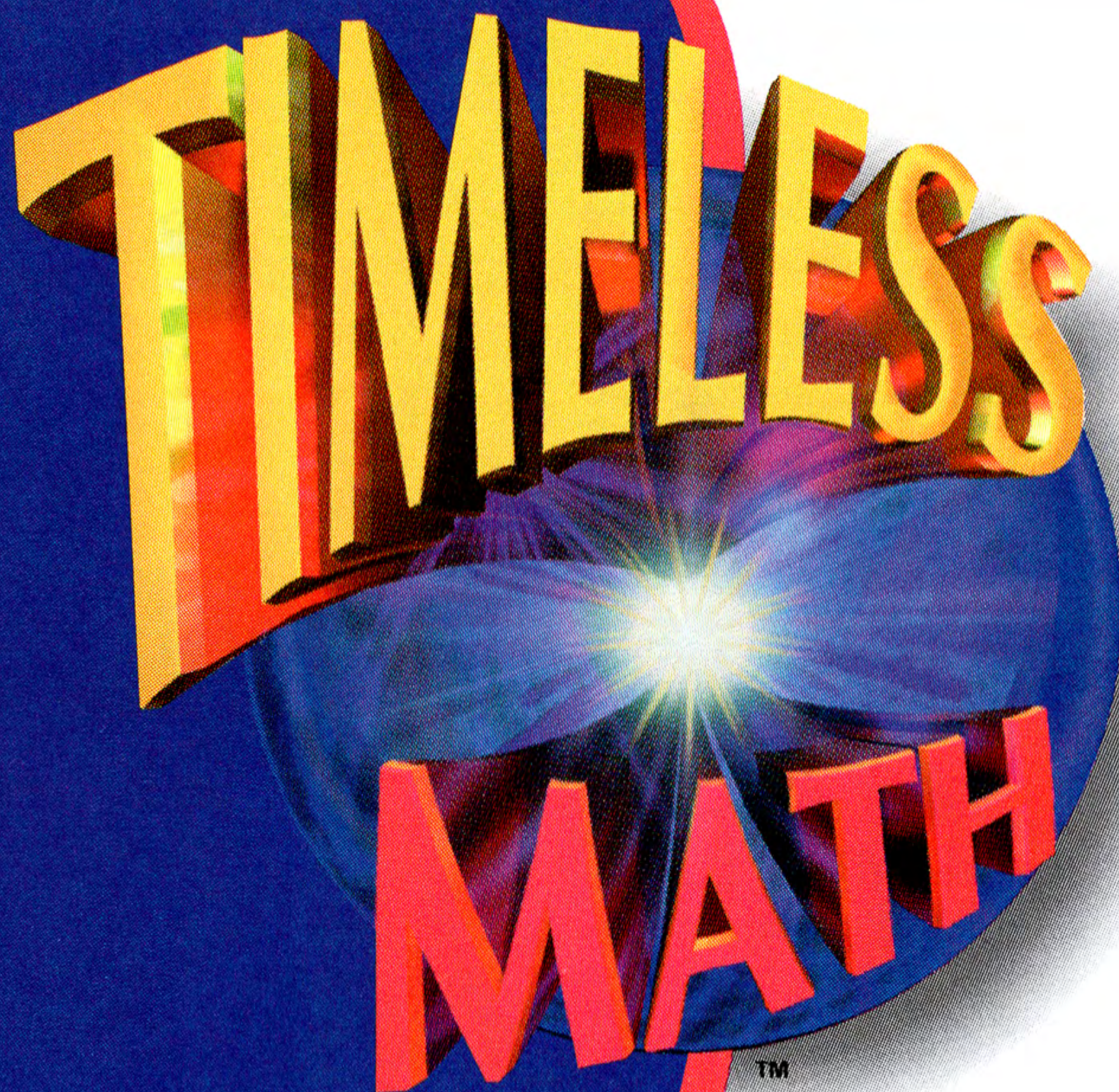




The Maya Adventure Adventure 2—“Observatory”



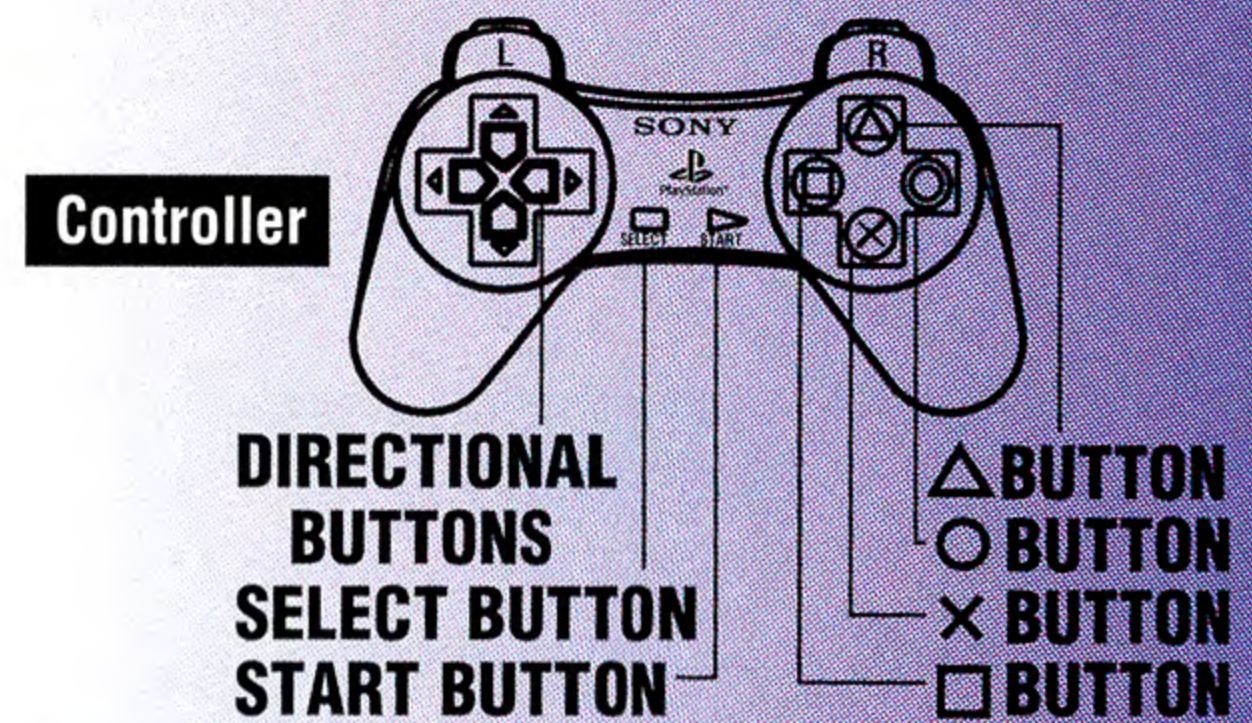
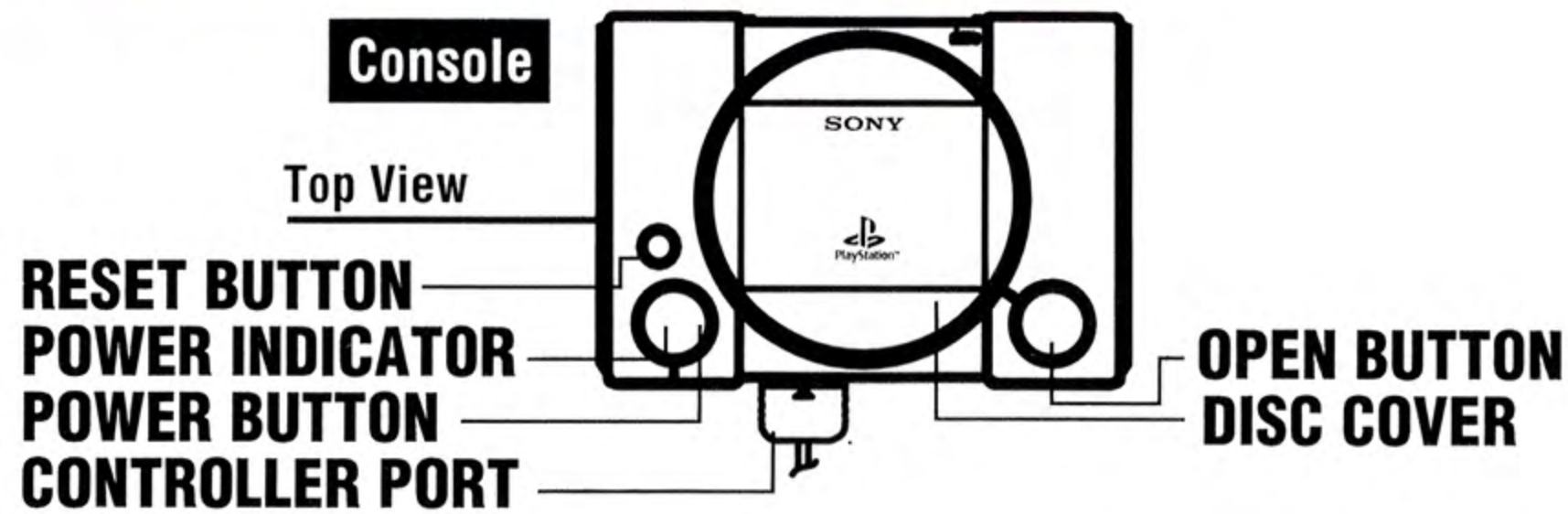
Todd and Maria are two school friends suddenly and mysteriously transported back to the ancient Maya civilization. In “Observatory,” your child continues to help the characters return home by completing mathematics activities.

Your child will solve fascinating puzzles with angles, order the Maya number system, and order, sequence, and identify equivalent forms of fractions, decimals, and percentages.

LEARNING OBJECTIVES

- Identify, match, and order fractions, decimals, and percentages
- Use angular measurements to solve puzzles
- Understand patterns in the Maya numbering system
- Analyze graphs and charts to make decisions and solve problems

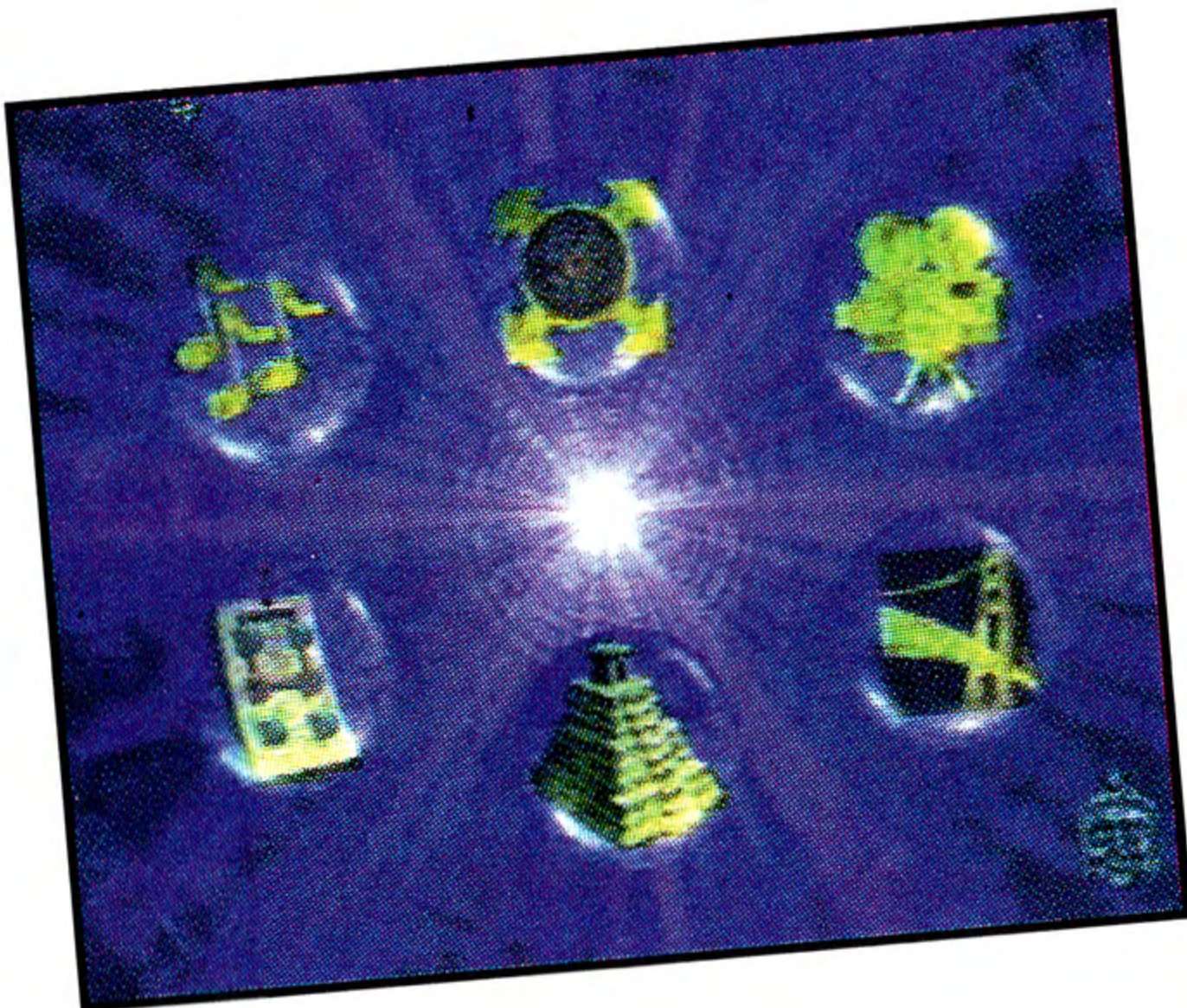
Getting Started



Set up the PlayStation™ game console according to the instructions in its Instruction Manual. Make sure the power is off before inserting or removing a compact disc. Insert the *Timeless Math* disc and close the CD door. Insert the game controller and turn on the PlayStation game console. Follow the instructions on the television screen to start the adventure.

The CD begins by introducing your child to Todd and Maria and the goal of the adventure.

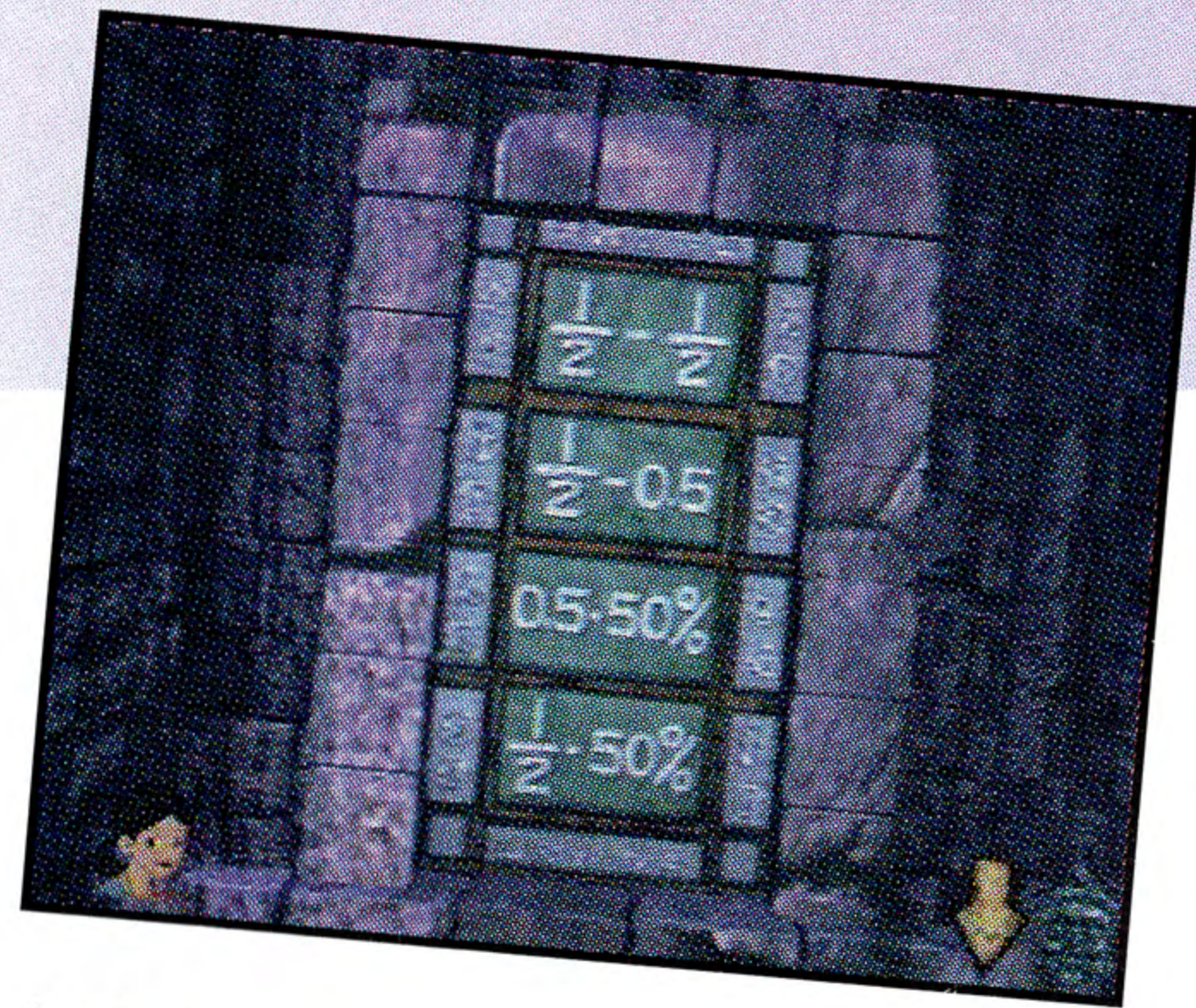
- Use the **X button** on the PlayStation controller for clicking.
- Click if you want to skip the introduction.
- Click the **movie projector** to watch the story introduction.
- To begin the "Observatory" games, click the **pyramid**, then click **OK**. Notice that the pointer sometimes changes to a red arrowhead. When this happens, click to begin an activity or perform a task.
- Click the **music note** to hear the Timeless Math theme song.
 - Click the **map** to see the map of all the "Observatory" games.
 - For help at any time throughout the game, click **Ixché** in the lower-right corner of each game screen.
 - For more information about a puzzle, click the **book** in the lower-left portion of the screen.



“Observatory”

Your child is challenged to move through the pyramid by solving mathematical puzzles, building bridges, solving riddles, and mastering the ancient Maya numbering system. To win, your child must earn 30 jade pieces, 15 obsidian bars, and 15 jewel eggs before meeting the final challenge, the Gem Game, in the Strategy Room.

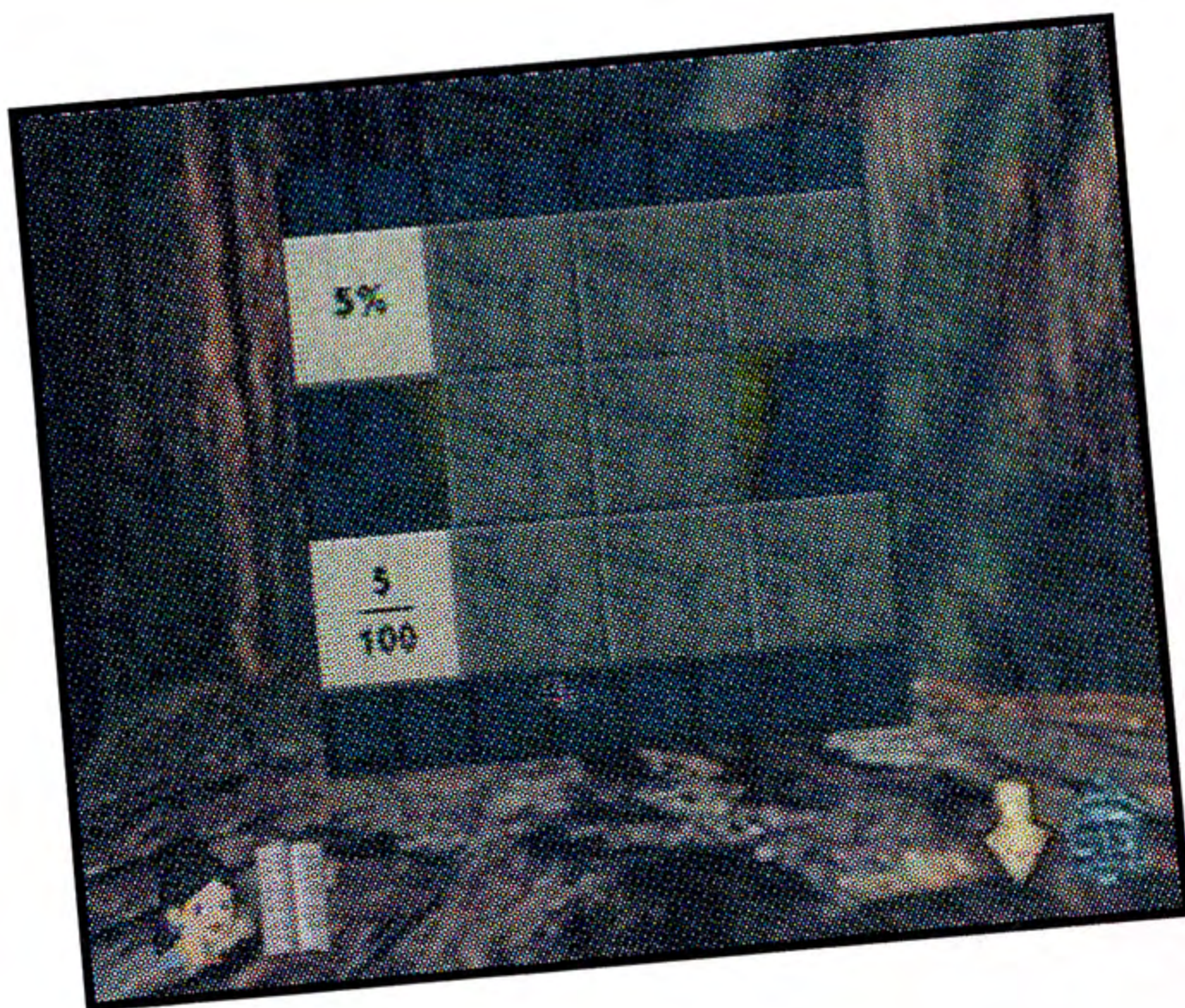
- For each “Observatory” game, your child will choose a difficulty level from 1 to 4.
- The **down arrow** in the lower-right corner of the screen allows your child to return to the Main Menu, select a password, turn the music on or off, or move to either the Navigation Room or the Strategy Room.
- To explore the Maya pyramid, have your child click the **arrows** that appear when the pointer moves over certain portions of the screen.



Cenote

To open the door and bridge the chasm to the jade treasure, your child will identify and match equivalent forms of fractions, decimals, and percentages, then order them. Have your child:

- begin by clicking a **glyph** on the left door to choose which number representations he or she wants to match, then select the level of difficulty



Magic Door

The object of this Concentration game is to match the number under one tile with its equivalent representation under another tile. When all the tiles are cleared, the door will open. Have your child:

- click a **tile** to see the number behind it
- click another **tile** to try to match the first; when two tiles are matched, they disappear, revealing the magic door
- keep going until all the tiles have disappeared

Treasure Bridge

The object of this game is to put the fractions, decimals, and percentages on the left in the same least-to-greatest order as the circles on the right. Have your child:

- rearrange the number **tiles** by clicking any two, and they will switch places
- continue until all the numbers are in the same least-to-greatest order as the circles on the right; for each tile moved into the correct place, a stepping stone will be added to bridge the chasm to the treasure

Caracol

To find Seven Finder Macaw's precious jewel eggs, your child will use time and direction clues to determine angles and discover hiding places in the Caracol. Have your child:

- click the **middle door** to begin, then select a level of difficulty
- click the **north cubby** (the one that is 0 degrees and 360 degrees) in the Caracol to start the game
- make a note of the clues given; then click at the **top of the screen** to return to the Caracol
- click the **table** in the center of the room to lead him or her to the Seven Finder Macaw's Finder Machine, where he or she can use the clues to determine the angle needed to find the treasure
- click the appropriate **arrows** to enter the start and stop times and the date from the clues
- click the **green star** on the circle, then click the **red star** on the circle; watch what happens
- make a note of the degree measurement that appears in the box in the lower-right portion of the screen
- click the **top of the screen** to return to the Caracol
- move the given number of degrees from the starting point in the direction of the color given in the clues
- click the **cubby** he or she arrives at through the calculations; if it is the correct one, your child will be given more clues; if incorrect, have him or her try again
- repeat this process until he or she has discovered all 7 of Seven Finder Macaw's hiding places



Pok ol Pok

As your child tries to outperform the Maya's finest Pok ol Pok players, he or she will order Maya numbers. Have your child:

- click the **door** on the right to begin
- click a **glyph** to choose the home team, then select a level of difficulty

- notice the Maya numbers on the four colored *steles* on the playing field; these match the four *steles* in the center of the field; he or she must aim the player to kick the ball into the *steles* on the field, starting with the least number and working up to the greatest
- click the **ball**, then line up the Maya player behind the ball so that the kick will hit the least-numbered *steles*; click again when ready to kick
- continue until he or she has knocked over all four *steles*
- win three rounds to complete this game

“Strategy Room”

The Strategy Room gives your child the opportunity to explore information about the Maya civilization, use tools to practice the concepts taught in the games, and analyze his or her performance in each game.

- The first screen your child will see is the Data Set menu.
- Other menus are available by moving the pointer to the left Tool Set or right Information Set on the screen and clicking when it turns into an **arrow**.
- To return to the games at any time, have your child click the **down arrow** in the bottom-right corner of the screen.

Data Set Menu

Using the Data Set, your child can check his or her game progress, analyze results, and determine the best strategy to win the adventure. Once he or she has reviewed a game score, click the **arrow** in the upper-left corner of the screen to return to the Data Set screen.

Have your child:

- click the **observatory** below the Data Set screen to see his or her scores in the form of a graph for each of the “Observatory” games
- click the appropriate **picture** to see his or her scores for each game:
 - the tiles in the upper-left corner show Cenote Magic Door scores
 - the bridge in the upper-right corner shows Cenote Treasure Bridge scores
 - the dipper of stars in the lower-left corner shows Caracol scores
 - the stone ring in the lower-right corner shows Pok ol Pok scores
 - the colored bars in the middle show how much treasure he or she has won
 - click the **legend** at the bottom of the treasure screen for an explanation of the treasure symbols



Note: MD = Magic Door; TB = Treasure Bridge.

- click the **key** to choose preferences for the games
- click the **2-player picture** to choose how many players will compete in the adventure
- click the **pyramid** to save his or her game status and exit the adventure

Tool Set

The Tool Set screen is located to the left of the Data Set screen in the Strategy Room. It provides your child with an opportunity to practice the concepts taught in the games.

Have your child:

- click the **observatory** to see the Tool Set for “Observatory”
- click the **angle** to use the Angle Tool; this tool explores the relationship between angles in a circle:
 - click either the **blue** or **red dot** on the circle, and move it around the circle
 - watch what happens to the blue and red angle measurements in the boxes as the dots move
 - notice how the angles always add up to 360 degrees; this tool is especially helpful when playing the Caracol game
- click the **square with bars and dots** to use the Number Tool; this tool will help him or her understand what the various Maya numbers mean:
 - click the **arrows** in the left portion of the screen to alter the number of colored dots in the upper and lower squares
 - watch what happens to the Maya numbers on the right when the colored dots are moved between the upper and lower squares; this tool is especially helpful when playing Pok ol Pok
- click the **tools** in the bottom far right of the Tool Set screen to check his or her game status; to complete the game successfully, your child must earn 30 jade pieces, 15 obsidian bars, and 15 jewel eggs before meeting the final challenge—the Gem Game in the Strategy Room

Information Set

The Information Set provides your child with options for exploring written information and images about the ancient Maya civilization. Topics include the environment, architecture, culture, agriculture, calendar system, and astronomy of the ancient Maya people. Have your child:

- explore each option to discover a wealth of information about the ancient Maya civilization

Extending the Learning Experience

Family Activities

Popular Math Sayings

Have a contest with members of your family to see how many popular sayings that involve math they can think of, and then discuss what the saying means; for example, "You'll feel 100% better," "He has a 50/50 chance," or "We have a half-dozen eggs."

Math In Sports

Together with your child look for a few sports statistics in the newspaper and discuss what they mean. If the athlete or team did twice as well the next day, what would the new statistics be? If the athlete or team did twice as poorly, what would the new statistics be? What does a batting average mean? Convert a batting average decimal to a percentage, then to a fraction.

WARNING: READ BEFORE USING THE PlayStation™ GAME CONSOLE.

A very small percentage of individuals may experience epileptic seizures when exposed to certain light patterns or flashing lights. Exposure to certain patterns or backgrounds on a television screen or while playing video games, including games played on the PlayStation™ game console, may induce an epileptic seizure in these individuals. Certain conditions may induce previously undetected epileptic symptoms even in persons who have no history of prior seizures or epilepsy. If you, or anyone in your family, has an epileptic condition, consult your physician prior to playing. If you experience any of the following symptoms while playing a video game—dizziness, altered vision, eye or muscle twitches, loss of awareness, disorientation, any involuntary movement, or convulsions—IMMEDIATELY discontinue use and consult your physician before resuming play.

WARNING TO OWNERS OF PROJECTION TELEVISIONS:

Do not connect the PlayStation™ game console to a projection TV without first consulting the user manual for your projection TV, unless it is of the LCD type. Otherwise, it may permanently damage your TV screen.

HANDLING THE PlayStation™ DISC:

- This compact disc is intended for use only with the PlayStation™ game console.
- Do not bend it, crush it, or submerge it in liquids.
- Do not leave it in direct sunlight or near a radiator or other source of heat.
- Be sure to take an occasional rest break during extended play.
- Keep this compact disc clean. Always hold the disc by the edges and keep it in its protective case when not in use. Clean the disc with a lint-free, soft, dry cloth, wiping in straight lines from center to outer edge. Never use solvents or abrasive cleaners.



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