



PLAY BASED

Teacher Training Manual



**Equipping educators to support play
in and out of the classroom**

By Elizabeth Moreno, Illustrations by Alejandra Gómez & Matt Green

Acknowledgements

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Welcome!



Play is so important that it is considered a “right” by the United Nations. And yet, in today’s world play is often seen as a luxury, not a need.

Consequently, millions of children around the world do not have adequate access to play and are not developing to their full potential.

We all desire the very best for the children in our care, and we all instinctively know play is an important ingredient to a happy and healthy childhood.

What you may not be aware of is the research that has been carried out by doctors, psychologists, and child development experts in recent years, uncovering just how vital play is to healthy child development. Time and space to play is one of the most critical needs for a growing child - as essential to their brain development as food. It has been shown that access to play has a dramatic positive affect on children intellectually, physically, and emotionally, with impact that lasts far into adulthood. Studies have shown that a child with access to play has better chances of going to university, getting a better job, and having a higher income as an adult.

In this manual, you will find the key knowledge and easy practical solutions to equip you to advocate for and promote access to play for the children in your care. You will discover the vast benefits of play for the developing child and gain a biological understanding of what drives children to play. The information in this manual will broaden your understanding of what play includes and what barriers exist that limit access to play for children around the world. We hope in this manual you will find tools and inspiration to utilize the resources in your own community to create opportunities for play.

We're glad you've joined us on this journey to explore the power of play. We're honored to stand beside you and support the important work you do every day.

- Elizabeth Moreno, Playground Ideas

The transforming power of play

"Play is fun, but it is anything but trivial. It is a basic biological drive as integral to our health as sleep and nutrition." – Stuart Brown

Around the world, more than 200 million children under the age of 5 are failing reaching their full developmental potential due to extreme poverty. Without access to sufficient nourishment for healthy development, children born into poverty often fall ill and do not survive their early childhood. Those who do make it are likely to remain developmentally "behind" throughout their life, making it nearly impossible for them to ever escape the vicious cycle of poverty.

In the 1980s, a group of health workers in Jamaica were troubled by the climbing numbers of poor children in their communities who were growing up malnourished and developmentally stunted. Over the years, the health-workers saw these children fall ill and perform poorly in school. Later in life they witnessed them fail to graduate from school, struggle to find employment as adults, and have difficulty providing for their own families.

Working with a group of researchers, the health-workers set out to change this cycle by embarking on an unconventional intervention strategy. They identified a group of 130 babies born into poor families who were physically stunted due to malnutrition.

These babies were smaller and weaker than they should be for their age.

Once a week for one hour, a health-worker would visit mother and baby in their home and together, they would play. They rolled balls back and forth. They stacked boxes up and knocked them down. They sang songs and clapped their hands. The health-workers counseled the mothers on the importance of play for their baby's healthy development and encouraged them to continue to play with their babies throughout the week. This was the only "treatment" the health-workers administered. Just play. They continued their weekly play hour with the mothers and toddlers for two years.

Without any further intervention, the children we revisited by the same diligent team a full two decades later to see if their work had made any long term impact. Although the team were expecting some modest changes they were astounded by the results. When the children reached adulthood, they were much more likely to go to university and find employment. In fact, when compared with their peers who did not receive the “play intervention,” the health-workers found this group to have significantly higher earnings.

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Jamaica Play Intervention 20 Year Follow-up Findings

- + 42% higher earnings
- + Higher IQs
- + Higher levels of education attainment
- + Lower rates of crime
- + Higher psychosocial skills



Numerous studies, in addition to this one, have highlighted the amazing power of play. But what exactly is it we're talking about when we talk about play? Play is any activity that is freely chosen and self-directed. It can be imaginative and creative, self-disciplined and rule based. This may be play that we all know like running, jumping, and climbing, playing with toys, and sports but it also includes a host of activities we don't always recognize as play, which we'll discuss more in the next chapter.

In play, children are driven to interact with their environment in ways that challenge and stretch them to grow and understand their world step-by-step. It is nearly impossible to count all the ways children benefit from play:

Cognitive

- + Play contributes to healthy brain development.^{5,6}
- + Play enhances children's learning readiness, learning behaviors, and problem-solving skills.⁷
- + Play encourages children's ability to be creative and innovative.⁸
- + Play boosts children's ability to concentrate and pay attention.⁹
- + Play supports language development and literacy skills.



A randomized control trial found children who played for just 70 minutes per day to show improved cognitive performance and brain function compared to less active children.¹¹



A 2013 study of 12,000 students found that Children who are physically fit absorb and retain new information more effectively than children who are out of shape.¹³

Emotional and social

- + Play helps children connect and communicate with each other. Through play they learn how to share, negotiate and resolve conflicts, and to advocate for themselves.¹⁴
- + Children who do not have adequate access to play often exhibit violent behaviors as adults.²



"In play...children bring the realities of their world into a fictional context, where it is safe to confront them, to experience them, and to practice ways of dealing with them."¹⁵ – Peter Gray, Evolutionary Psychologist

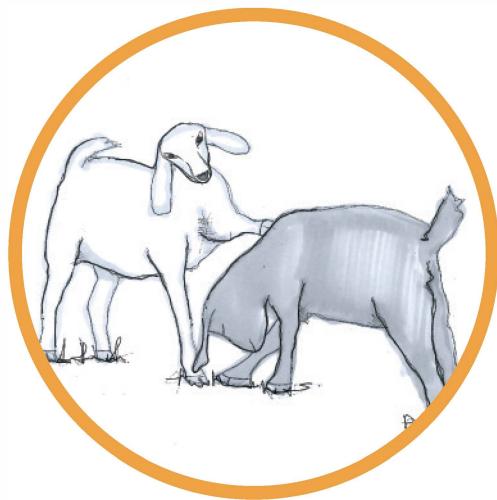
Why do children play?

"Play is the work of the child" – Maria Montessori



Imagine for a moment a newborn baby. Their first fragile days are consumed with eating, sleeping, and crying - fulfilling their basic needs to stay alive. Have you ever considered how babies know to breathe in and out, to eat when they are hungry, sleep when they are tired, and cry when they need food, or rest, or care? Did someone tell them to do so? Did they read it in a book? Of course not. All babies are born with an inborn, biological, instinctual drive to stay alive and thrive - to give their bodies what they need to survive and grow.

As babies grow into children, their survival instinct remains just as strong. In order to successfully develop into adulthood, children must learn to use their bodies and develop their minds. They must learn to understand the world around them and how to interact with the people and things in it. How do children learn these crucial life skills? Through play. Play is the inborn tool our young brains use to learn and adapt to their environment. It is a powerful biological drive, as powerful as the drive to eat and sleep. Without time and space to play, it is difficult, if not impossible for children to learn to successfully navigate the world.



Play is so deep in us that we share it with other life on earth. Have you ever noticed animals play? Perhaps you've seen two young puppies wrestling or two newborn goat kids butting heads.

They look like they are fighting, but any onlooker can tell they are not trying to harm one another. So what are they doing? Through play, they're practicing the skills they will need to survive as adults.



We can see the fundamental importance of play for human communities in its existence across every culture and throughout history. In the 4th century B.C., the Greek philosopher Plato wrote, "The most effective kind of education is that a child should play amongst lovely things." Across Africa, Asia, Australia, the Americas, and Europe, communities in cities and remote villages have developed games, riddles, and play traditions that are passed down for hundreds, even thousands of years.

For example, on the remote Pacific Islands of Kiribati, children throughout generations have played a game called "Te Boiri" in which a ball is kicked between players, never letting it touch the ground.¹⁶

In the West African country of Nigeria, a game of throwing and catching stones, called "Okwe" is said to be "as old as man."¹¹



The chasing and tagging game of "Kabaddi" is played all throughout Asia and believed to be more than 4,000 years old.¹¹

Surely you can think of games similar to these from your own culture that you happily devoted hours to as a child. Perhaps you learned them from an older sibling or friend, or were taught the rules by a parent or teacher. Why is it that play traditions like these exist across cultures and are persevered through time?

The simple reason is that children enjoy and delight in play. The reason play is enjoyable is the same reason laying down to sleep after a tiring day or eating a delicious meal when we are hungry feels so good. Our body rewards us with pleasurable hormones when we do things that are essential to our survival so that we do them more. The architecture of the human brain grows most rapidly in childhood and requires stimulating experiences for healthy development. Scientists, doctors, and psychologists have found evidence that when at play, children's brains are engaged in rich developmental work. It is this work that leads to the myriad of benefits from play we learned about in chapter 1. Children are naturally driven to play because they instinctually know it is good for them. Just as a growing child needs food to develop a healthy body, a growing mind needs nourishment as well. Play is the nourishment of the mind.

90% of brain development happens by the age of 5.¹⁷

Unfortunately, play is commonly regarded as frivolous and trivial. All over the world, children at play are told by well-meaning adults to "be serious," "do something more productive," or "stop wasting time." Work and learning are viewed as more important than play. However, they are not opposites. Playing is learning and learning is playing! Once we understand the importance of play in a young child's brain development, we know that play IS learning. In the words of the famous physician and educator, Maria Montessori, "Play is the work of the child."

What does play look like

While we all loved to play as children, unfortunately when we grow into adults we forget what it was like to be a child at play. From our mature perspective, we may have a very narrow view of what play is. We might think it only includes organized sports and games like volleyball or football. Play encompasses much, much more. It includes a wide array of activities and behaviors children engage in. Explore some examples of “types” of play below to broaden our definition of what play is.

These “play types” are adapted from playworker¹ Bob Hughes “A Playworker Taxonomy of Play.”



Sometimes children use objects to represent something they imagine to be “real.”



Sometimes children look like they are fighting. They tackle, tickle, and wrestle with each other just for fun.



Sometimes children imitate the everyday activities they see the adults around them do. They pretend to be mothers and fathers, to cook a meal, or drive a car.

Sometimes children make up new games and they create their own rules to follow.

Sometimes children may use tools and materials to design, create, and build something creative and unique.



Sometimes children use their voice to play. They joke, make funny sounds, and mimic the voices of others. They sing, debate, and rhyme.

Sometimes children try out what it's like to be a big, important person. They imitate the people – politicians and celebrities they see on TV, or play-act the weddings, funerals, and ceremonies they see in their community.

Sometimes children do risky things when they play. They experiment with fear and danger.



Sometimes children use their eyes, ears, hands, and even mouth to play – they use their senses to discover.



Sometimes children's imaginations run wild. They dream up fantastical stories of make-believe.



Sometimes children play with imaginary friends.



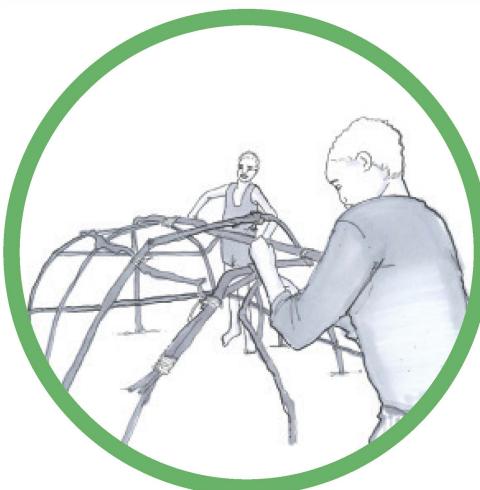
Sometimes children like to move their bodies in every direction!



Sometimes children will try an activity over and over again until they've mastered it.



Sometimes children play with ordinary objects in new ways.



Sometimes children try on what it would be like to be someone else.

They experiment with being a teacher, a bus driver, or a policeman.

Sometimes children's play mimics basic survival skills. They run and hide, pretend to build shelters, or dam streams.

Children at play are truly engaged in a universe of imagination and innovation the adult onlooker is often oblivious to. In the illustrations of "play types," can you identify what a child engaged in each "play type" might be learning?

Can you see that the child playing with sticks and sand



are maybe learning the principles of mathematics and physics? It's true! Perhaps they're counting how many stones they can stack high and how many handfuls of sand fit in a cup. Watch as they pour the sand onto their hand,

For the children play fighting,



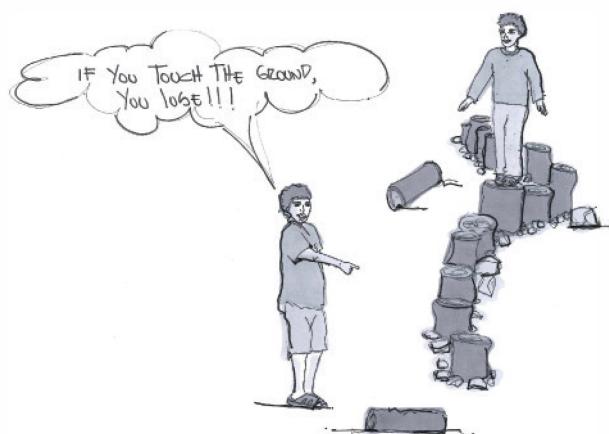
they are coming to understand how their growing bodies work. When they engage in rough play, they're testing their muscles, learning their strength and flexibility, and developing the necessary emotional and social skills to interact with others.

For the child engaged in risky play,
jumping off the tall tree branch,



they are building crucial survival skills and developing courage. Perhaps they will get hurt in their play, but in the process they will learn how to assess risk better next time, how to be resilient, and to try again when they have failed. Children must experiment with an element of danger while they are young in order that they understand how to manage risk and heed caution when they are older.

The children making up a new game



children must communicate, follow the rules they set, and work together. They're practicing important language skills that will improve their reading and writing, as well as social tools to cooperate with others.

It is not until we stop and truly look that we see the great "work" children are undertaking in play. Learning is happening in every corner of the schoolyard.

Obstacles to play

Today we live in a world where children's access to play is continuously under threat. Around the world, millions of children do not have adequate time and space to engage in the play they need for healthy development. Many factors can inhibit a child's access to play:

Urbanization

As our world marches towards urbanization, cities are becoming increasingly populated and congested. City planning often does not take space for children's play into account. Without safe, open spaces for children, many children in urban spaces are often left to play in dangerous places or kept indoors by parents worried for their safety.



Gender

In many areas of the world, access to play is not equal between boys and girls. Girls are often expected to perform a larger share of household duties, such as cooking and caring for younger children. This leaves many girls with little time for play.



Ability



For children born with disabilities, access to play is often a challenge.

Most play environments are not designed to accommodate children of all abilities. Or the spaces available for children to play are empty lots and abandoned areas where the ground is impossible for wheelchairs to pass. They need play materials and environments that can accommodate their abilities and for adults and peers to include them in play activities.



Child labour

Children living in poverty are often sent to work to support their families while they are still very young. Forced child labour prevents children from engaging in the play they need to thrive.



Lack of resources

Many schools around the world are overcrowded and lack adequate funding. They do not have the resources they need to build adequate play environments that can accommodate all their students. Insufficient play materials can lead to fighting and competition over resources.

Academic pressure

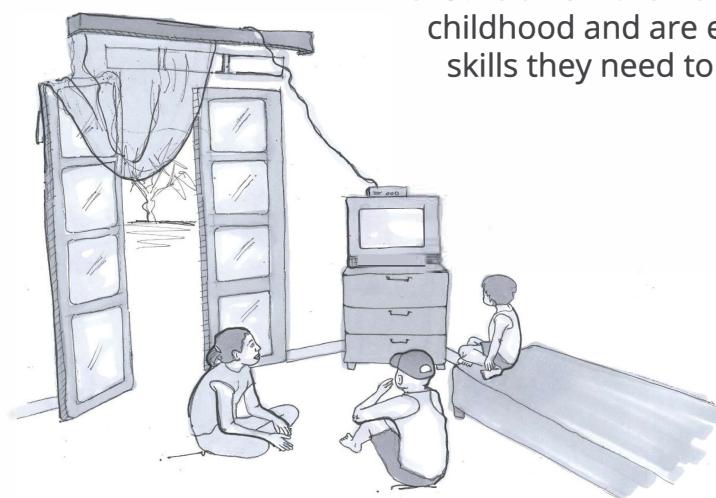
It is important that students learn to study and perform well in school.

However, many young children receive heavy academic pressure from teachers and parents to perform top of their class. Early literacy and numeracy are prioritized above play-time. This can lead to too much study and too little play, which can be harmful for children's healthy development. It is important that schools and classrooms reflect an understanding that playing is learning and that in addition to cognitive development, play helps children learn all the other essential skills and characteristics that are not taught in classrooms like social skills, emotional control, conflict management and resilience.



Technology

Technology can be a great tool for children to learn, and even play. But when children do not have limits on their exposure to technology, they can spend all their free time watching movies and playing video and computer games. Children need plenty of outdoor, active play with other children and they cannot get this from watching a computer or television screen.



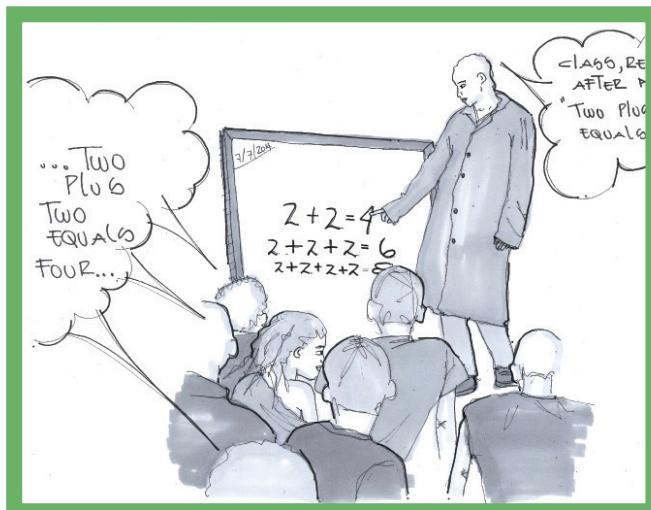
When children do not have adequate time and space to play, they are at risk of experiencing "play deprivation." A play-deprived child can exhibit behavioral problems, social isolation, and can fail to reach their full potential in adulthood. Because of these dangers, the UN has labeled play as a "right" of all children in Article 31 of the Declaration of the Rights of the Child. The right to play must be upheld, defended, and protected to ensure all children experience a healthy childhood and are equipped with the skills they need to thrive as adults.

Rote based learning

vs.

Play based learning

Schools play an important role in ensuring children's access to play. Unfortunately, many teachers around the world have not been trained on methods that include play in learning. Consequently, many schools only employ the "rote learning" method. "Rote learning" is a method of teaching that uses memorization and repetition to instruct children. Does this scene look familiar?



This is an example of a "rote learning" classroom. It can be a useful method in some settings. It is helpful for memorizing large sets of information to recall quickly.

However, the problem with only using "rote learning" in the classroom is that by simply repeating information, children do not learn how to think critically and learn how to use the information in real ways that work in the real world instead of just recalling it. It is also very difficult for young children to learn using "rote learning" because their bodies want (and need!) to move and play. It is very difficult for them to sit still for long periods of time as this goes against the natural way they were built to learn. Its much easier and less stressful to work with the way children instinctively want to learn.

Remember the child playing with sand and stones in the school yard?



She was learning the same concept of “ $2+2=4$ ” by stacking and counting her stones while playing. Because she was actively involved through play, she is learning the concept of addition and how to apply it to other situations, instead of just how to repeat an addition equation. And this didn’t require the teacher to expend energy forcing her to learn.

In order for children to learn instead of simply repeat, they must be actively engaged and using their senses and bodies. They must test, experiment, work together, and try new things. They do this best through play.

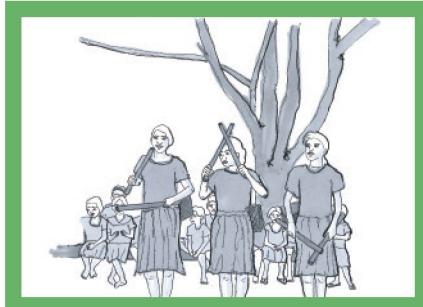
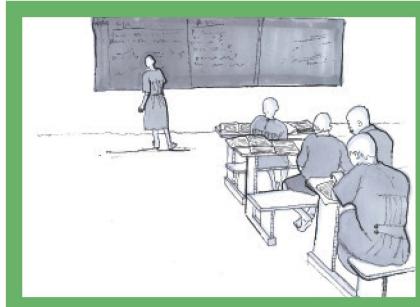
If you are a teacher, teaching through play may sound impossible. You know you are responsible to the school and the ministry of education for instructing your students on a set of information and learning outcomes for the class level and subject you are assigned this.

Teachers can support children to learn through play by incorporating “play based learning” in their classrooms.

Play-based learning simply means adapting learning objectives to respect and encourage children’s natural play drive. Let’s look at an example. Maria is a nursery school teacher. Today, according to her lesson plan she must teach her students about identifying colors.

If Maria used “rote based learning” her classroom might look like this:





If Maria used “play based learning” her classroom might look like this:

In the play based learning example, Maria is engaging with her students hands-on. She is encouraging them to learn through exploring and interacting with the world around them in active, playful ways. “Play based learning” will look different for different ages of students.

For example, an older group of students might learn a history lesson through “rote based learning” by writing down facts and dates they copy down from the blackboard.

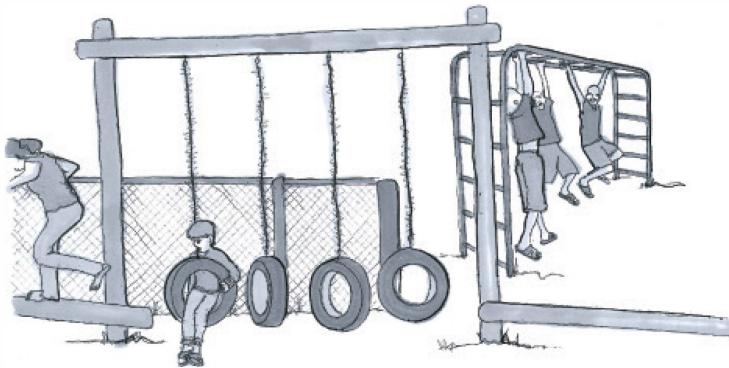
If their teacher used “play based learning” they might learn the same lesson by reading the information and then acting out the story from history in a play or by telling stories about what the different characters might have experienced at that point of history. What they could see, smell, hear, and feel.

Look back to the section on “What Does Play Look Like?” Can you think of different ways to teach learning objectives in the classroom by utilizing some of these play types? When teachers use “play based learning” instead of only “rote based learning” in their classrooms they support their students to think critically, develop their minds, and cultivate a love of learning.

Be a play advocate

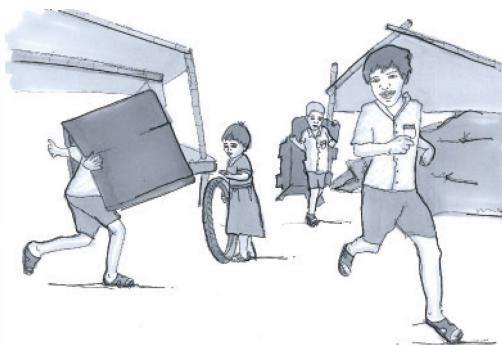
As a caring adult in the lives of children in your community, equipped with the knowledge of the power of play for child development, you can be a powerful advocate for children's right to play. Here are a few ideas of steps you can take to ensure the children in your community have adequate access to the play they need.

Build a playground



Children are the experts at play. They already know how to play, they just need the time and space to do it! Many schools and communities around the world lack safe, stimulating environments for children to play in. Playground Ideas is a non-profit organization dedicated to ensuring anyone, anywhere can build a play space using only local tools, skills, and low-cost and recycled materials. Over 500 communities around the world have used our resources to build beautiful play spaces. Our website hosts a 5-Step Playground Building Manual that will guide you through the process of building a playground from start to finish. We also have an international safety manual and over 150 easy to build playground designs and step-by-step instructions. All our resources are free to download and we're happy to chat with you over email or phone to answer any questions along the way. Visit us at www.playgroundideas.org to get started and connect with other playground builders around the world.

Provide materials for play



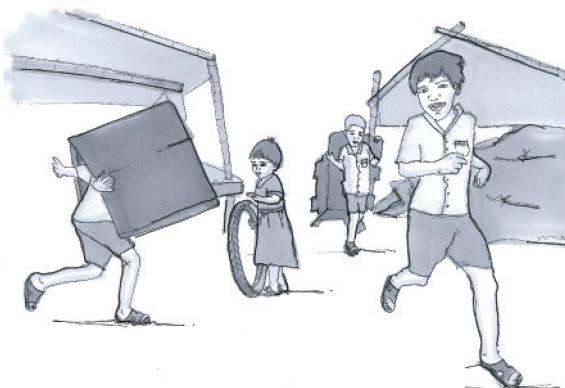
Interested in building a playground, but don't yet have the space or funds to do so? Don't let that stop you! You can create a stimulating play environment now by providing children with simple play materials they can build, move, and experiment with. "Loose parts" play materials are cheap or free ordinary household, homemade, and natural objects like cloth, sticks, leaves, beads, clay, plastic bottles, and wires that children can use for play activities. Even if you already have a playground, adding "loose parts" to the environment will make for a richer, more creative play experience. Playground Ideas has an easy "Loose Parts" manual that will introduce you to the benefits of "loose parts play" and guide you through creating and maintaining a low cost box of play materials for the children in your care. Download Playground Ideas' free "Loose Parts Manual" at www.playgroundideas.org/manuals (coming soon.)

Use play-based learning in your classroom



Are you a teacher? One of the most important things you can do to be a play advocate is to incorporate play based learning into your teaching. As you're creating your lesson plans, think of how you can adapt curriculum and your teaching method to create interactive learning experiences for your students that encourage their drive to play. Review the "Rote Based Learning vs. Play Based Learning" and start applying the play based learning method to your teaching today. See appendix 2 for a "Play Based Learning" reference sheet you can use in your lesson planning to help you brainstorm ways to make your lessons more playful.

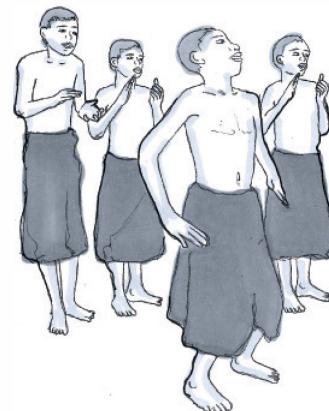
Educate the parents about the importance of play



Parents and guardians are one of the biggest influencers on a child's access to play. Now that you know about the importance of play for healthy child development, you can share your knowledge with parents. Organize a training for the parents in your school or community to increase their awareness of the importance of play and how they can support their child's play drive. For parents who did not receive a formal education themselves, they often feel inadequate to support their child's learning, as they themselves may not be literate. But regardless of education level, all parents can support children in play.

Equipping parents with training and encouragement to ensure their children have sufficient access to play is a great way to include parents of all backgrounds in supporting their child's learning and development. You can download free copies of this manual as well as a facilitator's training guide at www.playgroundideas.org/manuals.

Celebrate traditional games



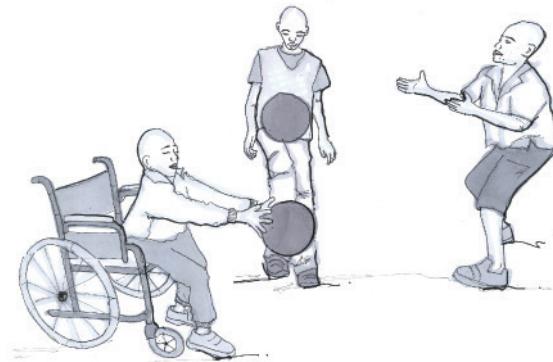
Play is a universal, and each community has unique games, dances, story telling traditions, and expressions of play. What play traditions are unique to your culture? Celebrating how play is expressed within individual cultures and passing on games and play traditions to the next generation preserves the beautiful diversity of play around the world.

Make play inclusive

All children deserve access to play, regardless of physical or mental ability, gender, or context. As you are designing play activities or environments, be mindful of how to include all children, regardless of the factors that may disadvantage them.

Disability – Ensure that children of all abilities have equal access to play.

Playground Ideas has an “Inclusive Play” manual on designing play environments to be inclusive to children of all abilities. You can download it for free at www.playgroundideas.org/manuals. (coming soon)



Gender – As you are designing play activities or environments, be sure to include all children in the planning process and be considerate of when girls might be marginalized in their access to play. Ask, have children been consulted about what their playground will include? Does the playground include games and activities that both girls and boys enjoy? Does the playground include games and activities that are culturally appropriate for both girls and boys to play?



Children in Crisis – children in situations of conflict, disaster, or emergency often do not have adequate access to play. Play can be a powerful tool for children who have experienced trauma to process their experiences and experience joy and safety despite their circumstances. Consider how access to play can be expanded to include settings like refugee camps and hospital wards.



Advocate for the right to play globally

Join an international movement to promote the child's right to play. The International Play Association is an international, non-governmental organization founded to protect, preserve and promote children's right to play as a fundamental human right, according to the Article 31 of the United Nations Convention on the Rights of the Child. The IPA has members in close to 50 countries. Learn more at www.ipa.org.



Keep learning



Thank you for taking the time to learn about the importance of play for the children in your life. The actions you take to promote access to play will positively impact children far into their futures.

If you are interested in furthering your knowledge of play, visit www.playgroundideas.com/resources for links to more manuals, articles, video and audio about play.

If you have questions or comments about the material in this manual, or have a great idea to spread access to play, write us an email at info@playgroundideas.org. We'd really love to hear from you!

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