

Abacus Land

Solar Map

Living Maze

Global Community

Checkers Board

Spectrum Toss

Perez Gallery

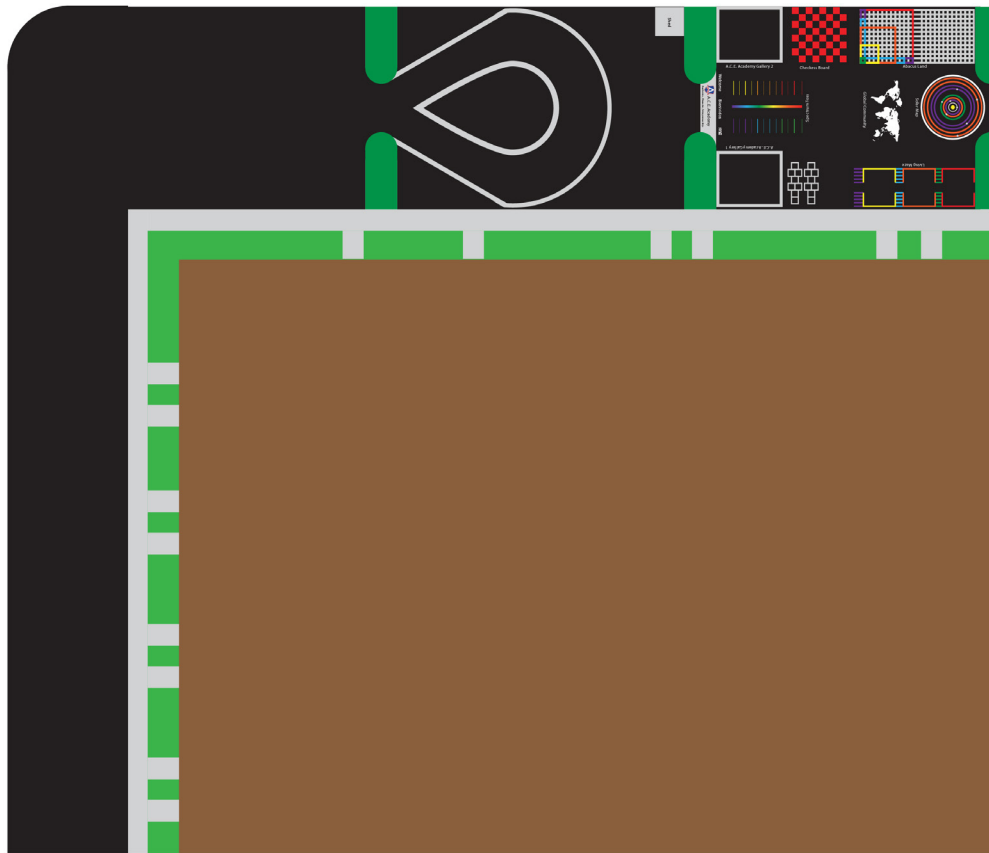
Robinson Gallery

Welcome Bienvidos 欢迎

A.C.E. Academy
Academics, Character, Entrepreneurship

Shed

Welcome to the Playpad Guide



The Playpad was designed to keep kids intellectually and physically stimulated through activities in the interactive design. Each major visual element on the playpad has been made for specific activities or for a lesson. From playing life-sized chess to learning about planets in where they are placed in our solar system, students will be able to learn something before leaving the play pad.

The following pages give description to each of the visual elements on the playpad and challenges for students or fun facts for them to know. Over all, the most important thing about this project is the intent for its flexibility for teachers to use as a teaching tool as well as a form of recess so students can get the out-door time while still learning what they would be learning in the classroom.

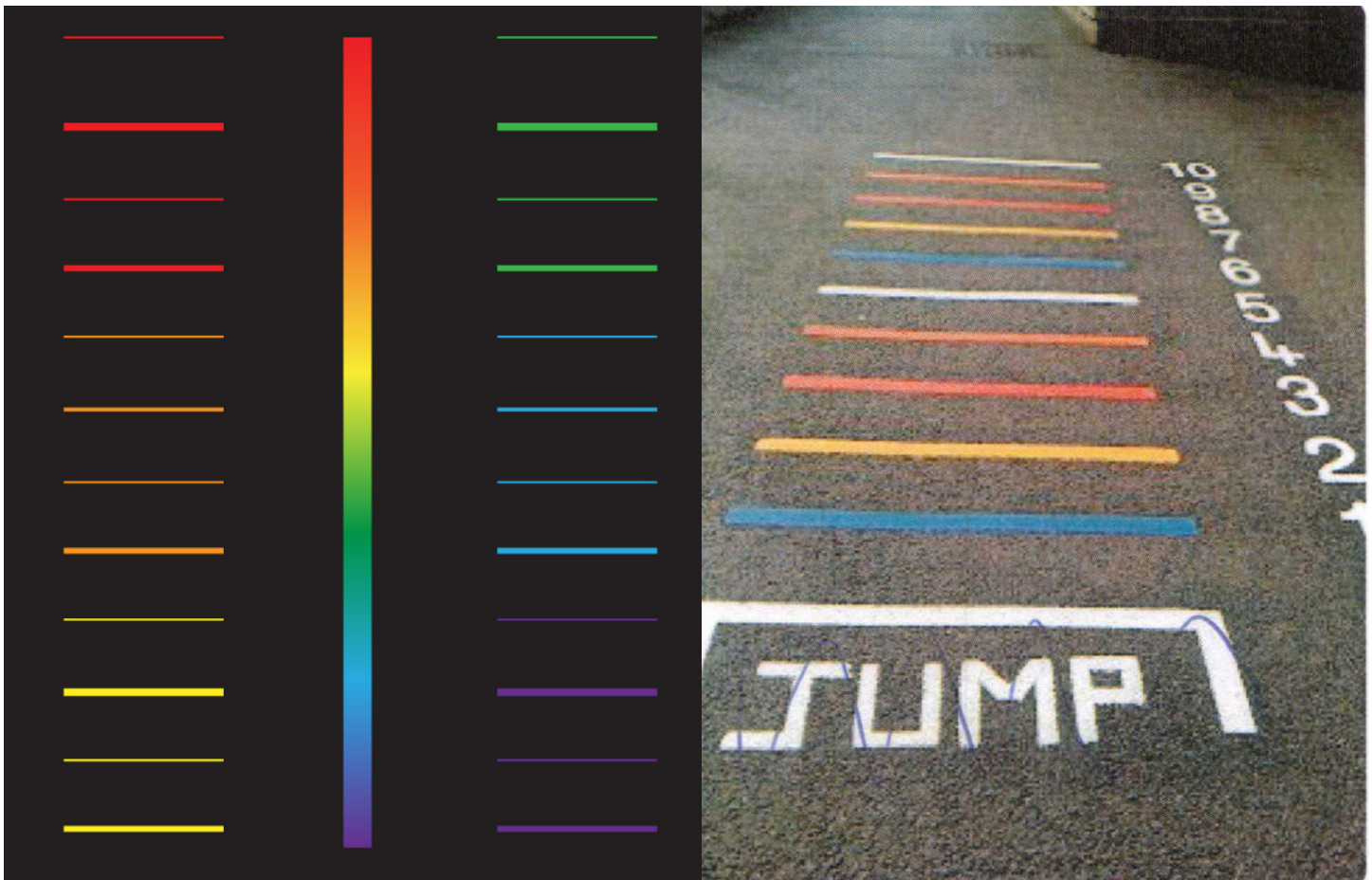


The Galleries are open spaces for students to draw, and create whatever they want. Student can draw their favorite animal, a scene from their favorite story, patterns or make special projects.

Contemporary Artist Leon Keer (right below) Made a perspective drawing of the terracotta army of Lego men. Can you try to draw the same?

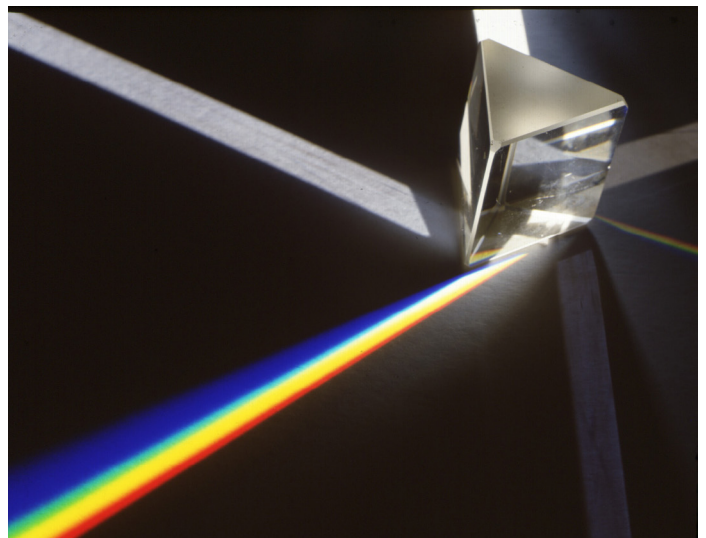
Checkout his process below.





Spectrum jump is for beanbag toss and jumping to see how far you can jump or throw. It is also a visual reference to the visible light spectrum, or color wheel. Students start from the side where Red and Green are next to each other. As they look, the markers are estimated to be a foot away from each other. When they toss a beanbag or jump, they can use those markers to measure how far out they have thrown or jumped. The lines can also be a reference to teach students about complementary colors, which are colors that are on the opposite of each other when they look at the color wheel. For example, the complement of red is green and the complement of blue is orange. View the color wheel below.

For the safety of the students, this should be used primarily for being bag toss, but if people want to measure how far they can jump, the only rule is that they should not run before they jump but must stand in place and simply jump forward.





Placement

- Place the rooks on the corners of the board. This piece is also known as the castle.
- Place your knights next to your rooks. This is the horse piece.
- Place your bishops next to your knights.
- Place the Queen in the center on her color. The positions for black and white are mirrored.
- Place your King in the last empty spot in that row.
- Place your pawns in the row in front of your other pieces.

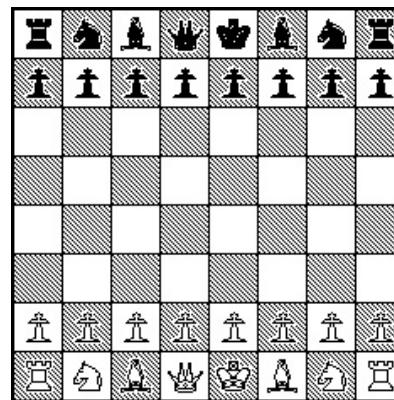
How do they move?

With all pieces, if your piece is in their path, they must stop before it. If it's your opponent's piece, you may land on that spot, making a capture.

- Rooks may move any number of vacant squares vertically or horizontally.
- Knights are the only pieces that can jump over other pieces. They move in an "L" shaped pattern. That is, two squares horizontally or vertically and then one square perpendicular to that.
- The knight cannot be blocked, and only captures pieces that it lands on.
- Bishops may move any number of vacant squares in any diagonal direction. Like rooks, they may capture an opponent's piece within its path.
- Queens can be thought of as the rook and bishop combined -- the most powerful piece on the board.

Queens can move any number of vacant squares diagonally, horizontally, or vertically.

- Kings can move exactly one space in any direction and can attack any piece except the opponent's King and Queen (it cannot go near it or else it would result in check).
- Kings are not offensive pieces. This is the piece you want to protect with the others.
- Pawns are denoted by the absence of a letter and take up the eight spots in front, forming a shield to your larger pieces. They normally only move forward one space. However, the first time it is moved, it may move forward one or two spaces.
- If another piece is in front of it, the pawn may not move or capture that piece.
- Pawns may only attack a target if the target is one space diagonally forward from the pawn.



The Checkers Board is a place where students can play Life-sized chess or checkers. This is a great opportunity to host class tournaments. Above are the rules to and a map to give a visual reference to players. Teams can communicate with each other and captains. For each team, there should be one captain that directs the student chess pieces. The same can be done for playing Chess. Check out the QR Code for more details.



Global community is the map of the world as we know it. Here, students can draw in and will locate a country of their choosing. They can divide up these lands in each of the continents in draw the boundaries of every country in it.

Because the earth is round and the maps are flat, it is technically impossible to get a map that is 100% accurate to the real shape AND size of landmass. Maps are made through a process that is called projection, and there are many types of projections based on the purpose of the map.

The two most popular forms of projection is called Mercator map which is common for Maps used in navigation, specifically with ships and sailboats. It presents the actual shapes of the landmass but distorts the size. Another popular projection is called the Gall-Peters projection, which represents the correct area of the landmass but distort the shapes. Another projection Winkel Tripel, which is a balance between the other two projections.

What projection is this map based from?

Check out the video below.



Hop-Scotch is a traditional game, dating back to the middle 1600's, The overall rules to the game has not changed much from the original concept.

Throw a flat stone or similar object (small beanbag, shell, button, plastic toy) to land on square one. It has to land inside the square without touching the border or bouncing out. If you don't get it within the lines, you lose your turn and pass the stone to the next person. If you do get it, however, go on to the next step.

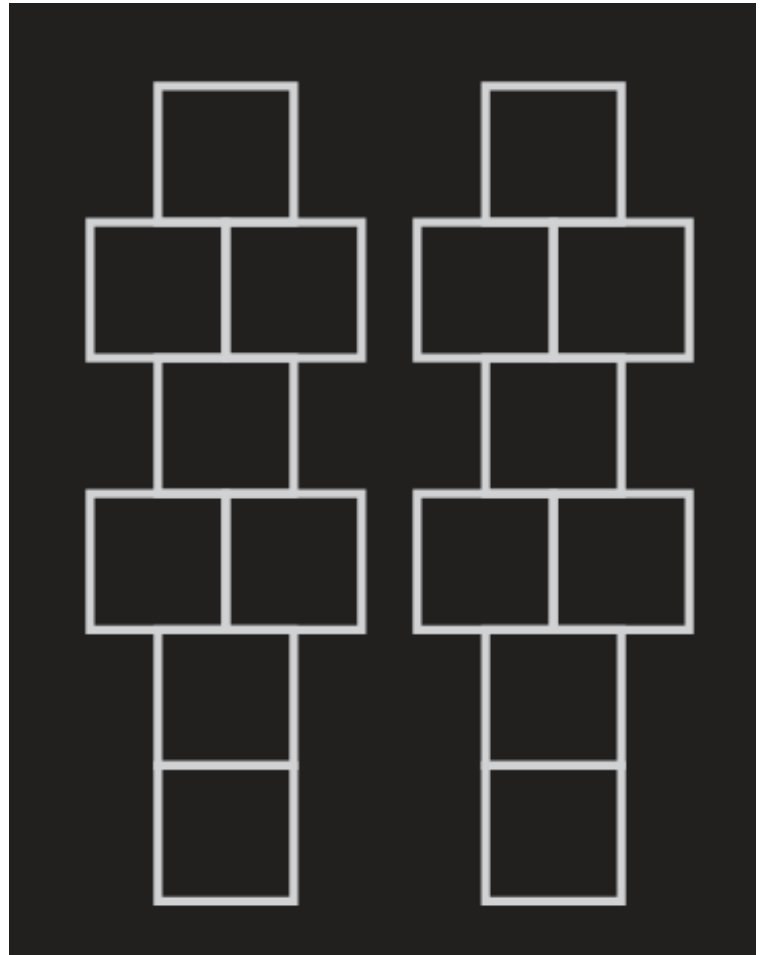
Hop through the squares, skipping the one you have your marker on. Each square gets one foot. You can't have more than one foot on the ground at a time, unless there are two number squares right next to each other.

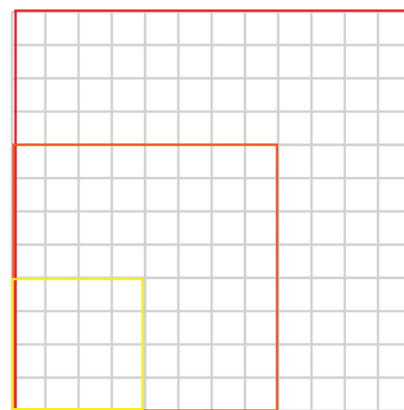
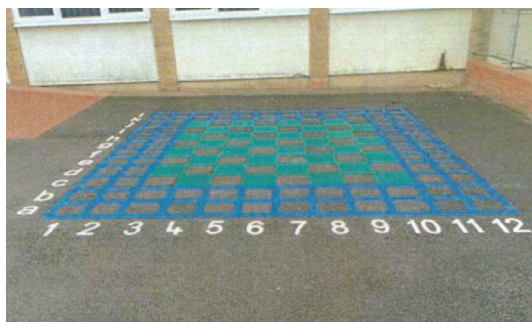
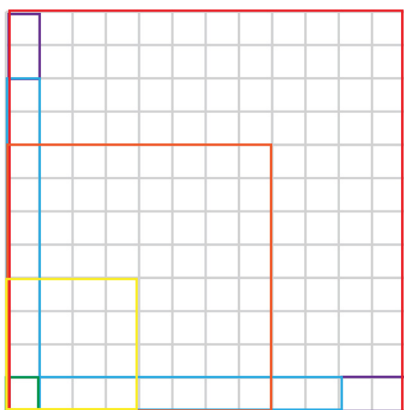
Pick up the marker on your way back. When you get to the last number, turn around (remaining on one foot) and hop your way back in reverse order.

Pass the marker on to the next person. If you completed the course with your marker on square one (and without losing your turn), then throw your marker onto square two on your next turn. Your goal is to complete the course with the marker on each square. The first person to do this wins the game!

Hopscotch can be played with just one person. If that's your case, make up the rules as you see fit!

Check out the history on the left and see the video of how to play on the right!





The Grid is designed to help students with multiple needs. Initially, it can be used to help students understand units, and counting.

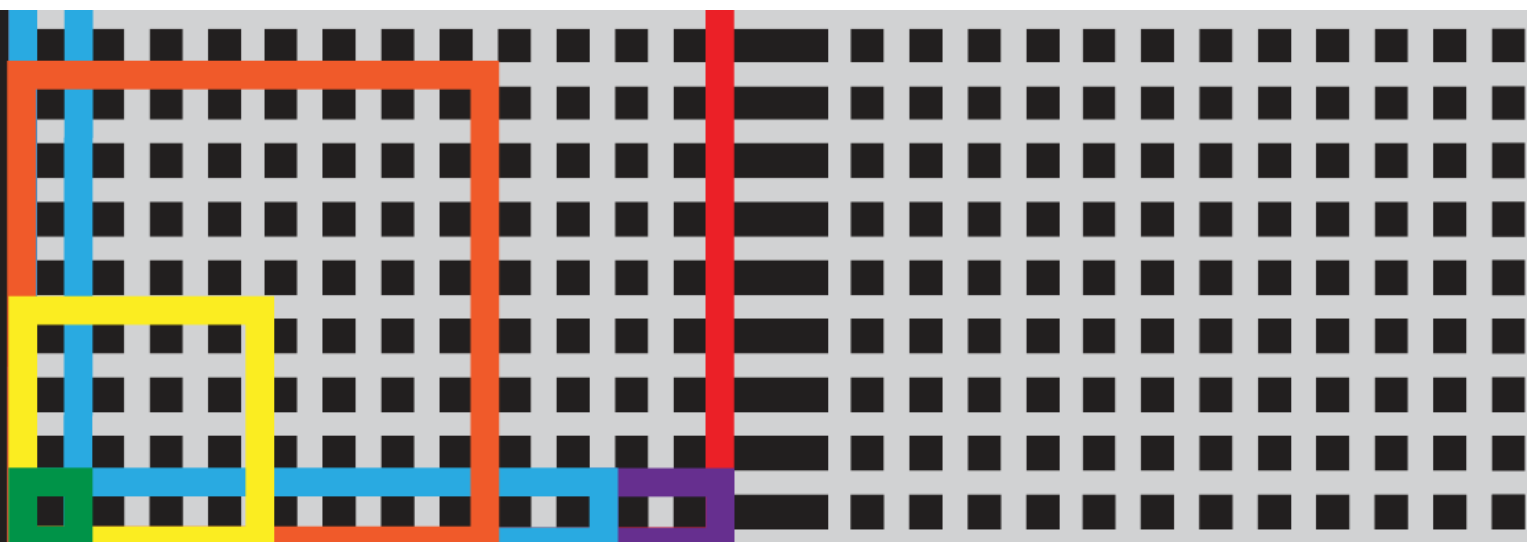
The two massive square grids are 12 units by 12 units. Within it, the orange square is 8 units by 8 units, and the yellow square is 4 units by 4 units. These provide a visual of understanding thirds. The blue bars along the edge of the massive square are 10 units long and 1 unit wide. This helps visualize counting sets of tens. The purple squares help distinguish the boundaries between 10 units and 12 units. The green square unit is to visualize one unit.

Of the two massive grids, the one closest to the checkers board has color to give reference. The other massive grid is left blank to allow teachers to utilize the space. This could be used to engage the students to be intellectually or physically active.

For physically active students, the grids can also be used for a variety of other activities, such as being used as ladders for students in football to do leg exercises. Other students could use the grid to make their own version of hopscotch, or even be used as another board for checkers or a smaller chess game.

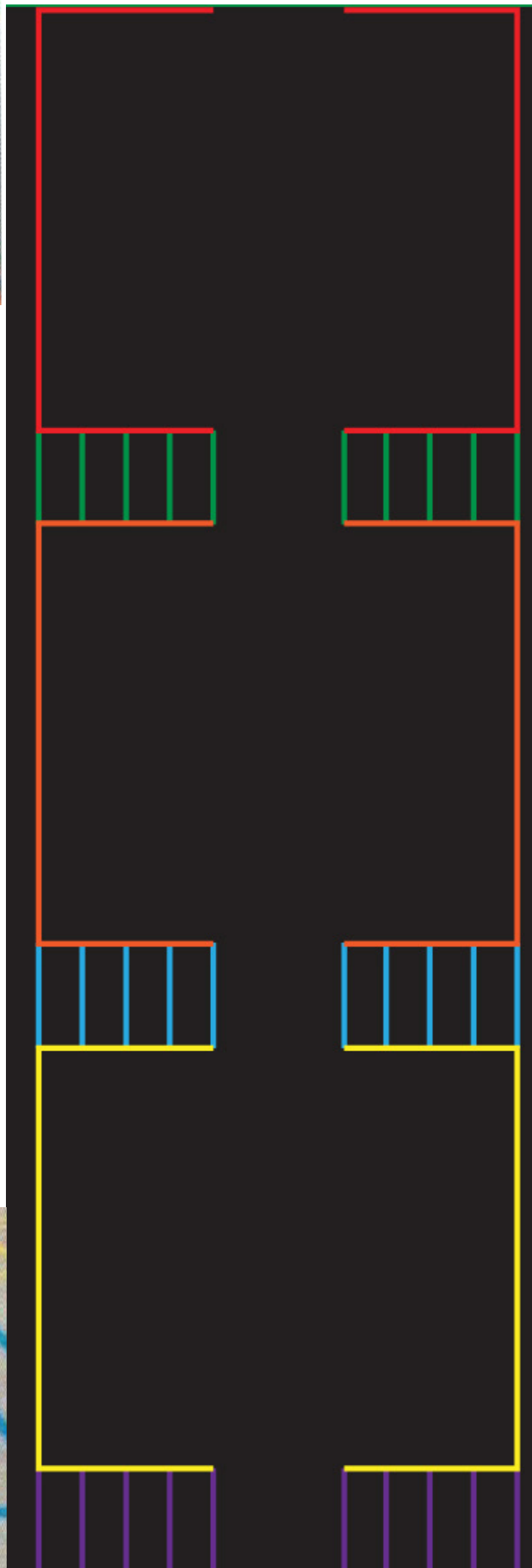
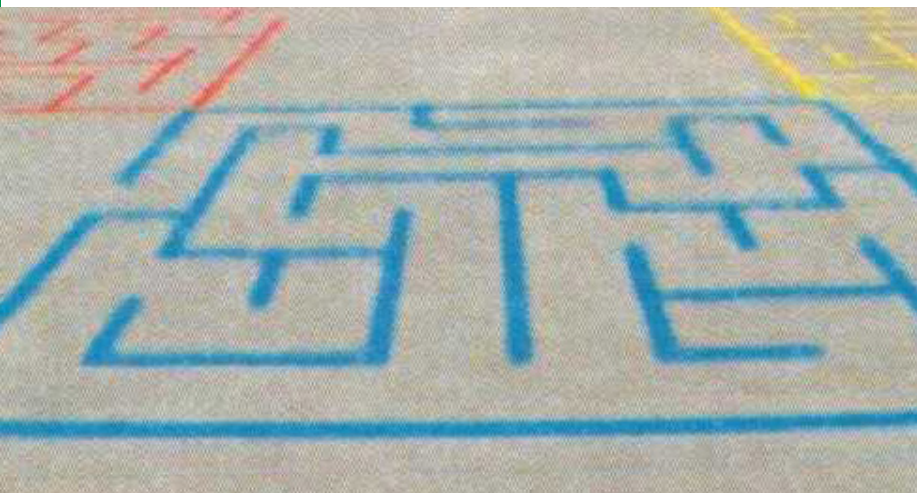
This grid is left blank for teachers to use for their own devices and to build their own systems.

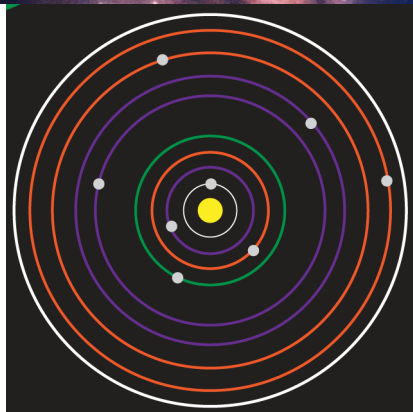
The QR Code has printable number charts for teachers to use.





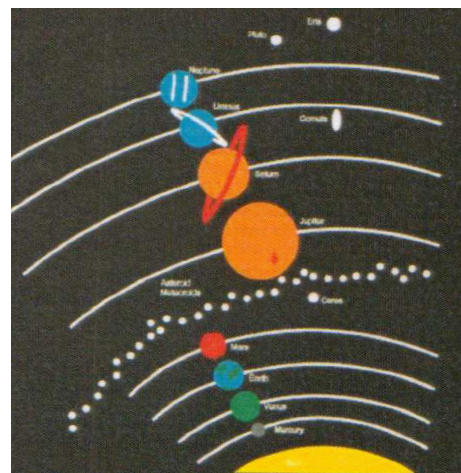
The living Maze is a three-level activity that changes with the times. Each giant square is its own level with yellow being beginner, orange being intermediate, and red being advanced. Once the maze has been solved, you can erase it and re-design a new one for the next group. This keeps students active and consistently engage with this graphic. You can draw the lines for the maze either by chalk or using masking tape to make the lines and the tape can be taken off when you're ready to redesign the maze.





The solar map is a large outline of our solar system. Students can draw in the planets however they want along the rings with in their system. The colors of each ring mildly complements the overall color of the planet. The outer ring, which would have been Pluto's ring in the older models, is left white as a marker Where students can draw about the dwarf planet and other celestial bodies that exist in that section, such as Ceres, Charon, and the others. Neither the planets, nor their moons, are drawn on the rings but the color of the rings give a clue as to what planet goes on what ring and what moon revolves around them.

Explore beyond our solar-system with your phone.





For more information and materials relevant to the Playpad, please follow the link below or contact the designer below:

<https://sway.com/4UuPbepfzJVd4B9H>

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