' Things Collection 2*. Explain that students will be drawing dots in the squares to make up interesting rhythm patterns. They can tap out the rhythms by tapping their fingertips on their desks or by tapping their toes.

Younger students might enjoy writing and rewriting their rhythms with dried beans. Then, the beans can be replaced with pencil dots. Have students continue the process with the remaining rhythm lines.

Older students can work in groups of two to four, completing rhythm lines to be played together. Let the groups perform their "toe tappers" for the class.



A Different Drummer

Primary emphasis: Strengthen symbol/sound relationships

In the Create Mode, have students play one of the rhythm lines along with the Oranga Banga band member. They can tap the rhythm out with a pencil or ruler on their desks. Once students have mastered this individually, they can work in groups of three at the computer with each student simultaneously tapping out the rhythm line of a different Oranga Banga band member. (When working in groups, each student should have a different "instrument" — a marker cap on a finger, a pencil or ruler, a spoon and tin can, etc.)

Encourage students to compose some rhythm patterns of their own (by placing dots in the boxes of each rhythm line) and practice playing their original compositions. Then students can click "Play" to have Oranga Banga's band play along with them. Have students save patterns they like.

Are You Sleeping?

	Are	you	sleep-	ing,	Are	you	sleep-	ing,	Bro-	ther	John,		Bro-	ther	John,	
A.																
B.																
C.																

	Morning	bells are	ring-	ing,	Morning	bells are	ring-	ing,	Ding,	dong,	ding		Ding,	dong,	ding.	
A.																
B.																
C.																

French:
Frère Jacques, Frère Jacques,
Dormez vous, dormez vous?
Sonnez les matines, sonnez les matines,
Din, din, don, din, din, don.

Spanish:
Fray Felipe, Fray Felipe,
Duermes tú, duermes tú?
Tocan las campanas, tocan las campanas,
Tan, tan, tan, tan, tan, tan.

German:
Bruder Jakob, Bruder Jakob,
Schläfst du noch, schläfst du noch?
Hörst du nicht die Glocke, hörst du nicht die Glocke,
Bim, bam, bim, bim, bam, bim.

Use with "We Got Rhythm" (page 35).

Toe Tappers

1.

2.

3.

4.

Use with "Toe Tappers" (page 37).

2-3D BLOX

Stretchy Putty

Primary emphasis: Manipulate visual images

To prepare stretchy putty, follow the recipe below. If you have a large class, it may be more convenient to mix two or three batches than to make a double or triple recipe.

Stretchy Putty

Mix well —
10 ounces liquid starch
20 ounces white glue

Cover and refrigerate overnight. Bring to room temperature before using.

Makes about 10 golf ball size lumps.

Below are suggestions for student experimentation. (Tell students to knead the putty between experiments to "clean it.")

- Press the putty onto a colorful comic strip frame. The image will transfer onto the putty. Slowly stretch the putty horizontally, vertically, and diagonally to see how the image changes.
- Using non-permanent markers, draw a face on paper. Press the putty onto the paper to pick up the image. Try changing the face by pulling the putty in different directions, by wrapping it around your hand, and by stretching it around a can. Draw additional faces. Stretch and wrap them around a golf ball, a cardboard cone, and other three-dimensional objects. Try this experiment with drawings of squares, triangles, and circles.
- Roll the putty into a smooth ball. Using non-permanent markers, draw a colorful design on paper (waves work well) and pick up the image by gently rolling the ball across the paper. Then try rolling the putty ball across a table top to see how movement affects the design.
- Make up your own experiments. You can combine your putty with other classmates' putty for experiments which require a larger amount.

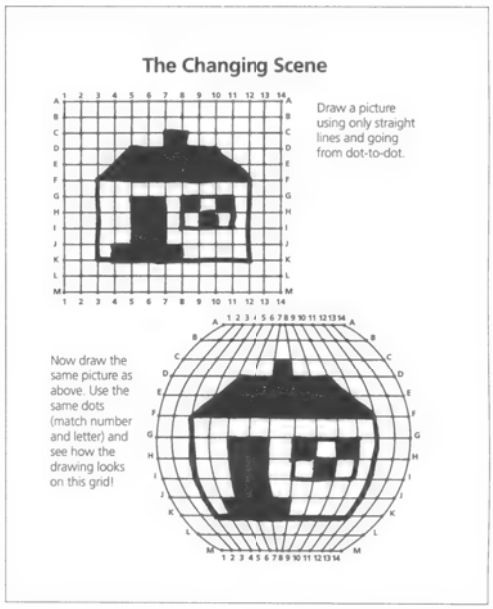
Note: The putty can be stored in tightly closed plastic bags at room temperature for a week or two. Do not use putty on fabric.

The Changing Scene

Primary emphasis: Experiment with mapping

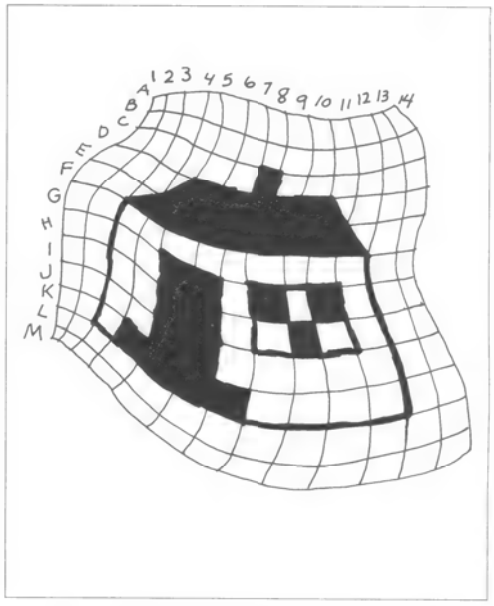
This activity will help students visualize what would happen to images if they were transferred from a two-dimensional surface to a three-dimensional image. Make a copy of page 47 for each student.

Instruct students to use only straight lines, going from dot-to dot, to draw a simple picture (a house, block initials, geometric shapes, a robot, etc.) on the first grid. Then have students draw the same picture on the second grid to see what would happen if the picture were mapped onto a rounded surface.



Activity sheet with house drawn by student.

Encourage students to create different types of grids (lines flaring out from the bottom, wavy lines, etc.) on separate sheets of paper and continue experimenting with the same drawing.



Student designed grid with same house.

Mind's Eye

Primary emphasis: Work with visual perception

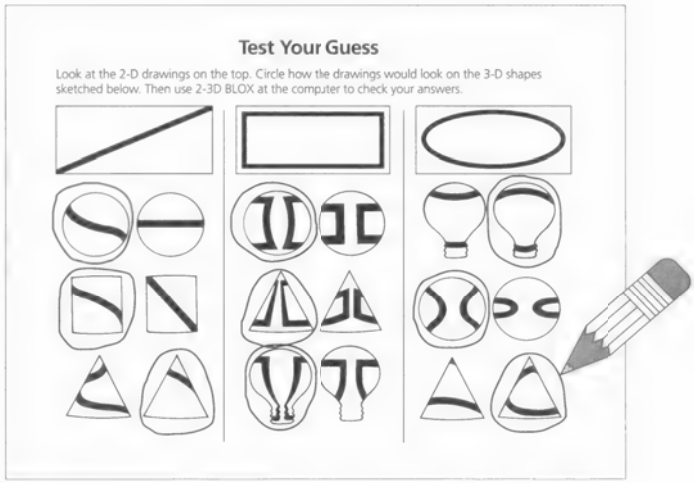
Explain to students that what they see depends upon how the brain combines what each eye sees. Tell students to hold up one finger about four inches in front of their eyes. Have them look at the finger with one eye at a time. They will notice that the finger seems to change position because each eye sees it a little differently. For additional visual experiments, instruct students as follows:

- Touch your forefingers together two inches from your eyes. Then focus on a wall in the distance. Can you see a hot dog bun floating in front of your eyes?
- Put a cardboard tube up to one eye and look straight ahead through the tube. Put your free hand, palm toward your face, against one side of the tube. What do you see? (A hole in your hand.) If you have trouble seeing this, try the other eye.
- On a piece of white paper, draw a red and yellow fish next to a black outline of a fish bowl. Stare at the fish for at least 30 seconds and then glance over at the bowl. You should see the fish again (in different colors) inside the fish bowl.

Test Your Guess

Primary emphasis: Visualize the mapping of two-dimensional designs onto three-dimensional images

After students have played with the 2-3D BLOX, give each student a copy of page 48. Ask students to predict how the two-dimensional drawings would look when mapped onto the three-dimensional shapes.



When students have completed their activity sheets, have them use the computer to check their predictions. In 2-3D BLOX, have students zap both the 2D Workspace and the Background. Then for each problem, instruct students to copy the two-dimensional drawing from the activity sheet onto the 2D Workspace. By clicking , students can see what the drawing looks like on various 3D Images. Have them use this information to correct their work.

Side-by-Side Challenge

Primary emphasis: Use a variety of tools to manipulate visual images

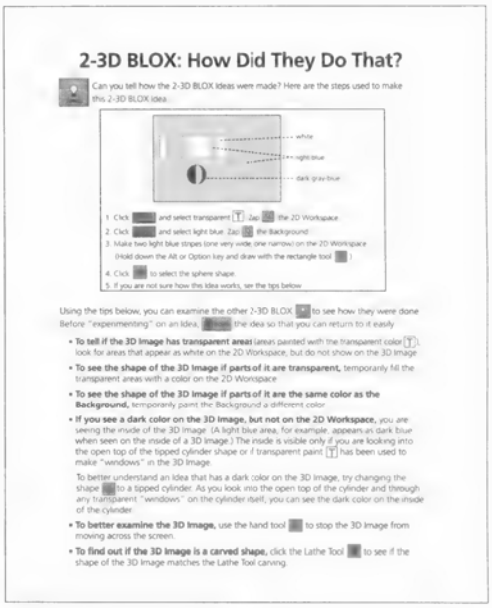
As students use the 2-3D BLOX activity in *Thinkin' Things Collection 2*, encourage them to save their best ideas. Later, let students challenge classmates to duplicate these ideas.

If two computers are located side by side, display one of the students' saved ideas on the first computer. Ask the student who is being challenged to duplicate the idea on the second computer. If the student gets stumped, let the creator of the idea give hints to help out. Use this activity over a period of time, encouraging students to design new and more complex challenges as their skills develop.

2-3D BLOX: How Did They Do That?

Primary emphasis: Analyze optical effects

Divide the class into small groups to look at the designs accessed from the Ideas Button. Give each group a copy of page 49. As a class, go through the step-by-step example at the top of the page. Then encourage the student groups to use the tips at the bottom of the page to analyze and discuss how the other 2-3D BLOX Ideas were created. What tools were used? What shapes and colors were chosen? They can test their hypotheses by experimenting with the tools themselves. Groups can share their discoveries with the rest of the class.



2-3D BLOX: How Did They Do That?

Can you tell how the 2-3D BLOX Ideas were made? Here are the steps used to make this 2-3D BLOX Idea:

1. Click [ ] and select transparent [T]. Zap [ ] the 2D Workspace.
2. Click [ ] and select light blue. Zap [ ] the Background.
3. Make two light blue stripes (one very wide, one narrow) on the 2D Workspace. (Hold down the Alt or Option key and draw with the rectangle tool [ ].)
4. Click [ ] to select the sphere shape.
5. If you are not sure how this Idea works, see the tips below.

Using the tips below, you can examine the other 2-3D BLOX [ ] to see how they were done. Before "experimenting" on an Idea, [ ] the Idea so that you can return to it easily.

- **To tell if the 3D Image has transparent areas** (areas painted with the transparent color [T]), look for areas that appear as white on the 2D Workspace, but do not show on the 3D Image.
- **To see the shape of the 3D Image if parts of it are transparent,** temporarily fill the transparent areas with a color on the 2D Workspace.
- **To see the shape of the 3D Image if parts of it are the same color as the Background,** temporarily paint the Background a different color.
- **If you see a dark color on the 3D Image, but not on the 2D Workspace,** you are seeing the inside of the 3D Image. (A light blue area, for example, appears as dark blue when seen on the inside of a 3D Image.) The inside is visible only if you are looking into the open top of the tipped cylinder shape or if transparent paint [T] has been used to make "windows" in the 3D Image.

  To better understand an Idea that has a dark color on the 3D Image, try changing the shape [ ] to a tipped cylinder. As you look into the open top of the cylinder and through any transparent "windows" on the cylinder itself, you can see the dark color on the inside of the cylinder.
- **To better examine the 3D Image,** use the hand tool [ ] to stop the 3D Image from moving across the screen.
- **To find out if the 3D Image is a carved shape,** click the Lathe Tool [ ] to see if the shape of the 3D Image matches the Lathe Tool carving.

If an Idea continues to stump students after repeated attempts to analyze it, feel free to write us for an explanation of the Idea.

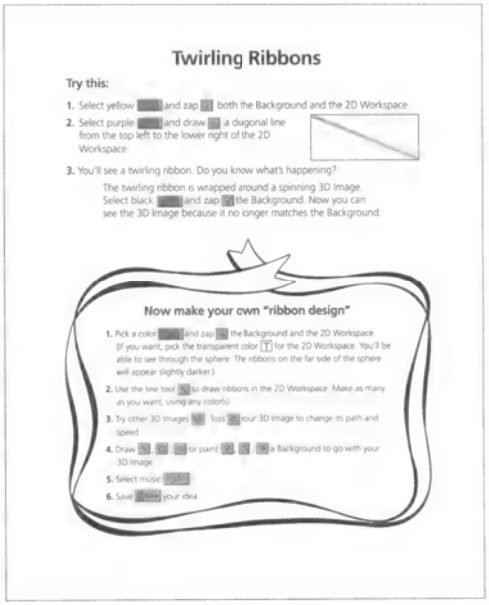
Edmark Corporation
Attn: Edmark Development Team – TT2
PO Box 97021
Redmond, WA 98073-9721

Twirling Ribbons

Primary emphasis: Create unique optical effects

Make a copy of page 50 to post by each computer. Have students work individually or in groups of two to four, following the activity sheets to experiment with "twirling ribbons." Explain that each student (or group) will end up with a design that will be saved and shared with the class.

When students are finished with their activity sheets, discuss Question 3 at the top of the page. Let students show their saved ribbon designs to the rest of the class and explain them.



Twirling Ribbons

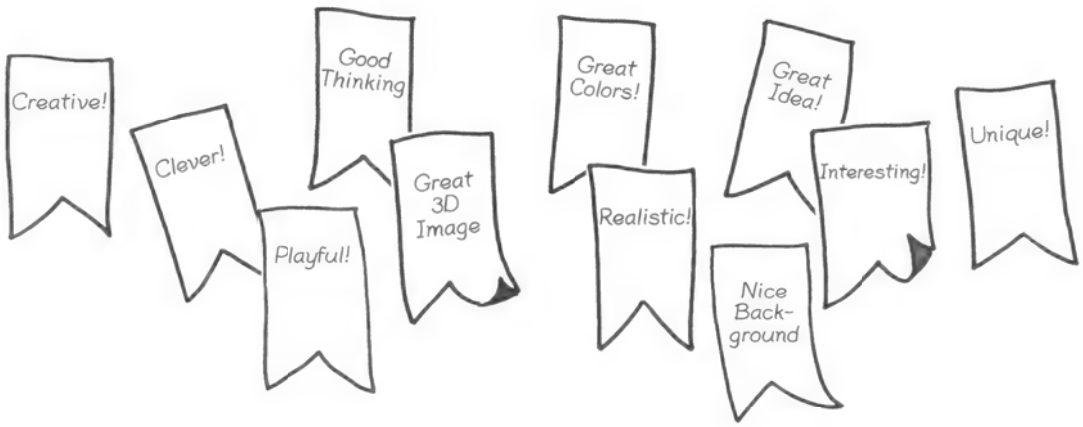
Try this:

1. Select yellow and zap both the Background and the 2D Workspace.
2. Select purple and draw a diagonal line from the top left to the lower right of the 2D Workspace.
3. You'll see a twirling ribbon. Do you know what's happening?
   The twirling ribbon is wrapped around a spinning 3D Image.
   Select black and zap the Background. Now you can see the 3D Image because it no longer matches the Background.

Now make your own "ribbon design"

1. Pick a color and zap the Background and the 2D Workspace. (If you want, pick the transparent color for the 2D Workspace. You'll be able to see through the sphere. The ribbons on the far side of the sphere will appear slightly darker.)
2. Use the line tool to draw ribbons in the 2D Workspace. Make as many as you want, using any color(s).
3. Try other 3D Images. Toss your 3D Image to change its path and speed.
4. Draw or paint a Background to go with your 3D Image.
5. Select music.
6. Save your idea.

If appropriate, award construction paper "ribbons" to all the entrants after their presentations:

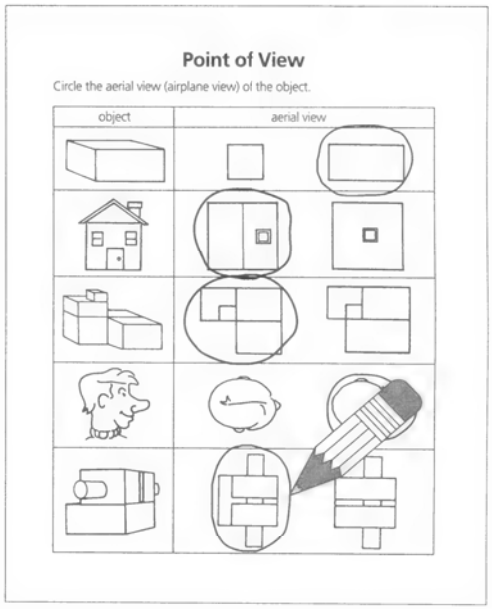


Point of View

Primary emphasis: Work with visual perception, dimension, and spatial awareness

Discuss with the class how things look from different points of view. Have students lay a few school supplies on their desks. Then ask them to look at the objects with their chins on the edges of their desks. Have them stand on their chairs and look down at the objects. Encourage them to look at other objects in the classroom from different points of view.

Make a copy of page 51 for each student. Introduce the activity sheet and allow time for students to work. When students are done, discuss their answers and let them correct their own sheets. If possible use a transparency of the activity sheet as you discuss it.

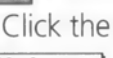


2-3D BLOX Hints

As students work with 2-3D BLOX, you may want to share some of these helpful hints.

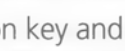
- When working on an Idea, 

often. (Then if you "goof," you can return to your saved version and go on from there.)
- To "park" the 3D Image in a corner of the screen while you are working on a Background or the 2D Workspace, click  and use it to drag the 3D Image to the corner.
- To make a filled rectangle or ellipse, select  or . Then hold down the Alt or Option key while drawing.
- For tips to help you understand the Ideas accessed through the Ideas Button  , see "2-3D BLOX: How Did They Do That?" (page 49).
- **Macintosh users only:** You can import PICT files (from paint or draw programs) to use as the Background or 2D Workspace in 2-3D BLOX. Imported art will be resized if necessary, sometimes distorting it. To avoid the possibility of distortion, follow these steps:

  1. **In 2-3D BLOX, save a blank Background (or 2D Workspace):**
     Select white and zap  the Background (or 2D Workspace). Hold down the Option key and click 

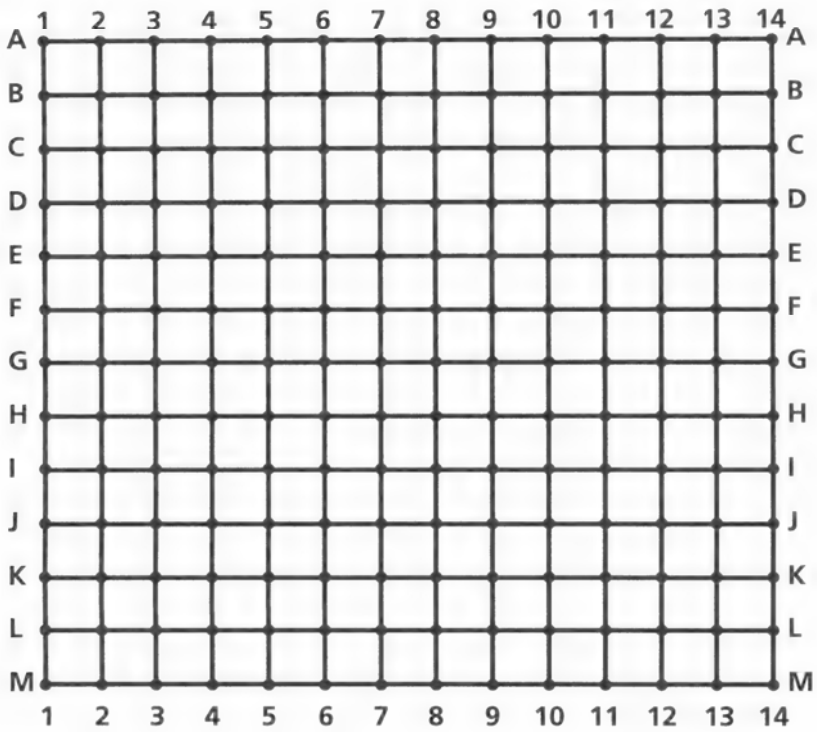
. Click the pop-up menu at the bottom of the dialog box and select Background Picture or 2D Workspace Picture. Title your document and click Save.

  2. **In your paint program, use the blank Background (or 2D Workspace) to create your own Background or (2D Workspace):**
     Open the document you saved (in Step 1). Create your own Background (or 2D Workspace) on it. Save it.

  3. **In 2-3D BLOX, import the Background (or 2D Workspace) you created:**
     Hold down the Option key and click 

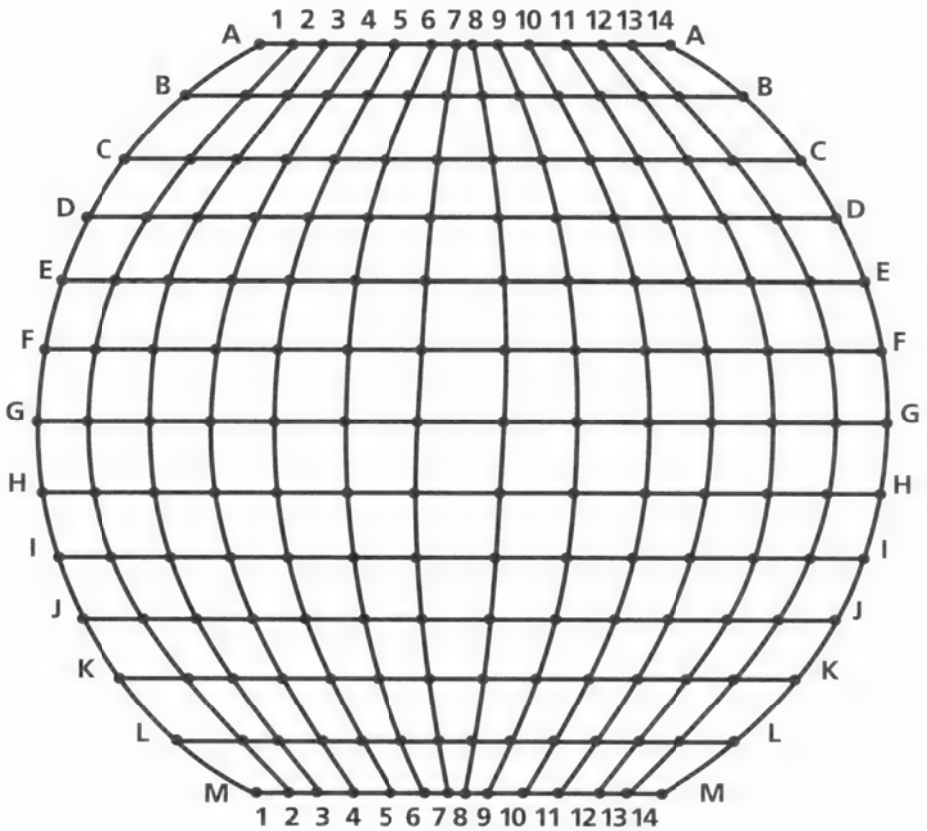
Click the arrow at the bottom of the dialog box and select Background Picture or 2D Workspace Picture. Find and click the document you created (in Step 2). Click Open. The Background (or 2D Workspace) you created should now appear in 2-3D BLOX.

The Changing Scene



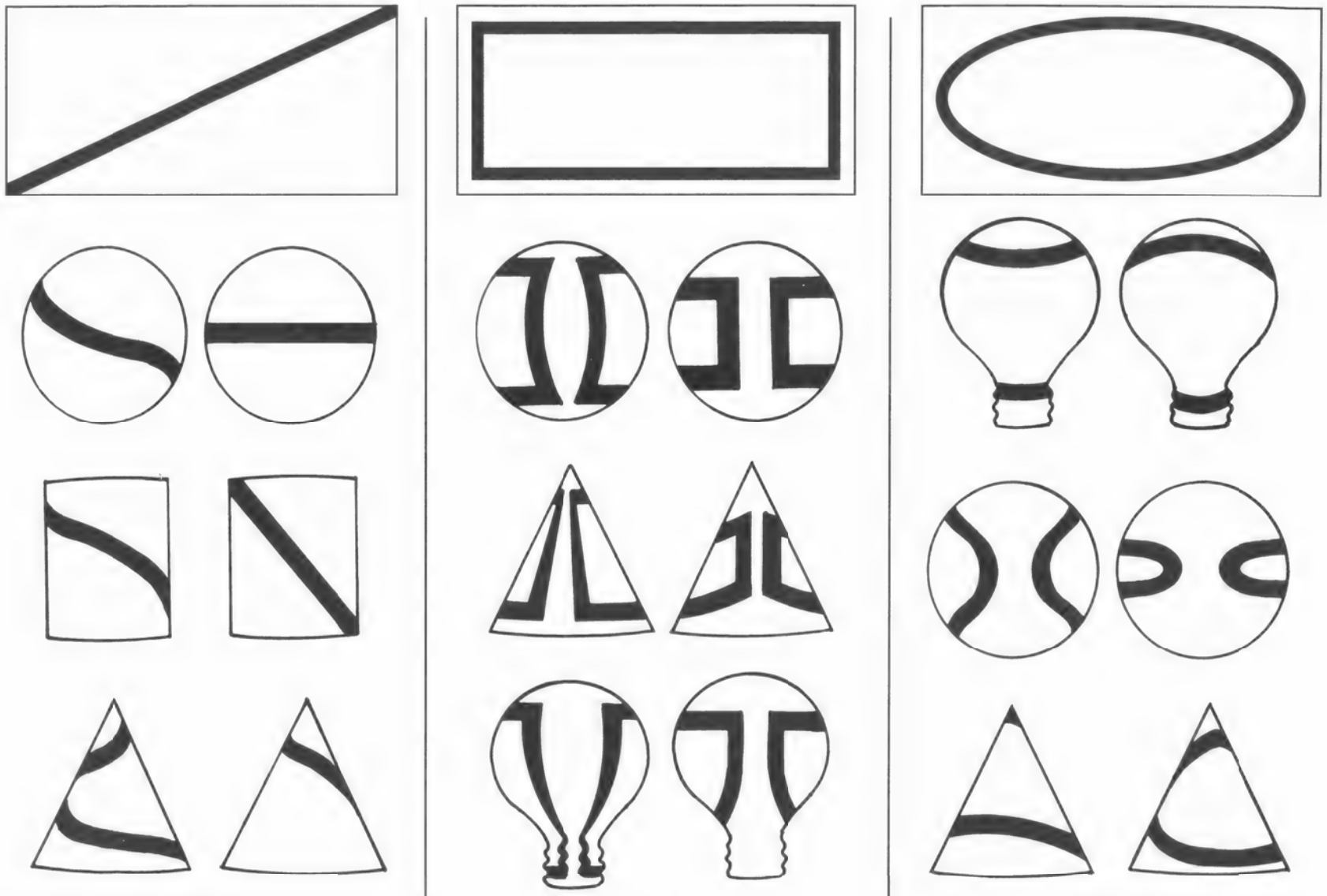
Draw a picture using only straight lines and going from dot-to-dot.

Now draw the same picture as above. Use the same dots (match number and letter) and see how the drawing looks on this grid!



Test Your Guess

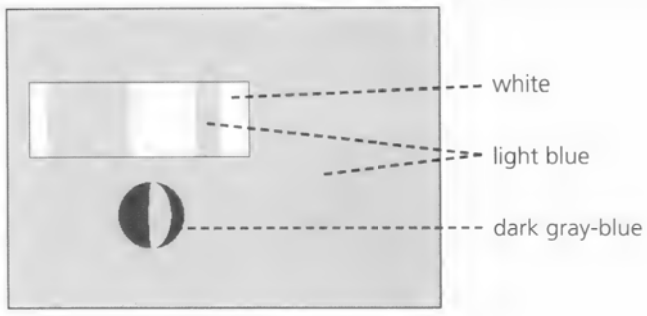
Look at the 2-D drawings on the top. Circle how the drawings would look on the 3-D shapes sketched below. Then use 2-3D BLOX at the computer to check your answers.



Use with "Test Your Guess" (page 42).

2-3D BLOX: How Did They Do That?

Can you tell how the 2-3D BLOX Ideas were made? Here are the steps used to make this 2-3D BLOX Idea:



1. Click and select transparent T. Zap the 2D Workspace.
2. Click and select light blue. Zap the Background.
3. Make two light blue stripes (one very wide, one narrow) on the 2D Workspace. (Hold down the Alt or Option key and draw with the rectangle tool.)
4. Click to select the sphere shape.
5. If you are not sure how this Idea works, see the tips below.

Using the tips below, you can examine the other 2-3D BLOX to see how they were done. Before "experimenting" on an Idea, Save the idea so that you can return to it easily.

- **To tell if the 3D Image has transparent areas** (areas painted with the transparent color T), look for areas that appear as white on the 2D Workspace, but do not show on the 3D Image.
- **To see the shape of the 3D Image if parts of it are transparent,** temporarily fill the transparent areas with a color on the 2D Workspace.
- **To see the shape of the 3D Image if parts of it are the same color as the Background,** temporarily paint the Background a different color.
- **If you see a dark color on the 3D Image, but not on the 2D Workspace,** you are seeing the inside of the 3D Image. (A light blue area, for example, appears as dark blue when seen on the inside of a 3D Image.) The inside is visible only if you are looking into the open top of the tipped cylinder shape or if transparent paint T has been used to make "windows" in the 3D Image.

  To better understand an Idea that has a dark color on the 3D Image, try changing the shape to a tipped cylinder. As you look into the open top of the cylinder and through any transparent "windows" on the cylinder itself, you can see the dark color on the inside of the cylinder.
- **To better examine the 3D Image,** use the hand tool to stop the 3D Image from moving across the screen.
- **To find out if the 3D Image is a carved shape,** click the Lathe Tool to see if the shape of the 3D Image matches the Lathe Tool carving.

Use with "2-3D BLOX: How Did They Do That?" (page 43).

Twirling Ribbons

Try this:

1. Select yellow and zap both the Background and the 2D Workspace.
2. Select purple and draw a diagonal line from the top left to the lower right of the 2D Workspace:

3. You'll see a twirling ribbon. Do you know what's happening?

   The twirling ribbon is wrapped around a spinning 3D Image. Select black and zap the Background. Now you can see the 3D Image because it no longer matches the Background.

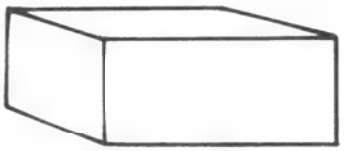
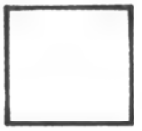
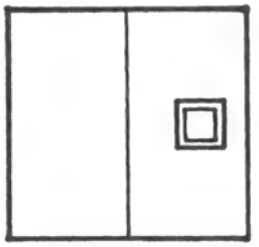
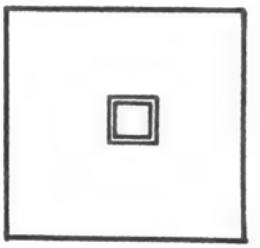
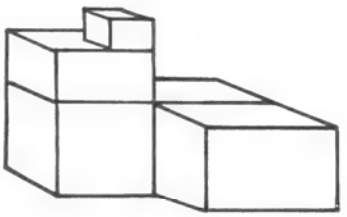
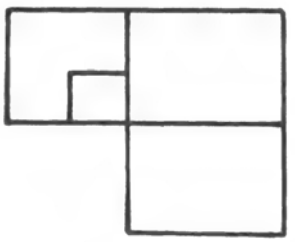
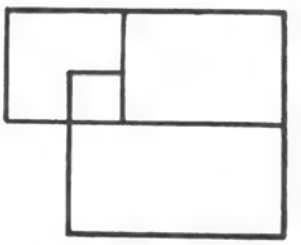
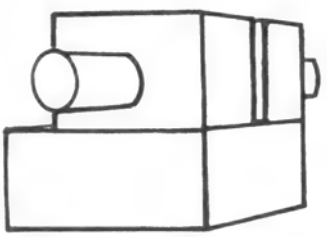
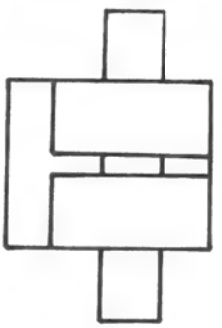
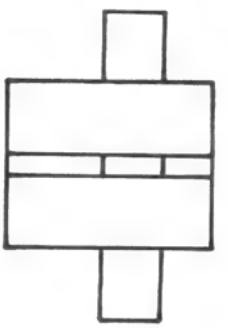
Now make your own "ribbon design"

1. Pick a color and zap the Background and the 2D Workspace. (If you want, pick the transparent color T for the 2D Workspace. You'll be able to see through the sphere. The ribbons on the far side of the sphere will appear slightly darker.)
2. Use the line tool to draw ribbons in the 2D Workspace. Make as many as you want, using any color(s).
3. Try other 3D Images. Toss your 3D Image to change its path and speed.
4. Draw , , or paint , , a Background to go with your 3D Image.
5. Select music .
6. Save your idea.

Use with "Twirling Ribbons" (page 44).

Point of View

Circle the aerial view (airplane view) of the object.

object	aerial view
	 
	 
	 
	 
	 

Use with "Point of View" (page 45).

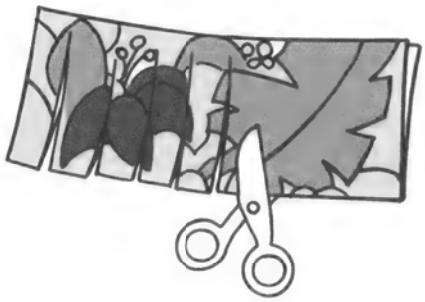
Snake BLOX

Snake Weaving

Primary emphasis: Enhance visual creativity

Have each student make a colorful background drawing about 9" x 12." The drawing could be a jungle, a plate of food, a cluttered room, etc. When the drawings are done, have students fold them in half horizontally and cut slits about an inch apart, leaving an inch at the top edge uncut. The slits can be straight or slightly curved.

student drawing

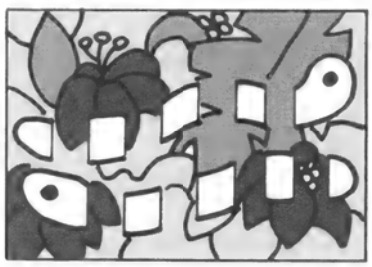


Cut slits up to about an inch from the top edge.

On a separate piece of heavy paper have students draw and then cut out fat snakes (about 2" x 12"). The snakes can be straight or wavy. Now students can weave their snakes into their drawings. Encourage them to try several different weaving patterns:

- over one, under one
- over two, under two
- over two, under one
- over one, under two
- a random pattern

After students have experimented and decided on their favorite weaving patterns, have them glue their snakes in place. If desired, students can make additional snakes and weave them into the same backgrounds. Display the weavings.

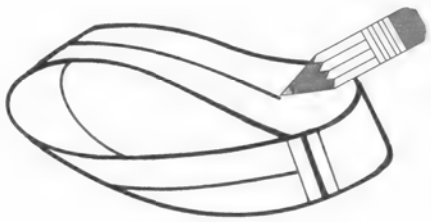


The Inside Is The Outside

Primary emphasis: Foster observation and visual analysis

Ask students how many sides a piece of paper has. Ask if they can write on both sides of the paper without lifting up the pencil or turning over the paper. Then explain that you are going to show them a trick in which the paper seems to have only one side.

Give each student a strip of paper about eighteen inches long and three inches wide. (Adding machine paper or cash register tape works well.) Instruct students to:



- Form the strip into a loop. Before putting the ends together, make a half-twist. Tape the ends together all the way across both sides of the strip.
- Draw a line along the middle of the paper without picking up the pencil.
- Notice the line is on both sides of the paper.

Explain that the Möbius strip was named for its inventor, August Ferdinand Möbius, a German mathematician. The principle of the Möbius strip is used in industry. For example, an engine belt twisted like a Möbius strip wears more evenly because both sides of the belt are used equally.

Ask students to predict what will happen if they cut the paper along the penciled line. Will they get a loop inside a loop, two separate loops, or something else? (They should get one large loop.) Instruct them to push their scissors into the paper on the penciled line and to cut along it. Have students make another Möbius strip and draw two parallel lines on it about an inch apart. Ask what will happen if they cut along these lines. Then have students test their hypotheses.

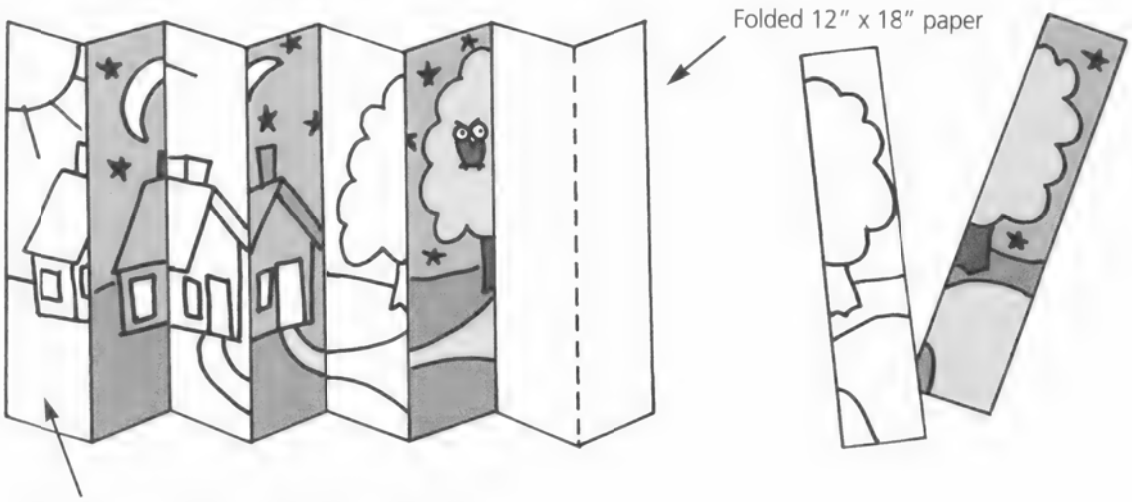
Sunrise, Sunset

Primary emphasis: Enhance visual creativity

Have each student draw one daytime scene and one nighttime scene of the same area on separate pieces of 9" x 12" paper, vertically positioned. Students can draw an attic, an underwater scene, the classroom, a forest, or whatever they choose.

Give each student a sheet of plain 12" x 18"paper. Have students accordion fold the paper into eight equal sections (across the width of the paper) and then smooth out the paper slightly.

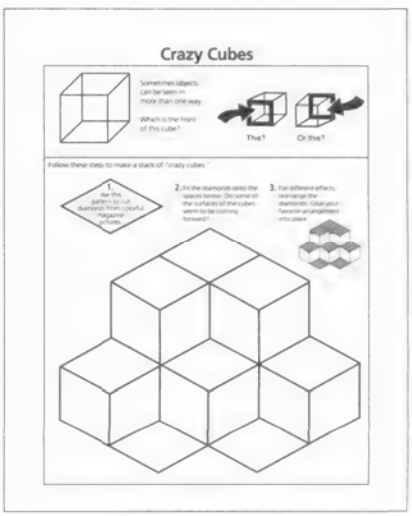
Instruct students to cut their daytime scene into fourths (vertically) and glue the pieces on every other section of the accordion-folded paper. Have students repeat the process, gluing the nighttime pieces onto the remaining spaces.



Have students refold their papers and stand the collages up on their desks. Allow time for students to walk slowly by all of the compositions. As they move by, they will see day gradually turning to night. To make a larger, dramatic day-into-night composition, line up several students' collages on tables placed end-to-end.

Crazy Cubes

Primary emphasis: Work with the illusion of depth



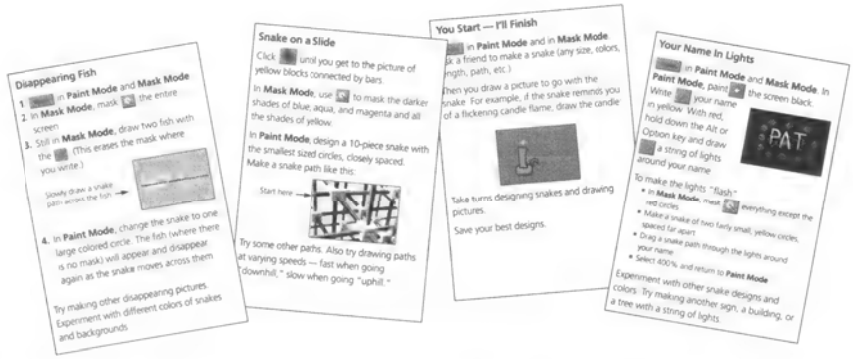
Make a copy of page 57 for each student. Explain that our brains use different clues to help us figure out what is near and what is far. Ask what some of these clues might be (overlapping, degree of clarity, size, etc.). Tell students that artists and architects use many different techniques to influence the perception of depth or distance. Color, shape, and line are often used to accomplish this. Look at the illustration at the top of the activity sheet and discuss the question.

Have students cut out the diamond and use it as a pattern for cutting at least 18 colorful diamond shapes from old magazine pictures. Have them fit the shapes onto the block puzzle. Encourage students to move the shapes around, experimenting with the colors to make sides of the blocks look like they are coming forward or receding. Once students have laid out a design they like, they can glue the shapes in place.

Snake Effects

Primary emphasis: Create and conduct experiments with the Snake and Mask Tools

Make copies of page 58 and cut each page into four cards.



Divide the class into pairs or small groups and let each pair (or group) draw a card. Have students work at computers with the Snake BLOX activity of *Thinkin' Things Collection 2*, trying the ideas on their cards. Ask students to save their computer creations.

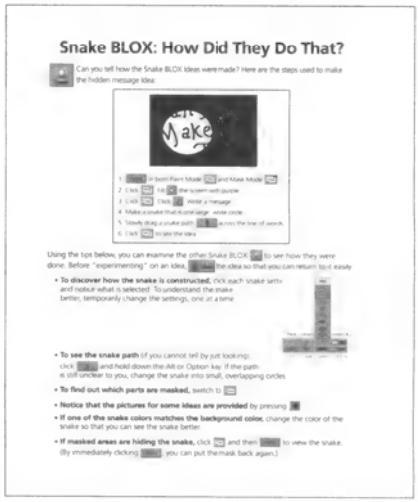
Provide time for students to share what they have saved with the class. Encourage them to explain their ideas to their classmates and to answer any questions. Suggest that students trade cards or jot down ideas for things they would like to try at the next computer session.

Snake BLOX: How Did They Do That?

Primary emphasis: Foster observation, visual analysis, and visual synthesis

For this activity, let small groups of students work at computers situated near a computer used only for display. Use the Ideas Button in Snake BLOX to select the hidden writing Idea (shown at the top of page 59). Let the Idea run uninterrupted on the display computer.

Ask the student groups to make designs similar to the Idea, referring to the display computer as needed. Encourage all students in each group to contribute suggestions on how to accomplish this. When at least one group has made a design, distribute copies of page 59 and discuss how it was done, referring to the step-by-step explanation at the top of the page.



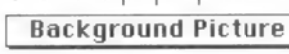
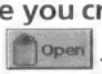
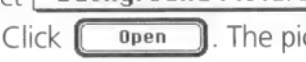
Challenge students to use the tips at the bottom of the page to analyze other Snake BLOX Ideas. Let student groups share their findings with the rest of the class.

If an Idea continues to stump students after repeated attempts to analyze it, feel free to write us for an explanation of the Idea.

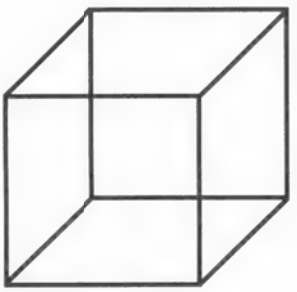
Edmark Corporation
Attn: Edmark Development Team – TT2
PO Box 97021
Redmond, WA 98073-9721

Snake BLOX Hints

As students work with Snake BLOX, you may want to share some of these helpful hints.

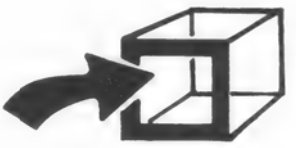
- To "park" the snake in a corner of the screen while you are working on a picture, click  and then click in the corner.
- When working on an idea,  often. (Then if you "goof," you can return to your saved version and go on from there.)
- If you mask an area by mistake, click  immediately. If you have gone too far to use  , you can still unmask the area by following these steps:
  1. Click  .
  2. Mask the area.
  3. Click  again.
- In **Paint Mode**, the  fills an area of the picture with paint. In **Mask Mode**, the  fills an area (bordered by masked areas) with masking paint. If you use the  to fill an empty screen (or an area not entirely bordered by masked areas), the masking paint will flood the entire screen.
- To draw a filled rectangle or ellipse, select  or  . Then hold down the Alt or Option key while drawing.
- For tips to help you understand the ideas accessed through the Ideas Button  , see "Snake BLOX: How Did They Do That?" (page 59).
- **Macintosh users only:** You can import PICT files (from paint and draw programs) to use as background pictures in Snake BLOX. Imported art will be resized if necessary, sometimes distorting it. To avoid the possibility of distortion, follow these steps:
  1. **In Snake BLOX, save a blank picture:**
      in Paint Mode and Mask Mode. Hold down the Option key and click  . Click the pop-up menu at the bottom of the dialog box and select  . Title your document and click  .
  2. **In your paint program, use the blank picture to create your own picture:**
     Open the document you saved (in Step 1). Create your own picture on it. Save it.
  3. **In Snake BLOX, import the picture you created:**
     Hold down the Option key and click  . Click the arrow at the bottom of the dialog box and select  . Find and click the document you created (in Step 2). Click . The picture you created should now appear in Snake BLOX.

Crazy Cubes



Sometimes objects can be seen in more than one way.

Which is the front of this cube?



This?

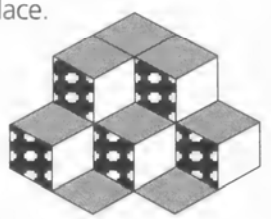
Or this?

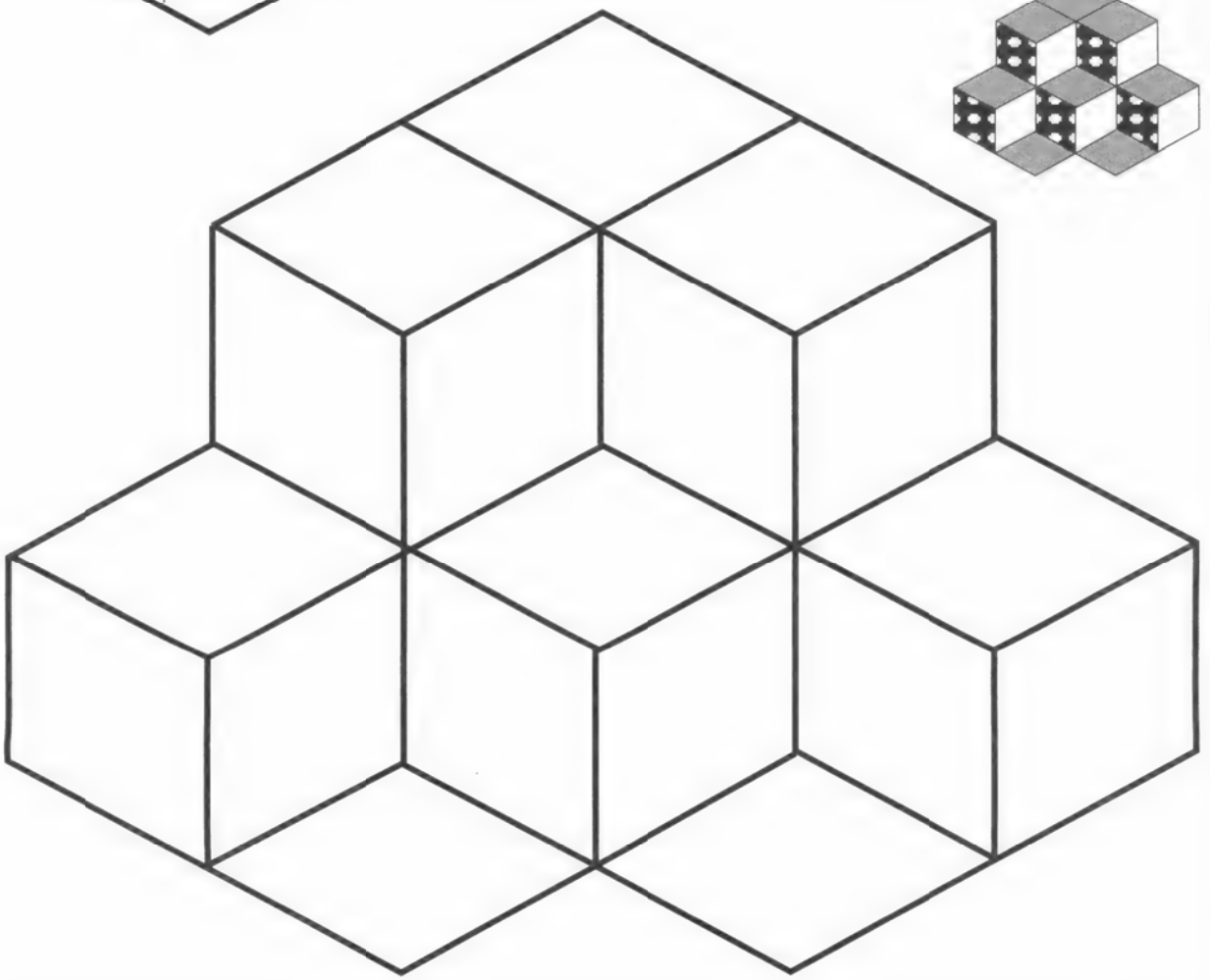
Follow these steps to make a stack of "crazy cubes."

1. Use this pattern to cut diamonds from colorful magazine pictures.

2. Fit the diamonds onto the spaces below. Do some of the surfaces of the cubes seem to be coming forward?

3. For different effects, rearrange the diamonds. Glue your favorite arrangement into place.



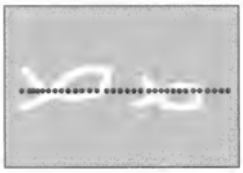


Use with "Crazy Cubes" (page 54).

Disappearing Fish

1. Erase in **Paint Mode** and **Mask Mode**.
2. In **Mask Mode**, mask the entire screen.
3. Still in **Mask Mode**, draw two fish with the . (This erases the mask where you write.)

Slowly draw a snake path across the fish. →



4. In **Paint Mode**, change the snake to one large colored circle. The fish (where there is no mask) will appear and disappear again as the snake moves across them.

Try making other disappearing pictures. Experiment with different colors of snakes and backgrounds.

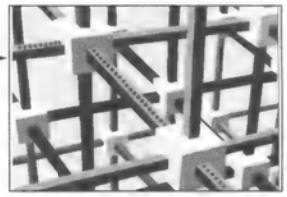
Snake on a Slide

Click until you get to the picture of yellow blocks connected by bars.

In **Mask Mode**, use to mask the darker shades of blue, aqua, and magenta and all the shades of yellow.

In **Paint Mode**, design a 10-piece snake with the smallest sized circles, closely spaced. Make a snake path like this:

Start here. →

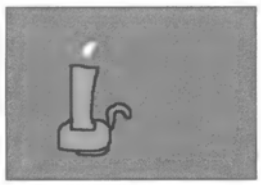


Try some other paths. Also try drawing paths at varying speeds — fast when going "downhill," slow when going "uphill."

You Start — I'll Finish

Erase in **Paint Mode** and in **Mask Mode**. Ask a friend to make a snake (any size, colors, length, path, etc.).

Then you draw a picture to go with the snake. For example, if the snake reminds you of a flickering candle flame, draw the candle:



Take turns designing snakes and drawing pictures.

Save your best designs.

Your Name In Lights

Erase in **Paint Mode** and **Mask Mode**. In **Paint Mode**, paint the screen black. Write your name in yellow. With red, hold down the Alt or Option key and draw a string of lights around your name.

To make the lights "flash":

- In **Mask Mode**, mask everything except the red circles.
- Make a snake of two fairly small, yellow circles, spaced far apart.
- Drag a snake path through the lights around your name.
- Select 400% and return to **Paint Mode**.

Experiment with other snake designs and colors. Try making another sign, a building, or a tree with a string of lights.

Use with "Snake Effects" (page 55).

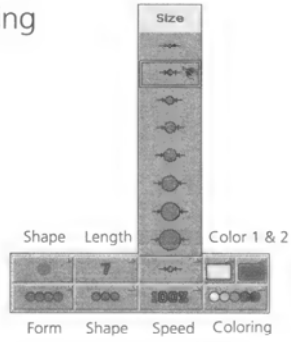
Snake BLOX: How Did They Do That?

Can you tell how the Snake BLOX Ideas were made? Here are the steps used to make the hidden message Idea:

1. Erase in both Paint Mode and Mask Mode.
2. Click Paint. Fill the screen with purple.
3. Click Mask. Click. Write a message.
4. Make a snake that is one large, white circle.
5. Slowly drag a snake path across the line of words.
6. Click Paint to see the Idea.

Using the tips below, you can examine the other Snake BLOX to see how they were done. Before "experimenting" on an Idea, Save the idea so that you can return to it easily.

- **To discover how the snake is constructed,** click each snake setting and notice what is selected. To understand the snake better, temporarily change the settings, one at a time.



- **To see the snake path** (if you cannot tell by just looking), click and hold down the Alt or Option key. If the path is still unclear to you, change the snake into small, overlapping circles.
- **To find out which parts are masked,** switch to Mask.
- **Notice that the pictures for some ideas are provided** by pressing .
- **If one of the snake colors matches the background color,** change the color of the snake so that you can see the snake better.
- **If masked areas are hiding the snake,** click Mask and then Erase to view the snake. (By immediately clicking Undo, you can put the mask back again.)

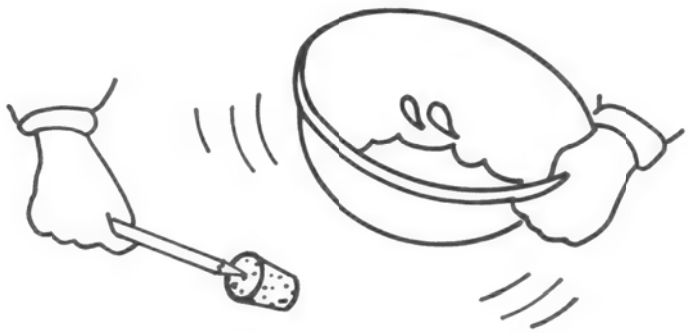
Toony's Tunes

Bowlful of Music

Primary emphasis: Experiment with creating a variety of pitches and sounds

Students can make interesting music with a large stainless steel bowl containing about half a cup of water. Insert the tip of a pencil into a cork to make a mallet for striking the bottom of the bowl.

Have a volunteer hold the bowl horizontally by the rim in mid-air and use the mallet to strike the outside of the bowl on the **bottom**. Ask students to listen carefully to the sound, noting its pitch. Next have the volunteer tip the bowl to one side and then strike the bottom of the bowl. Has the pitch changed? (It is higher.)



Explain that when the bottom of the empty bowl is struck, it vibrates to produce a sound. A high frequency vibration (many vibrations per second) produces a high-pitched sound and a low frequency vibration produces a low-pitched sound. Water slows down the vibrations of the bowl's steel bottom. When the bowl is tipped to one side and the water covers less of the bottom of the bowl, the vibrations are faster and the sound is higher.

Finally, let a volunteer strike the bottom of the bowl and swish the water from side to side. The bowl will make a wailing sound as the water covers and uncovers the bottom of the bowl, changing the frequency of the vibrations.

Throughout the day, let students take turns creating music with the bowl. Encourage students to experiment to get different musical effects by tipping the bowl, swishing the water from side to side, trying different rhythm patterns, and striking the bowl firmly or softly.

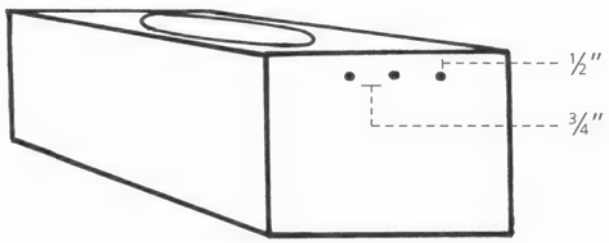
Three-Note Challenge

Primary emphasis: Create and tune an instrument; compose songs

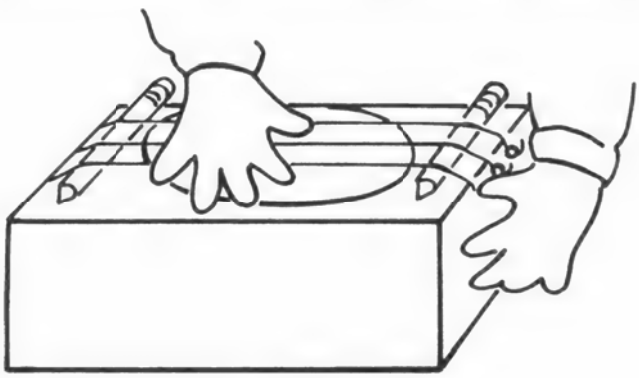
Let individual students or small groups of students make tissue box harps as explained below. Each student (or group) will need:

- an empty tissue box (similar to the one pictured below)
- two pencils (about 5 or 6 inches long)
- 6 brass paper fasteners
- 3 rubber bands, all the same size (Cut each band once.)
- masking tape

1. Use one of the pencils to punch three small holes (1/8 inch diameter) in each end of the box and then insert a paper fastener in each hole:



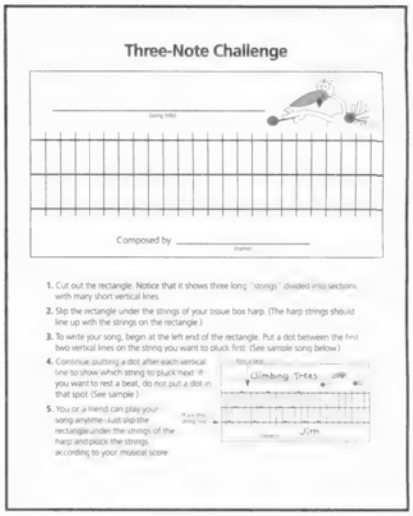
2. Tape the two pencils across the top of the box, one at each end. To string the harp, loop one end of a rubber band twice around a paper fastener (just below the fastener's head). The other end of the rubber band should be looped twice around the paper fastener at the opposite end of the box.



3. Tune the harp by stretching or loosening each rubber band until the three notes go from a low to a high pitch. After tuning, be sure the ends of the rubber bands are securely wrapped around the fasteners.

Challenge the students to compose simple tunes made up of only the three notes on their harps. Show them how to use page 65 to write down the musical scores for their tunes.

Give students time over the next few days to make up more songs. Suggest that students trade musical scores and try playing each other's songs. Older students may want to make up words for their tunes. (Lyrics can be written below the musical scores.)


Three-Note Challenge

Composed by _____

1. Cut out the rectangle. Notice that it shows three long "strings" divided into sections with many short vertical lines.
2. Slip the rectangle under the strings of your tissue box harp. (The harp strings should line up with the strings on the rectangle.)
3. To write your song, begin at the left end of the rectangle. Put a dot between the first two vertical lines on the string you want to pluck first. (See sample song below.)
4. Continue putting a dot after each vertical line to show which string to pluck next. If you want to rest a beat, do not put a dot in that spot. (See sample.)
5. You or a friend can play your song anytime. Just slip the rectangle under the strings of the harp and pluck the strings according to your musical score.

Climbing Trees

Jim

Musical Riddles

Primary emphasis: Strengthen auditory discrimination of pitch

Invite six or seven students who play band or orchestra instruments (flute, violin, trumpet, trombone, clarinet, tuba, piccolo, cello, etc.) to show and play their instruments for your class. Begin by asking the musicians to tell the class the names of their instruments and explain how they work.

Next ask the musicians to play the lowest notes they can on their instruments. Have the class help sort the instruments from lowest to highest pitch. Repeat the activity with the highest notes the students can play. Then ask each musician to play a scale from lowest note to highest note to illustrate the instrument's range of pitch. Give each musician the opportunity to play a short, simple tune while the class listens with their eyes shut. See if the students can guess which musician was playing.

Review the names of the instruments with the class and write the names on the chalkboard or chart paper. Let students, along with the musicians, write a silly riddle for each instrument name. (What instrument does my dog like? Trom-bone. What instrument has you in the middle? FL-U-TE.) For each riddle, have the student fold a sheet of paper in half and write the riddle question on the front. Write the riddle answer inside. If possible, post the riddles in a hallway for everyone to enjoy.

Name that Song

Primary emphasis: Strengthen auditory discrimination

For this game you will need a collection of about 15 familiar songs (songs your class has learned, patriotic songs, popular children's songs, songs by famous composers). You can play the songs on a piano or other instrument, use recordings of songs, or set up a computer in the classroom and use the songs from the Toony's Tunes software activity of *Thinkin' Things Collection 2*.

Names for Toony's songs are listed below:


Row, Row, Row Your Boat


Baa, Baa, Black Sheep


Frère Jacques


This Old Man


Bach Minuet No. 1


I'm a Little Teapot


The Itsy Bitsy Spider


On Top of Old Smoky


Do Your Ears Hang Low?


Michigan Fight Song


Over the River and Through the Woods


Auld Lang Syne


Oh, Susanna


Pop Goes the Weasel


Sweet Betsy From Pike

Divide the class into two teams. Place two chairs at the front of the classroom. Have the first player of each team sit in front of the classroom. Explain that you will begin to play a song. (If you are using Toony's Tunes, click "Song" in the Create Mode, select a song, and immediately click "OK.") As soon as one of the players in the front of the room recognizes the song, that player should stand up, and you should stop the music. (If you are using Toony's Tunes, click anywhere on the background to stop the music.)

The player who stands first gets to try to name the song, thereby earning one point for the team. If the player cannot identify the song correctly, the player from the other team gets a chance to name the song and earn a point. If neither player can identify the song, see if someone from

either team can name it. (Neither team gets a point.) Play the song again to reinforce students' memories and reuse the song later in the game. Continue the game with the second player from each team. After everyone has had at least one turn, add up the points to determine the winning team.

A variation of this game can be played by a pair of students at the computer in the following manner:

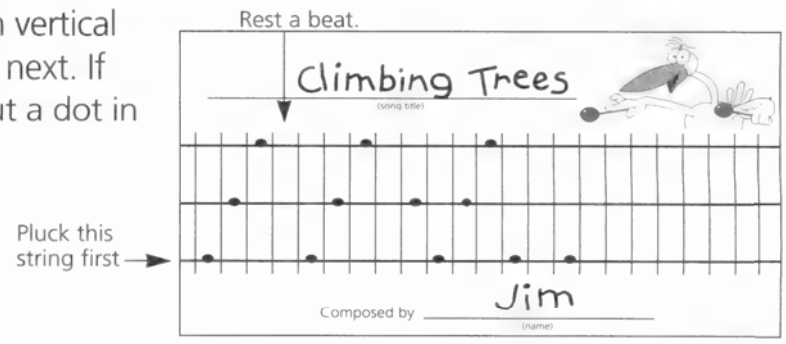
- The first player faces away from the computer and says, for example, "I'll try to name Toony's song in eight notes." (The player can ask for up to 14 notes. However, the goal of the game is to get a low score.)
- The second player clicks "Song," selects a song, and immediately clicks "OK." After Toony has played eight notes (or whatever number of notes were requested), the player clicks anywhere on the background to stop the song.
- If the first player can name the tune, that player gets eight points; if not, the player must take 15 points.
- The players switch roles, and the game continues until the allotted time is up. They total their points; the player with the **lowest** score wins.

Three-Note Challenge

_____
(song title)

Composed by _____
(name)

1. Cut out the rectangle. Notice that it shows three long "strings" divided into sections with many short vertical lines.
2. Slip the rectangle under the strings of your tissue box harp. (The harp strings should line up with the strings on the rectangle.)
3. To write your song, begin at the left end of the rectangle. Put a dot between the first two vertical lines on the string you want to pluck first. (See sample song below.)
4. Continue, putting a dot after each vertical line to show which string to pluck next. If you want to rest a beat, do not put a dot in that spot. (See sample.)
5. You or a friend can play your song anytime. Just slip the rectangle under the strings of the harp and pluck the strings according to your musical score.

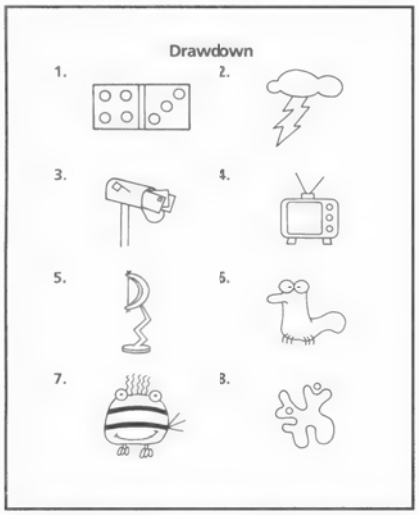


Frippletration

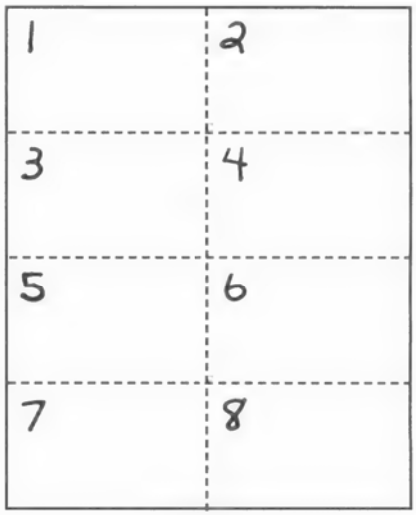
Drawdown

Primary emphasis: Strengthen visual memory

Make a transparency from page 71. Provide students with paper and demonstrate how to fold a sheet of paper into eight sections. Have students number the sections.



transparency



folded paper

Cover all but the first design on the transparency. Using an overhead projector, show the design for 20 seconds. Ask the students to study the design carefully. Turn the projector off (or cover the design) and have students try to draw the design from memory in Section 1 of their papers. When everyone is done, let students check their drawings by comparing them to the design on the transparency.

Continue with the second design. Challenge students to see how many of the eight "drawdowns" they can match. Suggest that they experiment with techniques to help them remember. For example, while studying the design, students could draw the design "in the air" or mentally describe the design's features in words.

Hear, See, and Spell

Primary emphasis: Recognize preference for visual or auditory input

Discuss the idea that some people are very good at remembering things they hear while others are better at remembering things they see. Try a class experiment (as illustrated on page 67), using three spelling lists of similar difficulty. Explain that students will try learning their spelling words on Week 1 by listening, on Week 2 by seeing, and on Week 3 by both listening and seeing.

Week 1: Listening

- Pronounce each word and spell it aloud.
- Offer hints for remembering the spelling. ("This word has two sets of double consonants. What are they?")
- Review at least once a day by saying the words and having students spell them out loud.
- Have a spelling bee.
- Test students and record scores.

Week 2: Seeing

- Write the first word on a large card as students watch. Pronounce the word, and tack it on a bulletin board.
- Ask students to look carefully at the word, copy it, close their eyes, and picture it. Continue with each word.
- Review at least once a day by having students look at the words and copy them.
- On one day, let volunteers write the words with colorful pens on a transparency as the class watches and checks for accuracy.
- Test students and record scores.

Week 3: Listening and Seeing

- Present and study the words with a combination of methods from Week 1 (listening) and Week 2 (seeing).
- Test students and record scores.

Have each of the students compare the scores for the three weeks. Did they do best on Week 1 (listening), on Week 2 (seeing), or on Week 3 (listening and seeing)? Which methods did students prefer? Make a class graph showing the number of students who prefer seeing, who prefer hearing, and who prefer both. Were student preferences reflected in their scores? If not, why might that be? What ideas do students have for effective ways to study spelling words? Suggest that students each try using a variety of methods of learning throughout the year to discover methods that seem to work best.

Ooh's and Aah's

Primary emphasis: Strengthen auditory discrimination

In a quiet corner of the room, assemble a variety of containers and tubes (round oatmeal box, facial tissue box, wide-mouth mayonnaise jar, large plastic peanut butter jar, paper towel tube, etc.).

Demonstrate how to hum an "ooh" or "aah" sound with your lips slightly open as you slowly bring a jar in front of your mouth. (The jar should not touch your mouth.) As you hum, move the jar away and then back — or from side to side.

Allow time throughout the day for students to try the activity. Ask them to notice any changes in sound as they move the jar. Have them experiment with the tubes and other containers, listening closely for any differences. Students can work in pairs, listening to (not watching) each other hum and trying to guess what container was used.

After all students have had a chance to experiment, discuss their conclusions. At some point as the container is moved toward the mouth, the sound mellows. Why?

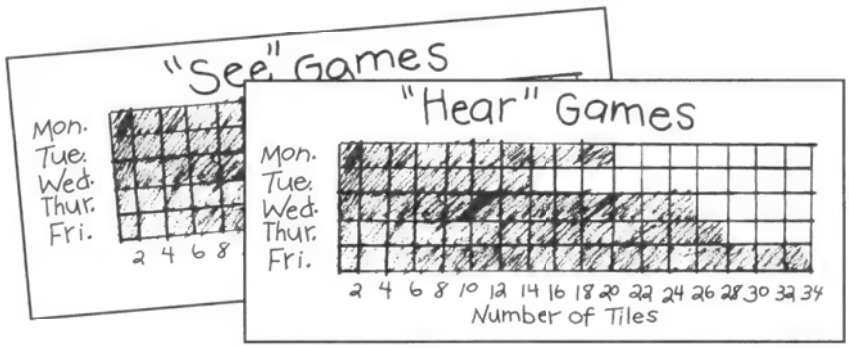
- Your humming creates sound waves of various frequencies (number of vibrations per second).
- The container reflects these sound waves, but it reflects some frequencies better than others.
- The reflected sound waves combine with the sound waves from your humming.
- Different containers and tubes produce sounds which are slightly different because some reflect the lower frequencies the best, while others reflect the higher frequencies the best.

Fripple Marathon

Primary emphasis: Recognize a preference for visual or auditory input

Let students explore both the "See" and "Hear" problems in Frippletration to determine the type of game they prefer and with which type of game they are more successful. (In the Adult Section, set the "See" and "Hear" Grow Slides at the same level. Turn off "Remember progress..." and "Allow child to access Grow Slides." See pages 29 and 30.)

Each day for a week, have students play "See" games for six minutes. Each student should count the number of tiles on the screen before beginning play and record this number on a "score sheet" after completing the screen, continuing with as many screens as possible in six minutes. If a student has a partial screen completed at the end of six minutes, that student should count and record the number of tiles under the Fripple at the right of the screen. Have students add up the numbers on their score sheets to determine the total number of tiles they have matched. Repeat the activity with six minutes of "Hear" games. Have students record the results on graphs similar to these:



At the end of the week, discuss the results. Students should not draw firm conclusions from this experiment, but discussing the following questions will help them think about their individual learning styles and preferences.

- What is the average number of "See" tiles I matched in six minutes?
- What is the average number of "Hear" tiles I matched in six minutes?
- Was I able to match more "See" tiles or more "Hear" tiles?
- Did I improve my scores over the week?
- Which did I like better, "See" or "Hear" games?

Match That

Primary emphasis: Identify matching attributes

Introduce this activity by having students play Frippletration at the computer, noticing the different criteria (matching by color, matching by shape, matching by number of dots, etc.). Have students sample the simplest problems and then the more complex. (Use the Grow Slides to adjust the level of difficulty.)

Set up a station where two students can work together. The students will need 16 paper cups and a box containing an assortment of items small enough to fit under an inverted cup. Some possibilities include:

- assorted rubber bands
- various types of erasers
- screws, nails, and washers
- assorted buttons
- assorted paper clips
- spools of thread
- game parts (die, chips, playing pieces)
- marbles
- small balls
- twist ties

Explain that pairs of students will be using the supplies at the station to create a matching game. For each game, students decide what attributes they want to match (colors match, shapes match, all attributes match, etc.). Students should select eight pairs of items to fit the attribute category they have chosen. For example, students who have decided to match colors might select two blue paper clips, a yellow marble and a yellow twist tie, orange yarn and an orange bead, etc. Students should invert the 16 cups and place one of the items under each of the cups.

The game is played as follows:

- "Shuffle" the cups/items by sliding them around until they are thoroughly mixed and then slide them into four rows.
- Player A — Lifts any two of the cups, revealing the hidden items. If the items match (for example, they are both red), the player keeps the cups/items. If they do not match, the player covers the items again.
- Player B — Takes a turn, lifting two cups as explained above.
- Play continues until all items are matched. The winner is the player with the most matches.
- The game can be played again and again, using different selections of objects and different attribute categories. Provide time over several days for all students to play.

Stomp, Stomp, Clap, Clap

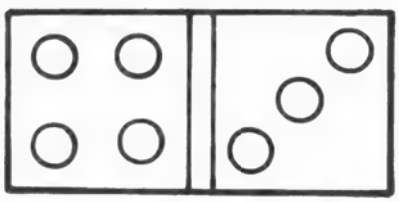
Primary emphasis: Strengthen auditory memory

Let a volunteer be the first "leader" for this game. (All students including the leader can sit at their desks.) The leader uses any combination of claps and stomps to make a series of four sounds (for example: clap, clap, clap, stomp). The class tries to remember the series and repeat it by stomping and clapping in unison. Then a new leader takes over. As the class improves at the game, try longer and longer sequences.

Variation: Sit in a circle. Designate one person to begin by stomping or clapping once (for example: clap). Moving counterclockwise around the circle, the next person should repeat that sound and add one (for example: clap, stomp). The next person should repeat those two sounds and add one (for example: clap, stomp, stomp). Continue until a player is no longer able to remember the sequence. Then start over with the next person in the circle clapping or stomping once.

Drawdown

1.



2.

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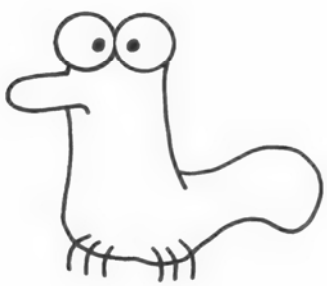

7.

8.

Students with Special Needs

Thinkin' Things Collection 2 is designed to be used by young students or students with special needs and is compatible with Edmark's TouchWindow, a touch-sensitive screen that attaches to your computer monitor. (The TouchWindow can also be used as a single switch device. See below.)

Scanning for Single Switch Users

Thinkin' Things Collection 2 supports single switch input with scanning in Oranga Banga's Band, Frippletration, and Toony's Tunes. When scanning is turned on, a selection arrow automatically advances from choice to choice (the speed is adjustable). Students make a selection by activating a single switch device. (See page 73.) For more information about enabling scanning and controlling the scan rate and scan progression, see page 29.

When scanning is on, Macintosh users can temporarily suspend or resume scanning by pressing Command-Option-S. PC users press Ctrl-Alt-S.

Although most of the features in *Thinkin' Things Collection 2* function normally when scanning is on, these features change:

Macintosh and PC/Compatible

- Children's Grow Slides are disabled in Frippletration and in the Question & Answer Mode of Oranga Banga's Band.
- In the Create Mode of Toony's Tunes, Toony will repeat a student's pattern with preset timing.

Macintosh Only

- In Oranga Banga's Band and Toony's Tunes, you can listen to songs that have been saved. To save songs, scanning must be temporarily turned off.

PC/Compatible Only

- The "Record" button of the "New Sound" dialog in Oranga Banga's Band is not scanned. However, you can record sounds for the rhythms by temporarily suspending scanning (see instructions above), recording as you normally would (see page 13), and then resuming scanning.

Single Switch Devices used with Scanning

You can connect a variety of single switch devices, using them in accordance with the special needs of your students. Each student can then use the most suitable switch while taking turns on the same software activity.

- **TouchWindow** — The entire TouchWindow can function as the single switch device. When the selection arrow points to the object or icon, touching any part of the screen selects the indicated object or icon. The TouchWindow can be placed in the user's lap or on a desktop.
- **Mouse** — The mouse button can serve as the single switch device. When the selection arrow points to the object or icon, clicking the mouse button selects the indicated object or icon.
- **Keyboard** — (PC users only) The Space Bar and the F5, F6, F7, and F8 keys can be used as single switch devices. When the selection arrow points to the object or icon, pressing the Space Bar or one of the F5 through F8 keys selects the indicated object or icon.
- **Switch** — A switch is a specialized input device for special needs users. When the selection arrow points to the object or icon, touching a switch selects the indicated object or icon. (Most switches require a switch interface to connect them to the computer. Switch interfaces are available from Edmark.)

System Requirements

For Macintosh Disk Users

What's in this package?

- *Thinkin' Things Collection 2 Teacher's Guide*
- Registration Card
- 3.5" high-density disks

What do you need?

- Color Macintosh
  (256 colors required)
- System 6.0.7 or higher
- 4 MB RAM (5 MB required for System 7.5)
  (1900K minimum free)
- Hard disk with 11.5 MB free

For Macintosh CD-ROM Users

What's in this package?

- *Thinkin' Things Collection 2 Teacher's Guide*
- Registration Card
- CD-ROM for Macintosh

What do you need?

- Color Macintosh
  (256 colors required)
- System 6.0.7 or higher
- 4 MB RAM (5 MB required for System 7.5)
  (1900K minimum free)
- CD-ROM drive

Optional:

- **Microphone** —Record speech or sound directly using a microphone. You can record original sounds in Oranga Banga's Band.
- **TouchWindow** —A touch screen that attaches to your monitor and provides direct, easy input for young students or students with special needs. The TouchWindow is available directly from Edmark Corporation, 800-362-2890.

Please ...

- Return your registration card today so you can receive pre-release information on Edmark products, money-saving coupons, upgrades and more! Or, if you prefer to register by phone, call us at 800-691-2988, 24 hours a day, 7 days a week.

Installation: Disk

Before installation, turn off all extensions and virus-protection software. System 7 users can do this by holding down the Shift key while their computers start up.

Follow these steps to install *Thinkin' Things Collection 2* on your hard drive:

1. Insert the disk labeled "Disk 1 Install" into your disk drive.
2. When the "TT2 Disk 1 Install" window appears, double-click .
3. Click OK on the *Thinkin' Things Collection 2* title screen.
4. Click Install.
5. Insert the Disks as directed by the messages that appear on your screen.
6. When the screen indicates that installation was successful, click Quit.

To run *Thinkin' Things Collection 2*, open the folder on your hard drive named *Thinkin' Things Collection 2*, then double-click the application *Thinkin' Things Collection 2* .

Installation: CD-ROM

1. Insert the CD-ROM.
2. Double-click the *Thinkin' Things Collection 2* icon to run the program.
   Double-click the *Dear Parents*** icon to view *Dear Parents*.

***Dear Parents* presentation: Edmark Vice President Donna Stanger, award-winning software designer and former teacher with twenty years of classroom experience, shares thoughts about strengthening children's thinking skills and answers parent questions.
Dear Parents was created using Macromedia Director®.

Running Thinkin' Things Collection 2 from KidDesk

KidDesk is a personalized, colorful program launcher for children. If you choose to run *Thinkin' Things Collection 2* from *KidDesk*, use *Add Application* from the *KidDesk* Adult Section to place *Thinkin' Things Collection 2* on your children's desktops. Please see *KidDesk Aware* (pages 31–33) for information about additional features available to System 7 users.

Technical Support

Thinkin' Things Collection 2 is designed for enjoyable and easy use. If a problem does arise, the following information may help. If you do not find a solution on this page, consult *Troubleshooting* (page 77), which lists specific problems and solutions.

1. Do I have the required hardware?

Review *System Requirements* (page 74) to make certain that your computer equipment meets or exceeds the minimum requirements. Also, check to see that your microphone is working correctly.

2. Did I select the correct options in the Adult Section?

If a feature is not working or an icon does not appear in the appropriate activities, the feature or icon may have been turned off. Check to see that you have selected the correct options in the Adult Section by pressing Command-Option-A. Then, select either the Preferences Card or Activity Settings Card (page 29). For example, if a large scanning arrow appears in the activities, check to be sure that Single Switch Input is "Off" on the Preferences Card.

3. Are the Control Panels and the Chooser set correctly?

Controls for many Macintosh functions such as sound, color, mouse operation, etc., are located in the Control Panels. To access the control panels, choose the Control Panels item under the Apple menu. The Chooser, also available from the Apple menu, controls printer and network connections. Be sure to close all control panel windows before running *Thinkin' Things Collection 2*.

4. Is a System Extension (INIT) interfering with running or installing the program?

Sometimes problems are caused by other software or a System Extension (sometimes referred to as an INIT) that is installed. To disable System Extensions in System 7, restart your Macintosh and hold down the Shift key until the Finder appears. Then, reinstall or run *Thinkin' Things Collection 2*. (In System 6, restart with your System Tools disk in the disk drive.)

If the information above and *Troubleshooting* do not help you to solve the problem, please call our **Technical Support Department**, Monday through Friday, 8 a.m. to 5 p.m. (Pacific Time) at **800-528-7158**. In order to help you when you call, we will need to know:

- The Macintosh model you are using (for example, LC II, Performa 405).
- Additional hardware information, which may include third-party sound device, memory, etc.
- System and settings information, including control panel settings (Monitors, Memory, etc.), system version, etc.
- A detailed description of the problem, including specific error messages, your activity before the problem occurred, etc. The more information you give us, the faster we can solve your problem.

If possible, have the program running and call from a nearby phone.

For Macintosh Users

Troubleshooting

Problem	Possible Cause	Solution
Error during installation. (Disc version only.)	The *Thinkin' Things Collection 2* Installer may be running out of hard disk space.	Before installation, increase available hard disk space. If using disk compression software, you may need to make extra space available since some compression software does not report actual free hard disk space.
	Virus protection software may be interfering with installation.	Disable virus protection software. (Hold down the Shift key while restarting in System 7.)
	Screen saver may be interfering with installation.	Disable screen saver. (Hold down the Shift key while restarting in System 7.)
Error message "Disk not initialized" displayed after inserting *Thinkin' Things Collection 2* disk in a Mac II.	Using high-density disks in low-density drive.	*Thinkin' Things Collection 2* requires a high-density floppy drive.
Error message about 32-Bit QuickDraw when attempting to run *Thinkin' Things Collection 2*.	Using System 6 without 32-Bit QuickDraw.	Run the Installer from your original System 6 diskettes. Choose "Custom Installation." Select 32-Bit QuickDraw.
Irregular movement of 3D Image or Snake in BLOX activities.	Other programs running at the same time.	Quit all other applications and close any control panels before running *Thinkin' Things Collection 2*.
Sound breaks up.	Using System 7 with Virtual Memory on.	Turn Virtual Memory off using the Memory control panel (see the *Macintosh User's Guide*).
	Running disk compression utility.	Decompress *Thinkin' Things Collection 2* and disable disk compression.
	Running *Thinkin' Things Collection 2* from a network file server.	Install *Thinkin' Things Collection 2* on your hard disk. Remove copy from network.
Mouse cursor hidden. Large scanning arrow appears on screen.	Single switch input (scanning) is on.	Click Single Switch Input "Off" in the Adult Section of *Thinkin' Things Collection 2* (page 29).
Thinkin' Things Collection 2 does not display color on a color monitor.	Monitor is set to display "Grays."	Use Monitors Control Panel to set your monitor to "Colors" instead of "Grays" (see the *Macintosh User's Guide*).
Sound is too quiet or too loud.	Sound volume needs to be adjusted.	Adjust the volume for *Thinkin' Things Collection 2* using the Sound Volume control in the Adult Section (page 29).
Application icon not displayed.	Finder hasn't added application icon.	Rebuild the desktop. To do so, restart your computer, holding down the Cmd-Option keys until dialog appears. Click "OK."

For Edmark technical support, call **800-528-7158**.

System Requirements

For PC Disk Users

What's in this package?

- *Thinkin' Things Collection 2 Teacher's Guide*
- Registration Card
- 3.5" high-density disks

What do you need?

- MS-DOS 3.1 or later
- SVGA monitor with 1 MB RAM (VESA drivers are included)
- 560K free conventional memory
  2 MB extended memory (XMS) recommended
- Microsoft-compatible mouse and driver
- 3.5" high-density floppy disk drive to install
- Third-party sound-output device or card (with external speaker)
- Hard disk with 14 MB free
- 25 MHz 386 or better

Note: *Thinkin' Things Collection 2* also runs from Windows 3.1.

For PC CD-ROM Users

What's in this package?

- *Thinkin' Things Collection 2 Teacher's Guide*
- Registration Card
- CD-ROM for IBM and Compatibles

What do you need?

- MS-DOS 3.1 or later
- SVGA monitor with 1 MB RAM (VESA drivers are included)
- 560K free conventional memory
  2 MB extended memory (XMS) strongly recommended
- Microsoft-compatible mouse and driver
- CD-ROM drive
- Third-party sound-output device or card (with external speaker)
- Hard disk with 1 MB free
- 25 MHz 386 or better

Note: *Thinkin' Things Collection 2* also runs from Windows 3.1.

Optional:

- **Microphone** —Record speech or sound directly using a microphone. You can record original sounds in Oranga Banga's Band.
- **TouchWindow** —A touch screen that attaches to your monitor and provides direct, easy input for young students or students with special needs. The TouchWindow is available directly from Edmark Corporation, 800-362-2890.

Please ...

- Return your registration card today so you can receive pre-release information on Edmark products, money-saving coupons, upgrades and more! Or, if you prefer to register by phone, call us at 800-691-2988, 24 hours a day, 7 days a week.

Installation: Disk

From MS-DOS:

1. Insert the Installation disk into your drive.
2. Type **a:install** or **b:install** at the DOS prompt.
3. Follow the on-screen instructions to configure *Thinkin' Things Collection 2* for your computer.
4. If *Thinkin' Things Collection 2* has been previously installed in this directory, you must indicate if you want to replace the existing version on your hard drive.
5. After installation is complete, move to the *Thinkin' Things Collection 2* directory (for example, **cd \tt2**) and type **tt2**. (If you have added *Thinkin' Things Collection 2* to your path, restart your computer and type **tt2** at any DOS prompt.)

If you change your sound device after you have installed *Thinkin' Things Collection 2*, you must specify your new equipment. To do so, move to the *Thinkin' Things Collection 2* directory on your hard drive (for example, **cd \tt2**) and type **install**. You do not need to reinsert your disks. You will skip directly to the setup menus, avoiding the rest of the installation procedure.

From Windows:

1. Insert the Installation disk into your drive.
2. Choose *Run* from the File menu in Program Manager.
3. Type **a:install** or **b:install**.
4. Follow the on-screen instructions to configure *Thinkin' Things Collection 2* for your computer.
5. If *Thinkin' Things Collection 2* has been previously installed in this directory, you must indicate if you want to replace the existing version on your hard drive.
6. After installation is complete, exit Program Manager and restart Windows.
7. Double-click the *Thinkin' Things Collection 2* icon in the Edmark group.

If you change your sound device after you have installed *Thinkin' Things Collection 2*, you must specify your new equipment. To do so, choose *Run* from the File menu in Program Manager. Then type **c:\tt2\install** (or the name of the directory where you installed *Thinkin' Things Collection 2*). You do not need to reinsert your disks. You will skip directly to the setup menus, avoiding the rest of the installation procedure.

Installation: CD-ROM

From MS-DOS:

1. Insert the CD-ROM.
2. Type **d:\install** (**d** represents your CD-ROM drive) and answer the on-screen questions.
3. Type **d:\tt2** to start *Thinkin' Things Collection 2*.

If you change your sound device after you have installed *Thinkin' Things Collection 2*, you must specify your new equipment. To do so, insert the CD-ROM and type **d:\install**. You will skip directly to the setup menus, avoiding the rest of the installation procedure.

Note: *Dear Parents*** runs only from Windows.

From Windows:

1. Insert the CD-ROM.
2. Choose *Run* from the File menu in Program Manager.
3. Type **d:\install** (**d** represents your CD-ROM drive) and answer the on-screen questions.
4. Restart Windows and double-click the *Thinkin' Things Collection 2* icon in the Edmark Program Group.

If you change your sound device after you have installed *Thinkin' Things Collection 2*, you must specify your new equipment. To do so, insert the CD-ROM. Then choose *Run* from the File menu in Program Manager and type **d:\install**. You will skip directly to the setup menus, avoiding the rest of the installation procedure.

After installing *Thinkin' Things Collection 2,* you may also install *Dear Parents.***

1. Choose *Run* from the File Menu in Program Manager. Then type **d:\setup** (**d** represents your CD-ROM drive) and answer the on-screen questions.
2. Restart Windows and double-click the *Dear Parents* icon in the Edmark Program Group.

***Dear Parents* presentation: Edmark Vice President Donna Stanger, award-winning software designer and former teacher with twenty years of classroom experience, shares thoughts about strengthening children's thinking skills and answers parent questions.

Dear Parents was created using Macromedia Director®.

Running Thinkin' Things Collection 2 from KidDesk

KidDesk is a personalized, colorful program launcher for children. If you choose to run *Thinkin' Things Collection 2* from *KidDesk*, use *Add Application* from the *KidDesk* Adult Section to place *Thinkin' Things Collection 2* on your children's desktops. Please see *KidDesk Aware* (pages 31–33) for information about additional features available to *KidDesk* users.

Thinkin' Things Collection 2 and the TouchWindow

Your TouchWindow driver must be upgraded to work with *Thinkin' Things Collection 2*. Copy the upgraded TouchWindow driver, TWINDOW.EXE, included on the *Thinkin' Things Collection 2* installation disk or CD, to C:\TWINDOW or the directory containing your TouchWindow driver. (Restart your computer to load the new driver into memory.)

Technical Support

Thinkin' Things Collection 2 is designed for enjoyable and easy use. If a problem does arise, the following information may help. If you do not find a solution on this page, consult *Troubleshooting* (pages 82–83), which lists specific problems and solutions.

1. Do I have the required hardware?

Review the *System Requirements* (page 78) to make certain that your computer equipment meets or exceeds the minimum requirements. If you select hardware during installation that you do not have, *Thinkin' Things Collection 2* will not run correctly. If you change hardware after you have installed *Thinkin' Things Collection 2*, you must run the Installer again and specify your new hardware (pages 79–80).

2. Did I select the correct options in the Adult Section?

To go to the Adult Section, hold down the Ctrl and Alt keys while you press "A." Check to see that you have set the correct options. For example, if a large scanning arrow appears in the activities, check that Single Switch Input is "Off" on the Preferences Card.

3. Is your Sound Blaster/compatible sound card working?

In the Installer, there are two choices for Sound Blaster sound cards and compatibles. Make sure the address and DMA and IRQ settings are correct in the Installer. Check your sound card manual for information about these settings.

If the information above and *Troubleshooting* do not help you to solve the problem, please call our **Technical Support Department**, Monday through Friday, 8 a.m. to 5 p.m. (Pacific Time) at **800-528-7158**. In order to help you when you call, we will need to know:

- The kind of computer you are using, including the model (for example, 25 MHz 386, 33 MHz 486, etc.).
- Additional hardware information, including sound card, mouse, etc.
- Operating system information, such as DOS version and the contents of your AUTOEXEC.BAT and CONFIG.SYS files.
- A detailed description of the problem, including specific error messages, the activity where the problem occurred, etc. The more information you give us, the faster we can solve your problem.

If possible, have Thinkin' Things Collection 2 running and call from a nearby phone.

Troubleshooting

Problem	Possible Cause	Solution
Resource does not exist or resource error.	Program is missing necessary files. (Disk version only.)	Before Installation, increase free hard disk space.
"Not enough free memory" message.	Not enough conventional memory to load *Thinkin' Things Collection 2*: too many drivers and/or memory resident programs.	Remove unnecessary Memory Resident Programs (TSRs) that load from your AUTOEXEC.BAT file. Remove unnecessary drivers from your CONFIG.SYS file. Or, make a clean boot disk. Refer to your *MS-DOS User's Guide*. DOS 6.x users can run MEMMAKER.EXE.
Mouse error message appears on screen.	MS-DOS (or compatible) mouse driver not installed or installed improperly.	Install and load mouse driver (see your *MS-DOS User's Guide*). Or, consult your mouse manual.
"Could not find SVGA card."	*Thinkin' Things Collection 2* could not locate a VESA compliant SVGA card.	Use a VESA compliant SVGA card, or load the VESA driver for your video card.
Program will not continue beyond title screen.	Sound device not installed or improperly installed.	Install sound device, or consult your sound device manual.
	Wrong sound card selected during installation.	Run the Installer (pages 79–80) and select the correct IRQ. Refer to your sound device manual.
	Wrong sound card settings.	Run the Installer (pages 79–80) and select the correct settings. Refer to your sound card manual.
No sound.	*Thinkin' Things Collection 2* configured for incorrect sound device.	Run the *Thinkin' Things Collection 2* Installer (pages 79–80) and select your sound device.
	Sound device not installed or improperly installed.	Install sound device, or consult your sound device manual.
	External speaker not connected.	Connect external speaker.
No sound from Pro Audio.	Driver may not be loaded or using incompatible hardware settings.	Make sure the MVSOUND.SYS driver is loaded (refer to your sound card's manual), or make sure IRQ is less than 10. Or, select Sound Blaster in the Installer.
Sound is barely audible or too slow.	Sound device conflicts with other sound cards or with Windows.	Refer to troubleshooting section of sound device manual. Or, run the Installer (pages 79–80) and choose another option for running *Thinkin' Things Collection 2* from Windows.
	Using computer's internal speaker.	Install a sound device with external speaker.
No mouse cursor. Scanning arrow appears on screen.	Single Switch Input (scanning) is on.	Click Single Switch Input "off" in the Adult Section of *Thinkin' Things Collection 2* (page 29).

Troubleshooting (cont.)

Problem	Possible Cause	Solution
Recording is not available.	Sound card chosen that does not support recording.	Choose a sound card marked with an asterisk (*) in the *Thinkin' Things Collection 2* Installer.
	"Don't allow recording" selected in Adult Section.	Click "Allow Recording" in Adult Section (page 29).
Recording does not work.	Microphone level may be too low.	Set the microphone input level higher. Refer to sound device manual.
TouchWindow will not work with BLOX.	Old TouchWindow driver loaded.	Copy the upgraded TouchWindow driver (TWINDOW.EXE) on the *Thinkin' Things Collection 2* installation disk or CD to C:\TWINDOW or your TouchWindow driver directory. Restart your computer to load the new driver into memory.
Thinkin' Things Collection 2 icon does not appear on *KidDesk* desks.	*Thinkin' Things Collection 2* improperly added to *KidDesk*.	See *KidDesk Aware* (pages 31–33).
Changes to Windows install configuration do not take effect.	Windows only reads the changed configuration information on startup.	Restart Windows.
Edmark Group or *Thinkin' Things Collection 2* icon does not appear in Program Manager after running Installer from Windows.	Edmark Group or *Thinkin' Things Collection 2* icon does not appear until Windows has been restarted, or an incorrect configuration option has been selected.	Restart Windows. Or, reinstall *Thinkin' Things Collection 2* and choose a Windows install option.
No sound when *Thinkin' Things Collection 2* is started from Windows; and program freezes when trying to go past the main screen.	Windows sound card is not set up correctly.	Check your sound card setting or choose the "Suspend Windows" option from the *Thinkin' Things Collection 2* Installer.
No sound when *Thinkin' Things Collection 2* is started from Windows.	*Thinkin' Things Collection 2* sound configuration is not set up correctly.	Choose the "Windows Sound Configuration" option or the "Suspend Windows" option during installation.
Troubleshooting ideas don't help.	Need information too new for the guide.	See the readme file in the *Thinkin' Things Collection 2* directory. (To view in Windows, open **readme.wri** in Windows Write; to view in DOS, type **type readme.txt /p** at the DOS prompt.)

For Edmark technical support, call **800-528-7158**.

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TouchWindow

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Interactive play with animated, talking characters helps build important language and pre-reading skills.

Sammy's Science House – PreK to 2nd Grade
Sammy and his friends introduce students to fundamental scientific processes and help them learn about plants, animals, seasons, and weather.

KidDesk – PreK and Up
This hard disk security and menuing program protects your hard disk while enabling students to use the computer independently.

Thinkin' Things Collection 1 – PreK to 4th Grade
Oranga Banga and other Thinkin' Things help students build memory, problem solving, logic, and other thinking skills.

Thinkin' Things Collection 2 – 1st to 6th Grade
Students further develop memory, creativity, spatial awareness, and other higher level thinking skills.

Imagination Express Series – 1st to 6th Grade
The *Imagination Express* series transports students to exciting learning destinations and inspires them to create interactive stories and beautiful printed books.

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TouchMoney
Touch 'N See
Touch 'N Match
PuzzleMaker
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Words Around Me

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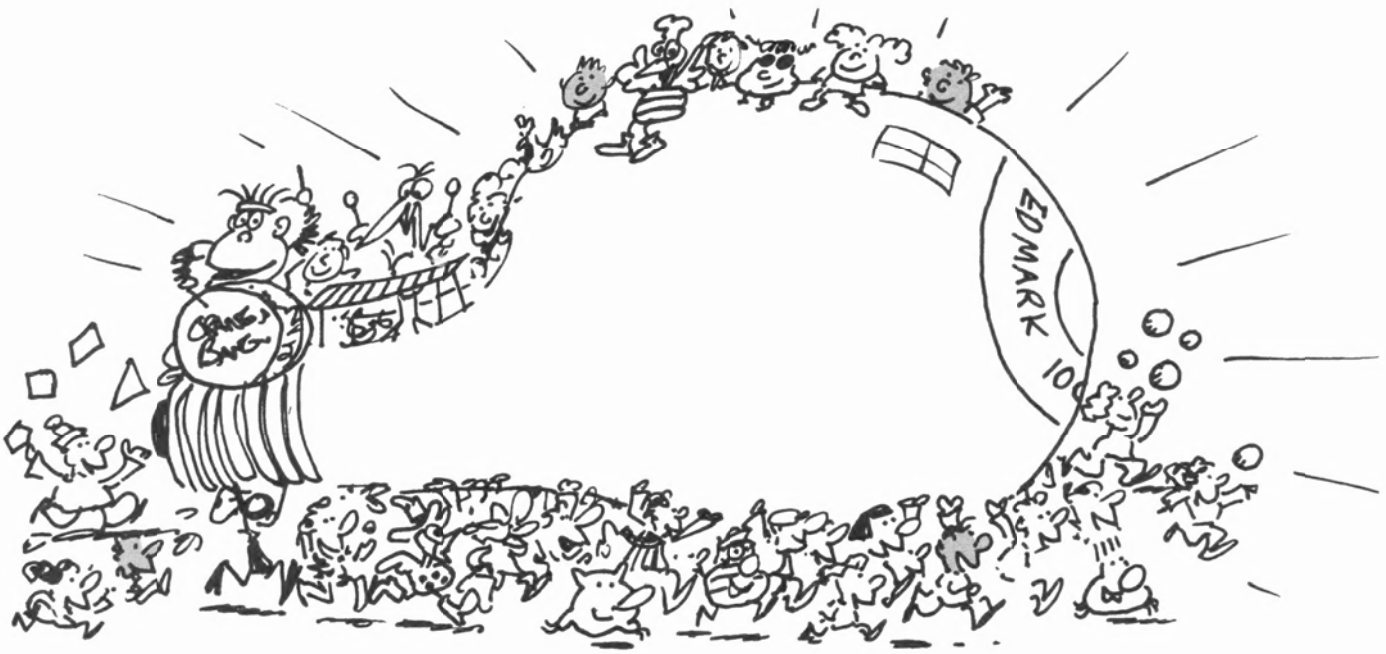

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