

WHAT IF?

We could transform cities into playful learning centers alive with fun opportunities for children that prepare them for success in a global world? What if, on any given neighborhood block, we could find kids playing together while building skills in math, science, language, and reading? What if children not only learned "basic" skills - but also learned how to learn - experimenting, taking risks, and gaining confidence by playing in everyday places? What if...

We could use the 80% of time children spend outside the classroom to make a difference?

The "other 80%" of time is up for grabs. What we do with that 80% can make the difference in how children develop and learn. Enriching urban environments for under-resourced children could narrow the nagging achievement gap. What if...

Playful learning could help all children reach their potential while building stronger cities?

Playful Learning Landscapes infuses the best science of learning into initiatives to build strong cities, offering exciting opportunities to help all children reach their potential. In cities around the world, everyday public places are being transformed - bus stops, libraries, parks - into hubs of playful learning. Communities know what they need and they know what their children need. Working with communities, we can build on their strengths to co-create playful learning opportunities where they are needed most.

We Can! Welcome to a playful learning city!

It is time to reimagine how the ordinary can become extraordinary. Imagine a supermarket that doubles as a children's museum, a bus stop fitted with puzzle walls and story games, and a humansized board game where children play with fractions to move around the game board! This Playbook illustrates how to infuse just this type of playful learning into our communities.

PLAYBOOK for Playful Learning Cities

This Playbook is an introduction to playful learning for anyone interested in combining play and learning in a community setting: community leaders, organizations working in education, play, or youth development, members of city government, or architects, designers, and innovators with an interest in building playful learning into their environments.

In cities across the globe, many children from under-resourced communities enter school lagging behind their peers in language development, spatial skills, and early numeracy.^{1,2,3} This can hurt their chances of success in school and beyond. High-quality preschools are a key part of the solution, but we can do even more. Children only spend 20% of their waking hours in school - which means 80% of their time is spent in home and community settings.

Playful Learning Landscapes creates opportunities for children and families in urban areas around the world through playful learning. Marrying the science of learning with playful urban redesign, our cities can create playful learning opportunities in public spaces for all.

MISSION of Playful Learning Landscapes

To foster the creation of playful learning infrastructure and activities in the everyday spaces where children and families gather.

By infusing our cities with playful learning opportunities, we can enhance children's cognitive and social development, better preparing them for success in the 21st-century.

WHY playful learning cities

WHAT is playful learning

3

BUILDING playful learning cities together

JOIN US! playful learning kit of parts o

LET'S **DISCOVER**

what a playful learning city is all about!



BY 2050, over 70% of the world's children will live in cities⁴

Yet many cities lack opportunities for play and learning, especially in under-resourced neighborhoods. We can help our kids flourish by tapping into the potential of urban public spaces to be both fun and educational.

Playful initiatives are sprouting in our cities. In Philadelphia we have the Festival of Play. We staged a Day of Play Extravaganza during the 2016 Democratic National Convention. We sponsored a Play Space competition to remake a library, a recreation center, and a school. We even wrote a Declaration of Play, declaring play a right of every child!

And we're not the only city that loves to play. Seattle is building playful designs into their sidewalks to create "Safe Routes to School." Pittsburgh has groups dedicated to making the city more playful that have rebranded it 'Kidsburgh.' KaBOOM named Chicago a Playful Learning City USA community for its safe and engaging play environments.

While these cities are full of playful initiatives, many are not consciously designed to spur learning. But this is missing a big opportunity – because kids can play and learn at the same time!

The mission of Playful Learning Landscapes is to create playful learning infrastructure and activities in the everyday spaces where children and families gather. By infusing our cities with playful learning opportunities, we can enhance children's cognitive and social development, better preparing them for success in the 21st century.

> let's explore playful learning! •



NOT ALL PLAY IS IDENTICAL Playful learning combines the action, fun, and creativity of play with consciously designed learning elements.

Playful learning includes free play, guided play, and games.⁵ When we think of children's play, we usually think of free play, where children play with little or no guidance from adults or the environment. Free play is a wonderful way for children to explore the world around them, interact with others, and creatively imagine new realms. Research suggests, however, that pure exploration might not be the best way to ensure educational outcomes.⁶

While children benefit from the unconstrained social interaction and joy of free play, evidence suggests that more guided forms of play can help children to develop their abilities in math, language, spatial skills, literacy, and other areas. In guided play, adults or the built environment gently guide children's play, consciously enhancing its learning elements.

Jenn Zosh of Penn State and her colleagues argue that play runs along a spectrum from free play to adult-directed, non-playful instruction.⁷ And mounting evidence from several labs suggests that when people have a learning goal that they hope to achieve, guided play is better than free play for achieving learning outcomes.^{8,9,10}

play as a spectrum

	Free Play	Guided Play
Initiated by:	Child	Adult
Directed by:	Child	Child
Explicit learning goal:	No	Yes



MAKING PLAY - PLAYFUL LEARNING

Consciously building learning goals into play is often a minor tweak, but it can make all the difference in learning

The scientific evidence strongly suggests that playful learning helps children achieve learning goals while they are having fun! It establishes a link between playful learning and outcomes in mathematics, spatial learning, language, vocabulary, and literacy.

For example, researchers from the University of Maryland, University of Chicago, and Temple University now know that learning about shapes and other spatial terms like *around*, *above*, *in*, and *on* are critical for later mathematical learning.¹¹

The 2010 Common Core regards spatial learning as essential for young children. Kelly Fisher and her colleagues studied how play could improve spatial learning about shapes and discovered that guided play, but not free play, helped children learn that triangles were shapes with three sides and three angles.¹²

In language and literacy, the evidence is even stronger that play supports learning. A study from Temple University, the University of Delaware, and Vanderbilt finds that when children learn vocabulary in guided play, they learn more words than during free play.¹³

But how do we change environments to support learning through play? Can we transform everyday public places in cities around the world into hubs of playful learning? Absolutely!

Picture a bench that is not just a bench... but a platform for puzzle and pattern play at the bus stop (think STEM... science, technology, engineering, and math). An ordinary wall in your community can be fitted with a chalkboard that invites parents and kids to to complete the phrase 'When I was little, I loved to play'. Math and pattern games can be embedded into the concrete on a "Safe Route to School."

THE DIFFERENCES BETWEEN



Climbing the pole to the playground netting? That's free play.

Kids on a playground near a bus stop? Free play.

Stocking a library with more toys? That encourages free play.

Add puzzles targeting spatial skills or special hopscotch games that build impulse control and you create playful learning.

Add tangram blocks that invite families to play with geometric forms and a climbing wall with letters and you get playful learning.

discover the principles for transforming everyday spaces into playful learning places! •



Add hatchet marks with numbers to those same poles and kids talk about how high they climbed - playful learning.

THE FIVE PRINCIPLES of how kids learn

LEARNING DOESN'T HAVE TO BE WORK dressed up in play clothes

Kids are naturally curious, and love to learn through play! In playful learning, children are in charge and learning is crafted into the environment through the five principles of how kids learn. Several lines of evidence demonstrate the scientific consensus for these principles.

A paper by Hirsh-Pasek and colleagues¹⁴ outlines the evidence for each as it applies to app design, and Zosh and her co-thinkers apply the same data to thinking on playful learning.⁷

Full references supporting each of the five principles are available in the Index.

make it **FUN**

Joy heightens children's interest and motivation for learning. People find games challenging and relaxing, creating a positive state called "flow." Playful learning activities should offer something new every time kids play it!

make it **ACTIVE**

Children must be "minds on" – acting, not passively observing. Thinking, reasoning, and creating knowledge generates learning. Kids have to do something, not just sit there!

make it **ENGAGING**

Kids learn best when they fully commit to an activity – mentally and emotionally. Distraction is the enemy. Make a clear learning goal. Does your activity spark Content, like science, math, or literacy? Critical Thinking? Collaboration? Creativity? All of the above?

make it **MEANINGFUL**

Children learn best when learning has purpose. Connect playful learning to their lives and the things they value. Ask: Is this activity intuitive? Is it relevant to families in my community?

make it SOCIALLY INTERACTIVE

Working together drives learning. Children learn more when they cooperate, discuss, and mingle with others than when they fly solo. When families do things together, children thrive.

MANY OF THE JOBS OF THE FUTURE don't even exist today

Changes in a global economy require that children develop a breadth of skills or competencies that are scientifically grounded, malleable, and measurable.

In Golinkoff and Hirsh-Pasek's (2016) book **Becoming Brilliant**,¹⁵ the evidence is reviewed for a suite of skills that is consistent with those of the Partnership for 21st Century Learning, noted in Trilling & Fadel's 2012 book, 21st Century Skills: Learning for Life in Our Times.¹⁶



Golinkoff and Hirsh-Pasek argue that playful learning embraces and enhances each of these competencies that build on one another.

If we want our community designs to be imbued with learning potential, we must be clear about our learning goals.

COLLABORATION

Working together and cooperating with others to build communities.

COMMUNICATION

Developing language and listening skills, and expressing ideas.

CONTENT

Science, math, reading, writing, and learning-to-learn skills.

CRITICAL THINKING

Sifting through information, and using evidence to make decisions.

CREATIVE INNOVATION

Making new things out of old, and solving problems in new ways.

CONFIDENCE

Learning from our failures, developing persistence, and adopting a growth mindset.





Test Version

NO MATTER YOUR LOCATION, BUDGET, OR EXPERIENCE LEVEL you can bring playful learning to your community!

The Playful Learning Design Method was developed through projects in Philadelphia and beyond. If you want to join in the Learning Landscapes movement, there are several steps that can guide you along the way.

The basic premise is that many ideas – from modifying a grocery store, to enhancing a pop-up event, to building a playground, or reclaiming urban parking spots – can be fodder for playful learning.

First, partner with the community to talk about what they need and what they would like. Once you decide to create a new activity or installation, it is just a matter of being conscious about building in the "how" and the "what" to any design. Make sure to integrate the "how" and "what" early in the process, and with community involvement!

The following examples illustrate how playful learning is blossoming in cities around the world. Some are simple activities with minimal budgets, while others are more complex installations.

Many evolved independently from local ideas and designs, but all are united by the principles of playful learning in action. Each began with the idea that everyday places can be transformed into playful learning spaces.

let's create a playful learning project! ••••



START with an idea:

Can we reshape the neighborhood library so more families use the facility? How can we energize an underutilized park in front of the children's museum? People wait for hours in hospital waiting rooms, can we make it a context for playful learning?

DEFINE learning goal with community:

Encourage more communication and high-quality language experiences in the library. Foster more collaboration between adults and children in a park. Build more STEM learning in a hospital waiting room.

SUPPORT community wants/needs:

Bring community leaders together, share your thinking, and solicit their input and collaboration.

ALTER based on community input:

Neighbors should feel they contributed to the project and take ownership. Learning goals are community-informed while remaining science-based.

MAXIMIZE playful learning principles:

Test the idea against the rubric for "how" children learn and "what" they learn to make sure the learning is intentional. Does the activity qualify as active or is it too passive? Will children have fun with this activity or is it boring?

Can we make the activity more meaningful to the community?

TEST performance of the space:

Are the neighbors happy?

Is the activity in the space intuitive?

Observe how families use and interact with the project.

REFLECT on benefits/learning goal:

Post helpful signs ("Did you know that this activity builds strong math skills?")

REFINE for future iterations:

Adjust based on family and community feedback.



LET'S TAKE A TOUR

of playful learning projects around the world!



Estimated Difficulty Cost to Build SSS

<u>Complexity of</u> Implementation*

*Complexity lies in coordinating multiple participating partners, finding a venue, and event logistics

THE BIG **IDEA**

Can we bring the science of how kids learn through play to the park for all to see?

the **LEARNING GOAL**:

The Ultimate Block Party targeted all of the 6Cs through a series of playful outdoor installations that focused on activities that sparked fun, active, engaged, meaningful, and socially interactive playful learning.

collaboration 🔗 communication 🔗 content 🤗 critical thinking 🔗 creative innovation 🔗 confidence 🤗

the **DESIGN**:

The original 2010 Ultimate Block Party invited scientists from across the country to transform NYC's Central Park into a festival of learning.

the **TEAM**:

The Ultimate Block Party was an idea conceived by Kathy Hirsh-Pasek, from Temple University; Roberta Michnick Golinkoff, from the University of Delaware; Dorothy Singer, from Yale University; Susan Magsamen, from Johns Hopkins University; the Goddard Schools; LEGO Foundation; and KaBOOM!

the **SUPPORTERS**:

The Ultimate Block Party was generously supported by three National Science Foundation (NSF) Science of Learning Centers: the Spatial Learning and Intelligence Center (SILC); the Learning in Informal and Formal Environments (LIFE); and the Temporal Dynamics of Learning Center (TDLC). In addition, funding was provided by Temple University and the University of Delaware.

the **SCIENCE**:

Over 50,000 people participated, and 291 people were studied to ask whether they began to see the learning value in the playful exhibits. Those who visited 3 or more of the 28 exhibits began to link play and learning.17





LOOSE PARTS

Materials that can be taken apart and put back together in multiple ways. With no specific directions, simple prompts can support an array of playful learning. Spatial learning is important for later STEM development.18

Photo credit: Ultimate Block Party



*The key is getting permission from local supermarkets, then designing playful prompts that encourage conversations about food items

the **LEARNING GOAL**:

Supermarket Speak aims to spark conversations and parent-child interactions in the aisles of grocery stores - a place where families naturally go. This enhances Communication and Critical Thinking about the characteristics of food items.

collaboration O communication V content O critical thinking 🗹 creative innovation 🔵 confidence 🔵

the **DESIGN**:

We turned walking through the grocery store into a learning adventure. We put up playful signs in supermarkets in low-and middle-income neighborhoods in Philadelphia. The idea caught on and spread to South Africa and Tulsa, Oklahoma!

the **TEAM**:

The Philadelphia installation was conceived by the Temple Infant and Child Lab, in partnership with Child's Play, Learning & Development Lab at the University of Delaware. Additional installations were part of the Talking is Teaching campaign, designed in partnership with Saxum, a marketing firm.

the **SUPPORTERS**:

Early installations in Philadelphia were installed for a budget of \$60 per supermarket, funded through the Temple Infant and Child Lab. Further iterations were supported by the Too Small to Fail initiative of the Clinton Foundation and the Kaiser Family Foundation and were rolled out to a wider audience.

the **SCIENCE**:

There was a 33% increase in parent-child talk in the Philadelphia project when the signs were posted.¹⁹ Children asked about fruits and vegetables, adults shared knowledge, and families explored new food items together. Key takeaways were to post signs in aisles that are popular with families, use multilingual signs for diverse communities, and add math questions to get kids talking about numbers.

CONVERSATION STARTERS

Simple prompts go a long way! Adults and kids asked more questions, talked more about food items, and used more descriptive language while shopping. HEY EXPLORERS! LET'S LOOK FOR COLORS.

How many colors can we find?



THE BIG **IDEA**

Can we stimulate math learning through number and measurement as part of a life-sized board game with fraction dice?

PARKOPOLIS 9

Estimated Difficulty Cost to Build SS SSS

<u>Complexity of</u> Implementation*

*Substantial funding was needed for the full version illustrated above. Less expensive versions, like the pilot, can be created using yoga mats and laminated paper

the **LEARNING GOAL**:

Parkopolis supports children's playful Communication with adults and fellow peers around Content in science and math. It encourages Collaboration and cooperative game play, Creative Innovation in creating new rules, and the Confidence to persist on challenging activities.

collaboration 🔗 communication 🔗 content 🔗 critical thinking 🔗 creative innovation 🔗 confidence 🤗

the **DESIGN**:

Parkopolis builds ideas about numbers, measuring, and fractions - a stumbling block for many children - into a life-size board game. Children roll "fraction dice" to skip around the board in 1/2 and 3/4 leaps, and draw giant cards that engage them in play that is hands-on and "minds-on".

the **TEAM**:

An initial pilot was developed in Switzerland through a partnership between Kathy Hirsh-Pasek, Andres Bustamante, the Playful Learning Landscapes Initiative, Christine Riesen and We Are Play Lab, and Nabil Shahidi. A full-scale version of Parkopolis was presented as an exhibit in Philadelphia's Please Touch Museum in summer 2018.

the **SUPPORTERS**:

The pilot was funded by New Profit and Gebert Rüf Foundation. The Philadelphia installation was hosted by the Please Touch Museum.

the **SCIENCE**:

Early findings suggest that children start talking about fractions, use measurement and number language, and engage in scientific reasoning – just by playing our game!²⁰ Parkopolis targets STEM learning through pattern recognition and memory. It calls on children to be mentally and physically flexible, moving their bodies in new ways, or measuring their jumps with a giant ruler.





CHOICE CARDS

Oversized playing cards present challenging activities, while allowing kids the flexibility to create their own rules.

Photo credit: Sahar Coston-Hardy Photography

THE BIG **IDEA**

Can we turn bus stops into

hubs for learning, so families

can play math, literacy, and

even impulse control games while they wait?

URBAN THINKSCAPE

Complexity of

Implementation*

Difficulty

to Build

*Urban Thinkscape involved designing and fabricating multiple playful learning components, securing a space and permission to build, and obtaining city permits

the **LEARNING GOAL**:

Urban Thinkscape encourages playful interactions between children and caregivers that feature Content in and math, science, and literacy, as well as Collaboration and Communication with peers, adults, and family members.

collaboration 🖌 communication 🖌 content 🖌 critical thinking () creative innovation () confidence ()

the **DESIGN**:

Urban Thinkscape began with a community's dream to energize Philadelphia's Belmont neighborhood with playful learning. They chose a bus stop next to a grassy lot where Martin Luther King Jr. gave a historic speech in 1965 as part of his "Freedom Now" tour. Puzzles appeared behind bus stop benches, kids can now scramble and climb across story art, and a canopy projects shadows of fruits and vegetables onto an interactive mural of Martin Luther King Jr., all brought to life by over 100 local youth and community members!

the **TEAM**:

Urban Thinkscape is a partnership between the Temple Infant and Child Lab, Drs. Roberta Golinkoff and Brenna Hassinger-Das, and architect Itai Palti of the Conscious Cities movement, Public Workshop and the Belmont Alliance Civic Association were also vital collaborators.

the **SUPPORTERS**:

The project is supported by the William Penn Foundation and Kaboom Play Everwhere.

the **SCIENCE**:

Preliminary results suggest that families at the bus stop are now interacting around the games while talking about numbers and shapes. They are moving, thinking, and talking about language, literacy, and STEM.

Estimated

Cost



JUMPING FEET

Shoe prints encourage jumping, and the pattern helps kids control impulses and think about their next step! Research suggests that controlling impulses is part of developing executive function skills, important for learning how to learn and for brain development.²¹

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S OF REASONS

νοι

STORIES

Kids move from one image to another, making up a story as they go. A large body of research establishes the link between the ability to tell a story and later reading comprehension.²²

Photo credit: Sahar Coston Hardy Photography

PLAY-**AND-LEARN** 9

SSS

Difficulty

to Build

Implementation*

Complexity of

*Involved assembling a large team of designer, architect, fabricator, library management, play and playful learning consultants.

THE BIG **IDEA**

The Free Library wondered if families could be encouraged to "stay and play" while also fostering learning goals in language and STEM

the **LEARNING GOAL**:

The Play-And-Learn Spaces will foster Collaboration through building activities with peers, Communication and language skills, and Confidence through physical achievements.

collaboration 🔗 communication 🔗 content 🔘

the **DESIGN**:

Each branch has a set of large multi-colored tangram blocks that allow children to build seating and forts, learning pattern recognition, shapes, and geometric construction. The Cecil B. Moore branch features a spelling/climbing wall, a stage box for fort building, and bookshelf puzzle nooks for reading. The Whitman branch sports a lookout tower with letters cut out of its sides. The Wyoming branch stars a stage with magnetic word panels and tiered amphitheater seating leading to a homework station.

the **TEAM**:

The project is a partnership with the Free Library of Philadelphia, architecture firm DIGSAU, play consultants Studio Ludo and Smith Memorial Playground and Playhouse, fabricator Erector Sets, and with playful learning support from Kathy Hirsh-Pasek (Temple University), Brenna Hassinger-Das (Pace University), and Jenn Zosh (Penn State University).

the **SUPPORTERS**:

The Play-And-Learn Spaces is a project of the Free Library of Philadelphia and generously supported by the William Penn Foundation.

the **SCIENCE**:

The play spaces are such a hit, attendance has doubled! There have been significant increases in physical activity and laughter, as well as more adult-child interactions.

Estimated

Cost



PUZZLE NOOKS

Each nook fits a specific combination of blocks, inviting children to solve the puzzle! They are also popular homework hangouts after school.

0.

TANGRAM **BLOCKS**

These blocks double the amount of seating. They are also puzzle pieces that build STEM learning, and research shows that playing with puzzles supports spatial learning - a foundation for early mathematics.23,24



PLAYFUL LEARNING LANDSCAPES CAN BECOME PART OF YOUR CITY from sidewalks to buildings to laundromats...

Notice that we started from an idea, worked with the community to select a learning goal and tailor the projects, and fine-tuned it to reflect the principles of playful learning: fun, active, engaging, meaningful, and socially interactive. By using the principles to test your idea against the science, you can ensure fun-based, successful outcomes for families and children.

Playful Learning Landscapes challenges every community organization, school, governmental agency, and neighborhood to breathe life into their ideas, and to infuse urban spaces with playful learning. What is happening in Philadelphia can easily be applied in communities around the world.

We are continuing to test and pilot playful learning projects with partners across the globe. With every project, we learn and grow our process, and share our findings. Can you imagine other places and communities that could benefit from playful learning?

Playful learning ideas don't have to be costly or complex. Read on to find a range of options for "à la carte" playful learning items that can be developed individually or as a package. All of the following activities are simple to put in place and are low to moderate in cost. The experience of Ultimate Block Party demonstrates that implementing even a small handful of playful learning activities can create powerful outcomes.

Once the intial investment is made in community engagement and design, future playful learning projects can be replicated at sites across cities, or as part of the infrastructure of community resources, like grocery stores and transit stops. Join with us in the Playful Learning movement and let's make every city a Playul Learning City!



PLAY wall

the **LEARNING GOAL**:

Modeled after Candy Chang's Before I Die exhibit, PLAY WALL is designed to enhance intergenerational Communication amongst community members, Critical Thinking about meaningful types of play, and the Confidence that grows from community engagement.

collaboration 🔘 communication 🎸 content 🔵 critical thinking 🗸 creative innovation 🔿 confidence 🗸

Any ordinary wall can be fitted with a Play Wall that invites parents and kids to share "When I was little, I loved to play..." The wall will soon be filled with exciting games that community elders can teach the younger generation, deepening community connections, and allowing adults and children to learn as they play together.

PLAYGROUND modifications

the **LEARNING GOAL**:

Encouraging children to Communicate and build early math and science Content.

collaboration () communication 🖌 content 🖌 critical thinking () creative innovation () confidence ()

We can take any playground structure and add "hatchet marks" - notches for measuring. Suddenly kids are developing early math skills as they shout, "I climbed 3 feet" and "I climbed 5!"

Any slope – like a playground slide – can be marked with an angle: "30 degrees." We can even add signs with prompts like: "Do balls roll down faster when the angle is higher?" These modifications cost little to implement, and they transform everyday climbing and sliding into playful learning!

JUMPING feet

the **LEARNING GOAL**:

Enhancing children's impulse control, which builds interpersonal and academic confidence that boosts all learning.

collaboration () communication () content 🖌

critical thinking () creative innovation () confidence 🗸

"Jumping Feet" - a new type of hopscotch - helps kids control impulses in ways that strengthen overall learning. Feet are painted on the floor in random order (left foot, right foot, both feet), so that children must think flexibly to match the pattern.

The vinyl Jumping Feet and concrete footers at Urban Thinkscape cost a few thousand dollars, but you can implement the same idea at much lower cost by simply painting a blacktop.



LIFE-SIZED ruler 1 2 3 4

the **LEARNING GOAL**:

Promoting Communication and Collaboration as children learn measurement skills, the foundation of STEM Content.



A giant ruler can be painted on a blacktop so that kids can have fun developing measurement skills key to math and science learning. Then use blacktop (or playing card) prompts to spark measurement games: Measure how far you and a friend can jump. Measure the difference between your jumps!

SHAPES/PATTERN games

the **LEARNING GOAL**:

Improving children's Critical Thinking and reasoning about patterns, as wells as their Content knowledge of shapes.

collaboration () communication () content 🗸 critical thinking 🗸 creative innovation 🔵 confidence 🔵

Colorful shapes can be painted on blacktop to help children develop early skills in geometry, numbers, pattern recognition, and short-term memory.



You can use playful learning prompts like these with the shapes: Hop on all of the triangles. Count them out as you go! Jump with two feet on the red shapes and one foot on the green shapes!

MUSICAL pipes

the **LEARNING GOAL**:

Encourage kids to Communicate about the musical patterns they are playing, use Critical Thinking to complete patterns, and Creative Innovation to create new melodies and rhythms.



Developed as part of Parkopolis, children can play these musical pipes like a drum. Costs may be a few thousand dollars with a fabricator, or you could build a homemade version from different lengths of PVC pipe. Then use prompts or cards to challenge children to play musical patterns.



GO FORTH AND PLAYFULLY LEARN

Together we can change our cities and give all of our children the opportunities they need to grow and succeed in school and beyond. It doesn't have to be hard; it doesn't have to be costly - but it does have to be intentional. We hope that you too will be a part of building Playful Learning Landscapes everywhere.

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