

# TAKING THE BEST FROM OUTDOOR PLAY

A PRACTICAL BOOK  
FOR PARENTS AND PRACTITIONERS OF  
EARLY CHILDHOOD EDUCATION

**Editors:**

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**A Practical Book for Parents and  
Practitioners of Early Childhood  
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**2021**

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## Foreward

Children's play can be considered a "stepchild" of developmental and educational psychology to the extent that it is relatively understudied. For example, in the seminal *Manual of Child Psychology*, starting with Carmichael in the 1940's, only two chapters have been dedicated to play. This state of affairs is indeed puzzling in light of it being studied by some of the giants of the field, e.g., Bruner, Piaget, Sutton-Smith, and Vygotsky.

Unfortunately, children's play outdoors is even less frequently studied. For example, in 1993 I wrote a Foreward for a book edited by Craig Hart, call *Children on playgrounds*. I wrote, then, many of the same things I've said over 20 years ago. This paucity of research is perhaps due to the fact that it is more difficult to observe than the convenient confines of university preschool laboratories and classrooms (Pellegrini, 2004). Or it could be due to the fact that many psychologists, educators, and parents do not think serious stuff happens on the playground or in the streets. What goes on in playgrounds, for example, is seen as less serious stuff, relative to what goes on in school classrooms.

The empirical record tells a different story, at least for kids in schools. Children's outdoor play, as the chapters in this volume illustrate and other research suggests, accounts for an important portion of children's time and caloric budgets (Pellegrini, Horvat, & Huberty, 1999). Further, recess periods, spaced across the school day, increase children's attention to classroom tasks (Pellegrini, Huberty, Jones, 1995). Further, kindergarten-age children's (5-6 years of age) social interactions on the playground predict first grade academic achievement, beyond that explained by kindergarten standardized test scores (Pellegrini, 2009). More recently, and importantly, the Nobel Laureate economist, James Heckman (Heckman, Pinto, & Savelyev, 2013) has found that children's social skills (he calls them "soft skills") are more predictive, relative to academic measures, of adult adjustment. It seems to be the case, as Piaget (1932/1965) noted, children's social interaction, especially with peers, relative to adults, requires a fair amount of social, cognitive, and linguistic work. In order to successfully initiate and sustain social interaction, they need to

consider others' perspectives, compromise, follow rules, and use explicit language to manage all of this - Not trivial.

The current volume should, hopefully, bring more attention to the important issue of children's outdoor play. It is an important contribution because it includes chapters addressing important, but understudied, areas, such as play in city streets and urban design, as well as explicit suggests for play activities. This book should be read by psychologists, educators, and parents. What goes on in children's outdoor play is indeed important.

***Anthony D. Pellegrini***

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## **Preface**

Play, which is a part of real life, is the most basic requirement and right of the child. The child's right to play was included in the United Nations Declaration of the Rights of the Child in 1959 as the 4th Principle and the play needs of all children were officially accepted. Thus, it has become a necessity to provide safe and accessible natural play environments that provide children with suitable conditions to interact with nature. However, the rapid urbanization, increasing traffic, and security problems brought by today's life have eliminated this function of outdoor spaces, which is the most natural playground of children, and play has been compressed into educational activities indoor.

Outdoor play allows children to socialize among their peers, develop their creativity, gain experience by using their different senses, show sensitivity to the environment, struggle, managing risks, control their emotions, cope with their fears, and develop their ability to act independently. Hence, it enables children to acquire self-confidence, self-awareness, self-esteem, and similar skills. Especially considering the importance of early childhood in terms of development and education, it is necessary to take advantage of this magical power of outdoor play.

For this reason, the streets, which are the most easily accessible playground and contribute to the physical, cognitive, psychomotor, and socio-emotional development of children, should be considered not only as vehicle-centered pathway, but also as a social and playful area; and necessary arrangements should be made.

Based on this view, a project titled “Outdoor-oriented Practices in Early Childhood Education Project” (OPIECE) was implemented within the framework of the Erasmus + program Cooperation for innovation and the exchange of good practices main action plan.

The aim of the project is to enable families, teachers, and prospective teachers to use the street effectively as a learning environment by designing a safe street that will support children's development and education, discover and learn by living, and increase their interaction with their peers.

To achieve this goal, under the coordination of Sakarya University; strategic partnership with Stichting Drio (Netherlands), University of Évora (Portugal), Vytautas Magnus University (Lithuania), Hendek Municipality (Turkey) and Yenimahalle Kindergarten (Turkey) were carried out.

This book is the intellectual output of the project and is prepared under the leadership of the University of Évora with the contributions of all partners. In line with the expertise areas of the partners, it covers the importance of outdoor play for the development of children, the concept of child-friendly street and its features, what the street means as a social area, the perspectives of families about outdoor play, the role of families and teachers in outdoor practices. In addition, the book is enriched with play activities of project partner countries where parents, teachers, and prospective teachers can support children's development and use for developmental and educational purposes.

The easy accessibility of the book will remind readers and practitioners of the importance of the play, which is the child's natural learning tool, and will enable teachers and prospective teachers to use play for the development and education of the child.

***Ayşe Güler Küçükturan***

Sakarya University

OPIECE Project Manager

*“To be a superhero is to lead; to host a teddy for tea is to organize; to build a fort is to innovate: to play is to learn.”<sup>1</sup>*

The idea that childhood represents a crucial window of opportunity to shape essential skills for later life has led parents and educative systems to replace children's free play time with traditional academic learning, which is starting earlier in life. A decline in the number of play spaces due to rapid urbanization has been reducing opportunities for outdoor play, too. All over the world children are spending less time playing, and such decline has serious consequences for children's development. In particular, fewer time and spaces to play mean fewer opportunities to develop the so-called 21st-century skills (also called noncognitive or social-emotional skills), which are essential to thrive in the fast-changing reality posed by the Fourth Industrial Revolution.

The freedom to choose and to change, the safety to try and to fail, and the intrinsic motivation to explore and to find meanings, make play a unique context for children's development, and particularly for social-emotional skills, such as creativity, critical thinking, persistence, and self-control. Besides, opportunities to move, take risks, engage in the natural world, meet friends and neighbors in the big-scale scenario provided by the outdoors, are opportunities to learn to resolve conflicts, to solve problems, and to build socially connected communities. These skills are of paramount importance for our children's development, and for the required adaptability to our fast-changing society. Children gain by playing, but our society too, as recognized by World Economic Forum (2018) that took on the lack of play as a priority issue:

*"The more our children play today, the more prepared future generations will be. Play is needed to endow us with leaders who can resolve conflict, problem solve, build socially connected communities and inspire society to flourish." <sup>1</sup>*

Indeed, research on the benefits of play is extensive and well-documented. Parents and teachers must be assured that creating opportunities for their children's play, particularly for outdoor play, is

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<sup>1</sup> Goodwin, J., Polman, P., Brodin, J., & Knell, G. (2018, Jan 25). World Economic Forum: Global agenda - *To play is to learn. Time to step back and let kids be kids*. Retrieved from <https://www.weforum.org/agenda/2018/01/to-play-is-to-learn/>

an effective way of contributing to their children's future success. Governments should also act on this issue, designing child-friendly cities and implementing family-friendly policies (e.g., long parental leaves, remote work, switch to part-time), providing space and time for families to be together, and therefore to play.

This book is committed to the actual need of assuring, encouraging, and supporting parents, teachers, and communities to advocate and promote children's outdoor play. We hope to raise awareness and change perceptions around the value of play, and actually increase outdoor playtime. The book is organized into two parts: The first part focuses on the importance of outdoor play for children's development and the community, as well as on the strategies for municipalities, parents, and teachers to increase children's outdoor play. The second part presents forty-seven hands-on outdoor play activities designed to help parents and teachers to take the best from the outdoors for children's development.

Finally, we should not forget that the benefits of outdoor-oriented practices depend much on adults' playfulness and enthusiasm felt and expressed when outside; that means loving puddles and dirty soil hands.

***Guida Veiga***

University of Évora

Editor-in-Chief

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**PART I**

**Perspectives on Outdoor-Oriented Practices**

# The Importance of Outdoor Practices for Children's Health and Development and for the Community

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## **Introduction**

Whether on the street, in a park, or in a forest, one of the most favorite places for children to be is the outdoors. Parents, teachers, community authorities, and the general public should be aware of how playing outside has so much potential, so many benefits, and can be so enjoyable for everyone. What makes the outdoors a unique context for children's health and development? How the community benefits from having their children playing out? First, the outdoors is an open environment where noisy voices, large, exuberant, and risky movements are allowed, which gives children a sense of joy and freedom of being and doing (Bilton, 2010; Sandseter, 2009). Such a big scale scenario also makes children move more, sit less, and play longer (Gray et al., 2015). While outdoors, children are exposed to sunlight, fresh air, and natural and living things, benefiting their health and development (Bilton, 2010; Dymont & Bell, 2008). Moreover, the outdoors is a free, accessible, and continuously changing environment, where children can connect with nature, experiencing natural phenomena (Maynard & Waters, 2007), meeting new people and becoming familiar with their surroundings, which enables them to feel

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safe and independent to move within the community (Crawford et al., 2017).

Despite the many benefits of playing outside, the time spent outdoors has been declining due to a number of reasons, including caregivers' fast-paced lifestyles, rapid urbanization, and concerns about children's safety (e.g., injuries, stranger abduction) while playing outdoors (Tremblay et al., 2015; Veitch, Salmon, & Ball, 2010). However, not only being outdoors is safer than what parents perceive, but also staying indoors is less secure than what most parents think (e.g., spending more time in front of screens increases the risk of being exposed to cyber-bullying and violence, and of eating unhealthy snacks) (Tremblay et al., 2015). According to a systematic review of the relationship between risky outdoor play and children's health, the benefits from engaging in risky outdoor play are worth, considering the low frequency of injuries that actually occur (Brussoni et al., 2015). In this context, where beliefs about playing outside have become so ambivalent due to generalized public misperceptions, compromising the time children spend outdoors, the present chapter seeks to provide an overview of the benefits of outdoor-oriented practices for children's health and development and the for the community.

### **The concept of affordances**

The concept of affordances (Gibson, 1979) is essential to understand the uniqueness of outdoor practices. According to the Gibsonian theory, the opportunities for play and the type of activities in which children engage, are closely related to the properties of the environment (e.g., the area, the type of surface, the number of people). Clearly, the actions afforded by an indoor area are different from those afforded by outdoor environments (Flôres, Rodrigues, Copetti, Lopes, & Cordovil, 2019). The greater freedom to move around and explore afforded by outdoor environments encourages the use and development of gross motor skills and the engagement in moderate and vigorous physical activity (Flôres et al., 2019; Green, Riley, & Hargrove, 2012). Thus, physical play interactions such as "chase and catch", "hide and seek", "hopscotch", and "duck, duck, goose" are more predominant in outdoor contexts, rather than indoors (Veiga et al., 2017). Besides, outdoor elements like trees, grass, rocks, uneven ground and slopes, digging patches, and flat areas afford risky play (Little & Sweller, 2015;

Sandseter, 2009), such as sliding, climbing heights or riding at high speed (Stephenson, 2003).

One should note that the perception of affordances depends on children's age, body size, experience, temperament, and motor competence (Adolph, 1995; Almeida, Luz, Martins, & Cordovil, 2016, 2017; Plumert & Schwebel, 1997). Therefore, the same element might afford different actions, depending on children's characteristics. For example, while a log affords a young child sitting, it can afford an older and more proficient child balancing and jumping. In the same way, while grass might afford pulling and sensory exploring to a toddler, it can afford rough-and-tumble play to preschoolers.

### **The outdoors contributes to motor development and physical health**

The emergence and refinement of children's motor abilities are closely related to their embodied experiences (Marmeireira & Duarte Santos, 2019), including the engagement in physical play and other outdoor activities. Through interactions with the environment during physical play, children progressively gain control and ultimately mastery over their bodies, improving their motor competence (Little & Sweller, 2015; Little & Wyver, 2008). Besides, the outdoors offers a sense of exhilaration and courage while simultaneously exposing children to risk and challenge. Such context motivates children to test their strengths and limits, try new skills, to learn how to adapt to the changing environment and to negotiate risky events, therefore improving their actual and perceived motor competence (Kemple, Oh, Kenney, & Smith-Bonahue, 2016; Little & Sweller, 2015; Little & Wyver, 2008).

Building a proficient movement repertoire is of paramount importance, as children become more confident in their motor abilities, and therefore more likely to engage in structured and unstructured physical activities, not only during childhood and adolescence but probably also during adulthood (Robinson et al., 2015). The big-scale scenario, as well as the many slopes and varied pavements of outdoor settings, give children opportunities to develop locomotor skills such as running, jumping, sliding, skipping, hopping, or leaping. Such environmental elements also provide opportunities for children mastering object control skills, such as hitting (stationary or moving) objects, dribbling balls, and kicking, catching, or throwing objects.

Moreover, the various natural elements and the standardization of their disposition promote children's balance and postural control abilities, such as jumping from rock-to-rock, standing over a moving log of wood, climbing a tree, walking over a narrow passage, riding a bicycle, etc. Indeed, research shows that it is easier for children to improve their fundamental motor skills in outdoor than in indoor environments (Flôres et al., 2019; Green et al., 2012). Besides, empirical evidence supports that children with better motor competence tend to be more physically active, have better physical fitness and a lower rate of obesity, than their peers with poorer motor competence (Marmeleira, Veiga, Cansado, & Raimundo, 2017; Wrotniak, Epstein, Dorn, Jones, & Kondilis, 2006).

Physical activity is a fundamental resource for children's health and development (Marmeleira & Duarte Santos, 2019), contributing to more favorable metabolic, body composition, and cardiovascular risk profiles, as well as enhanced bone health, and reduced symptoms of anxiety and depression (World Health Organization, 2010). Compared to indoor environments, the outdoors is generally more likely to contribute to the World Health Organization (WHO) recommendations of a minimum of 60 minutes of moderate-to-vigorous physical activity per day for children (Kemple et al., 2016; World Health Organization, 2010). Compared to indoor childcare settings, preschoolers are twice as active and less sedentary when outside (Tandon, Saelens, Zhou, & Christakis, 2018). A recent study carried out in five childcare centers in the USA reported that preschoolers were significantly less sedentary (51% vs. 75%) and more physically active (31% vs. 12%) when outdoors, compared to when indoors (Tandon et al., 2018). Besides, to achieve a minute of moderate-to-vigorous physical activity, preschoolers only needed 3.8 minutes outdoors, whereas they needed 9.1 minutes indoors (Tandon et al., 2018). A study with older children (7-14 years, from Canada) reported that each additional hour spent outdoors per day was associated with 7.0 extra minutes of moderate-to-vigorous physical activity, 762 more steps, and less 13 minutes of sedentary time (Larouche, Garriguet, Gunnell, Goldfield, & Tremblay, 2016).

Outdoor play requires physical capabilities as strength, resistance, speed, agility, and flexibility for moving around and interacting with environment, therefore promoting children's physical fitness. In fact, children who live in rural areas (and thus who are more

likely to spend more time outside), usually show better scores on several physical fitness components, including strength, cardiorespiratory fitness, flexibility, and muscle endurance (Antunes et al., 2018; Tambalis, Panagiotakos, & Sidossis, 2011; Tinazci & Emiroglu, 2009).

Being outside also exposes children to the natural sunlight. Sunlight exposure can trigger a cascade of biological events that leads to the production of more serotonin and vitamin D; among other benefits, these elements have a positive influence on children's affect (e.g., preventing depression) and bone health, respectively (Baldwin & Rudge, 1995; Misra, Pacaud, Petryk, Collett-Solberg, & Kappy, 2008). In everyday language, to "get fresh air" is a frequent comment on the benefits of taking children outside, especially to "green" and natural spaces. The literature is aligned with such generalized perception, as air quality in indoor facilities is often worse than outdoors (Tremblay et al., 2015). In particular, the risk of asthma seems to decrease when children play in natural landscapes and areas with higher vegetation density (Lovasi, Quinn, Neckerman, Perzanowski, & Rundle, 2008; McCurdy, Winterbottom, Mehta, & Roberts, 2010).

### **The outdoors benefits social-emotional development and mental health**

The outdoors is a rich environment also for social-emotional development. The freedom to move around the space facilitates children to move in and move out social interactions, according to what they are feeling or needing. Therefore, when a play interaction becomes too emotionally intense, a child can more easily move away when outside, rather than inside (Ouvry, 2003). For example, while it is quite expected that a child goes for a quick run to get some distance and calm down when playing roughly with their friends outdoors, this scenario is not as expected when indoors. Thus, the greater sense of space and freedom of mobility offered by outdoor spaces might facilitate the practice and mastery of social skills. In fact, lower levels of outdoor play have been related to poorer social competence of preschoolers (Hinkley, Brown, Carson, & Teychenne, 2018). Regarding older children, more time spent outdoors is related to fewer peer problems and better psychosocial health (Larouche et al., 2016).

Outdoor environments stimulate more physical play with peers, which is of paramount importance for children's emotional

development (Veiga, da Silva, Gibson, & Rieffe, in press; Veiga et al., 2017). The moderate-to-vigorous physical activity that characterizes physical play is accompanied by physiological arousal (e.g., racing heartbeat, rapid breathing, high muscle tone). Such bodily sensations are an important component of the emotional experience, giving important cues for children to understand how they are feeling (e.g., rapid breathing and heart beating is associated with fear). The perception and awareness and these bodily signals have been related to emotion regulation skills (Schaan et al., 2019). Emotion understanding and regulation are necessary skills for children to succeed in social situations (Denham et al., 2003). Indeed, research has shown that the more children engage in outdoor physical play, the more socially competent they are (Veiga et al., 2017).

Physical play has been also argued as an important context for social learning of children with disabilities (Veiga et al., in press). Research shows that it is the most enjoyable and favorite form of play for children with disabilities (Case-Smith & Kuhaneck, 2008). Possibly, as physical play does not require complex communication skills, fine motor skills, and long periods of attention, children with disabilities are more likely to succeed in physical play interactions rather than in pretend or constructive play (Veiga et al., in press). Besides, this form of play, involving twisting, spinning, rolling, bouncing, wrestling, is also an opportunity for proprioceptive and vestibular stimulation which helps children (especially those with sensory integration difficulties) to manage their behavior and feel calmer (Baranek, 2002; Blanche & Schaaf, 2001).

Furthermore, children can easily find plenty of natural loose parts (leaves, logs, stones) in the outdoors, including some big and bulky ones. Playing with these natural loose parts requires children to ask for help from others, thus promoting social negotiation and collaboration (Gibson, Cornell, & Gill, 2017), and has been related to increased socialization and resilience (Bundy et al., 2017; Flannigan & Dietze, 2017). Besides, unlike traditional toys, which often have a closed function, natural loose parts stimulate children to think, discover, and invent new ways and possibilities. Having natural loose parts available will enable children to solve problems, and to modify their own constructs and ideas during play (a stone can be used to throw, to stack, to simulate a car or a doll, etc.), therefore also promoting divergent

thinking, creativity, and problem-solving skills (Casey & Robertson, 2016; Daly & Beloglovsky, 2015).

### **The outdoors creates social capital for the community**

Playing out is also important for the community. The human being is strongly driven by the need for connection and socialization with others, and one of the most relevant expressions of this need is the establishment of friendships. Children are no exception, and they often find in free play a central tool for reaching others and establishing their most significant friendships. Indeed, research shows that often friendships do not occur within the classroom, but rather in play (Hart, 2002) and other social activities outside school (Offer & Schneider, 2007). When children have the chance to interact freely with their peers who live in their neighborhood, they get the opportunity to meet and bond with their friends, neighbors, and their community. Hence, children's outdoor play is an important key in the process of creating social capital for families and the neighborhood (Morrow, 1999; Offer & Schneider, 2007; Weller & Bruegel, 2009).

When children of the same community play regularly with each other, they allow parents to observe and interact not only with their children's friends but also with their parents, i.e., their neighbors. Offer and Schneider (2007) showed that parents were more likely to connect with the parents of their children's friends and create social closure if their children had good friends. It is important to note that those high-quality friendships were mainly developed in social activities outside school. Such interactions allow parents to verify that their children's friends and their parents share the same set of values and principles, thus reinforcing mutual trust, which is fundamental for fostering strong communities.

Unfortunately, as we have pointed before, opportunities for children's free play (especially for playing outdoors) have been declining. Streets do not always offer the best conditions for children to play freely, spontaneously, and safely. Although children might find such conditions in playgrounds, those are not usually close to their homes, the route to them is not always the safest to get there independently, which makes its access often dependent on adults' schedules. Giving the importance of outdoor play and its decline, Play Streets are becoming increasingly popular worldwide, involving the

temporary closure of a local residential street to motor vehicles in order to promote its use as a safe play space, ultimately aiming to increase children's autonomy and sense of community (Meyer, Bridges, Schmid, Hecht, & Porter, 2019).

Research has shown that even such temporary actions as Play Streets, promote the notion of cohesion inside the communities where they are held (Meyer et al., 2019; Zieff, Chaudhuri, & Musselman, 2016). For example, a study focusing on four Play Street events in different neighborhoods of San Francisco (USA) showed that 94% of the parents agreed that Play Streets strengthen their community (Zieff et al., 2016). A similar work focusing on a single Play Street event showed that 30% of parents met new neighbors, and 54% of parents reported strengthened relationships with neighbors previously met (Cortinez-O’Ryan, Albagli, Sadarangani, & Aguilar-Farias, 2017). Moreover, after a 16-week program of weekly events, street play was identified by 61% local adult residents as a good way for children to make new friends, a good way for children to feel part of the community (56%), and a good way for neighbors to get to know each other better (28%) (Murray & Devecchi, 2016). Also, 20% of the parents, residents and children reported that the local implementation of a play street led to a better sense of community, and 43% of parents identified social interaction as the main reason they liked the project (Murray & Devecchi, 2016). Clearly, outdoor practices in the local community seem to bring a positive change in the neighborhood dynamics and a stronger sense of community.

As Roger Hart (2002, p.136) brilliantly points "There are two major reasons why play should be a priority for city governments: first, play is important to children's development and second, free play in public space is important for the development of civil society and, hence, for democracy."

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## Streets as Social Places

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### **Historical context**

Many changes took place over the years regarding the role of the streets in the community's life. During a long period in history, streets acted as the social centers of towns and cities, providing the proper scenario for socio-historical events (Appleyard, 1980). For children, in particular, the public streets were places where they learned a lot about the world. With the increment of motorized and faster traffic, the potential danger of the roads led to the necessity of safer infrastructures and the progressive separation of road users (Hamilton-Baillie, 2004; Project for Public Spaces, 2017). Therefore, during the first decades of the 20th century, the (re)design of the streets traffic started to push people out to sidewalks. During the following decades, the separation between pedestrians and cars increased significantly as several road traffic elements (e.g., traffic signals, asphalt, road marking, parking lanes, crosswalks) gained importance (Hamilton-Baillie, 2004; Project for Public Spaces, 2017). During this period, street features related to playing, shopping, and chatting, markedly reduced their presence in the street environment (Project for Public Spaces, 2017). One consequence of such changes was the reduction of the time children spent outdoors and the emergence of artificial playgrounds surrounded by secure fences.

### **Principles and elements of the “living street”**

During the late 1960s and early 1970, a new street model called “living street” (“woonerf” in dutch), was developed in the Netherlands by Niek de Boer, Professor of Urban Planning, and engineer Joost Váhl (Hamilton-Baillie, 2004; Karndacharuk, Wilson, & Dunn, 2014). This street model was a reaction to the prevalence of motorized vehicles on the traditional city streets and the loss of independence of mobility by children (Hamilton-Baillie, 2008). The woonerf concept was a new approach to traffic management and street design, stimulating pedestrian mobility, children's play, and social activities in streets that

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are also shared by cars (Hamilton-Baillie, 2008; Karndacharuk, Wilson, & Dunn, 2014).

Hans Monderman, a traffic safety analyst in the Netherlands, was one of the main pioneers of this new paradigm of integration, developing a number of ideas of how urban design and traffic engineering might work together (Hamilton-Baillie, 2004). He centered his approach on the organization of the spaces shared between vehicles and pedestrians, considering that behaviors of street users are conditioned by their perception of risk when navigating the environment (Monderman, Clarke, & Baillie, 2006). In his view, people tend to take more risks and less responsibility in the presence of numerous safety rules. In the alternative, lesser guidance (e.g., removal or downgrade of measures of road signs, barriers, and lights) could stimulate individuals to communicate more and pay more attention to each other in traffic (Hamilton-Baillie, 2008; Monderman, Clarke, & Baillie, 2006), since in these conditions, drivers and pedestrians take more shared responsibility to guarantee road safety (“negotiating in traffic”). Although Monderman and colleagues (2006) were convinced that the implementation (supported in information and training) could turn the streets of the town centers into more attractive places to live and work, they also recognized that such innovational ideas could be difficult to be accepted at start.

Most of the contemporary shared or living streets, evolved from the original concept of woonerf (Karndacharuk, Wilson, & Dunn, 2014). The principles that govern a woonerf street in a suburban environment, in which the integration between pedestrian and traffic activity is of major importance, were well systematized by the scholar and urbanist Ben-Joseph (1995). According to the author, woonerf is a part of the residential public space, shared by pedestrians and motor vehicles (paved space did not demark the sidewalk rigidly) although traffic is discouraged. In the woonerf, entrances are clearly marked, the speed of the vehicles is restricted (using deviations, undulations, and bends), landscape and furniture are extensive, and walking and playing are welcomed activities.

The woonerf and other related concepts highlight that streets should be inclusive and seen as living, social, pedestrian-focused, and safe shared places (Hamilton-Baillie, 2008; Karndacharuk, Wilson, & Dunn, 2014). This new paradigm of shared spaces, intends to bring pedestrians to the urban outdoors, integrating pedestrian social activities into the underlying transport functions of the public road space (Karndacharuk, Wilson, & Dunn, 2014). It assumes that streets should be integrated (shared) within the broader built environment (e.g., quality of parks, green spaces, sidewalks, public spaces, zoning) in a way that promotes social interactions and community engagement (Hassen

& Kaufman, 2016). In this line of thought, by expanding the space (e.g., wider sidewalks, promenades, public parks) that is available for public life in urban contexts, one can increase the number of people outside, stimulate social activities, and build stronger communities (Bain, Gray, & Rodgers, 2012). In a safe and pleasant urban environment, it is expected that more street events emerge (e.g., festivals, educational projects, and activities), fostering community participation and connection, facilitating play and cultural activities, as well as physical activity (National Street Service, n.d.).

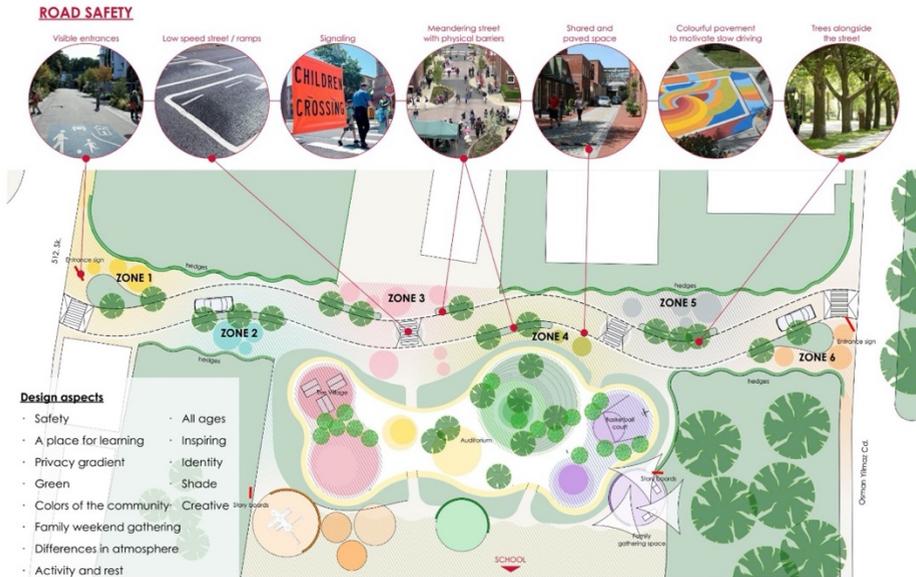
### **Safety**

Safety is one of the main principles governing the design of living streets. Having people outside, requires creating a sense of security; for instance, the perception of risk markedly influences the level of permission given by parents for children to play outside (e.g., Veitch, Bagley, Ball, & Salmon, 2006). Therefore, safety conditions should be created allowing young children to walk, cycle, and play safely through neighborhood streets, and to have independent mobility to schools, playgrounds, parks, or other places (Appleyard, 1980; Biddulph, 2011; Whewey & Millward, 1997). Traffic-calming measures are of major importance to make public streets more friendly and have a positive influence on its popularity (Whewey & Millward, 1997). By reducing the volume and speed of road traffic, while maintaining them permeable for pedestrians and bicycles, more opportunities for outdoor play can emerge (Biddulph, 2011).

Traditional traffic calming can include many features (Aerts, 2018; Forman, 2017; Project for Public Spaces, 2017). Here we designate some of the most common safety strategies that should be considered when designing a public road:

1. making drivers feel that they are entering a different domain (a private street) by using a bump at the entrance and the exit, painting the road in different colors, and using child-friendly street signs;
2. narrowing the street physically and visually by using natural barriers;
3. parking on one side only or using special parking places for visibility of drivers and children;
4. creating speed limits for vehicles (10-15 km/h);
5. integrating bicycle routes and bicycle parking points.

In figure 1 we can see an example of such principles applied in the design of the OPIECE educational playstreet.



**Figure 1. An example of a road integrating in its design safety aspects. VFO Architects Urban Design bv & Stichting Drio©**

### Educational and playful streets

Play is a powerful learning and developmental tool for children. It can stimulate in an easy and pleasant way, cognitive, socioemotional, and motor development. It is fundamental that streets and neighborhoods afford children's play, which means that they should be child-friendly, in the sense that they should stimulate children's activities in a safety background. When creating child-friendly neighborhoods, landscape architects and urban designers should work together, and a number of elements should be considered, including sidewalks, cycling routes, neighborhoods roads, public transit shall, informal paths shall, circulation organization, playgrounds, and natural landscapes (Accola, n.d.).

The sidewalks should be wide, have furniture and vegetation, incorporate kid routes using iconography or color palettes, and contain a barrier (e.g., using on-street parking or vegetation); neighborhoods roads should utilize woonerfs when possible, use measures to slow traffic, and differentiate the crossing areas. The quality of the outdoor spaces will be much improved, if the playground areas are 'bespoke', well located, make use of natural elements, and provide a wide range of experiences (e.g., gardening; social encounters). They should allow children of different ages to play together, be accessible to children with

disabilities, give space for children to experience risk and challenge, be sustainable and appropriately maintained, and be able to change over the years. The schools can also contribute. In specific, they can develop 'greening' school grounds, to include design elements such as gardens, trees, shrubs, water features, and artwork and gathering areas (Dyment & Bell, 2008). Children should be involved in designing, creating, caring for, and using school nature areas (Bell, 2001).

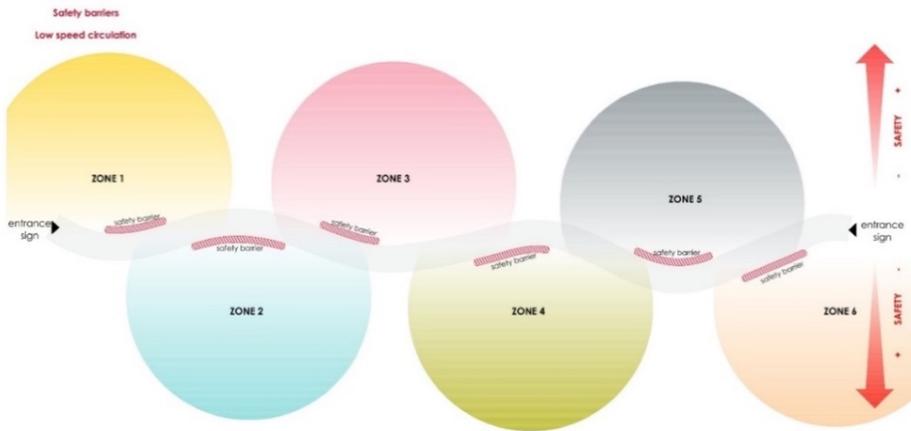
### **Involving children in the design of the streets and outdoor spaces**

For better planning of the public spaces, urban planners should get the contribution of the people that will regularly use such spaces, including children. Hence, child-responsive urban settings should be inclusive of all society and empower children to participate actively in decision-making, encouraging civic participation and connectivity. In particular, Hart (1992) created a youth ladder of participation with eight different levels of participation. The first three rungs of the ladder corresponded to "non-participation levels", where there is a strong propensity of adults to undervalue the competence of children. In the other five rungs of the ladder, there is an increasing degree of children's participation in public space projects: assigned but informed – e.g., a group of children color the street crossing after being properly informed of its purpose; consulted and informed – e.g., children are consulted by a decision-maker about specific questions regarding public space design, and their opinions are really considered; adult-initiated, shared decisions with children – e.g., children are asked to participate in planning a playground; child-initiated and directed – e.g., children produce their own street or playground design plans; child-initiated, shared decisions with adults – e.g., after realizing that there are safety problems in their street, children work in a design/project to solve it and mobilize adults to implement it.

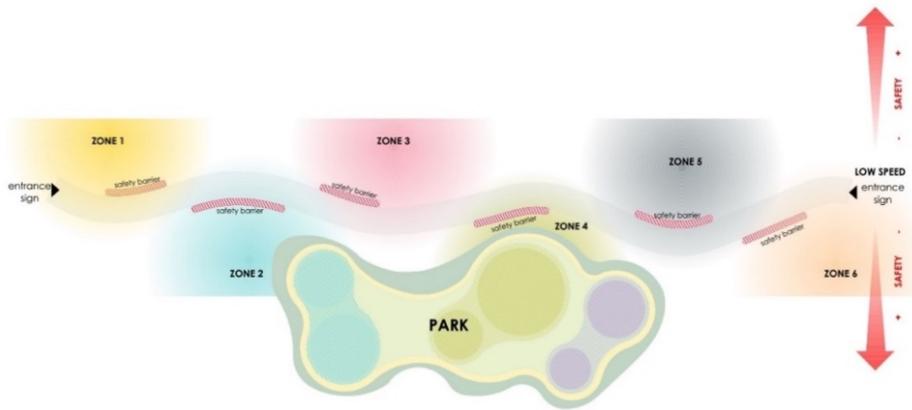
Unfortunately, very often, the children's role in public space is considered as one of a passive user rather than an active player in its development (CABE Space & CABE Education, 2004). The work by Hart (1992) highlights the importance of considering children's needs and desires. Designers, parents, municipalities, and child educators should work together with children (and youth, in general), discovering ways to empower them and to display their choices, aspirations, and visions for planning urban changes. If children are involved and contribute to decisions about what happens in their environment, they will develop respect for the community, learn about the role of local government, and develop a sense of responsibility when using public spaces (CABE Space & CABE Education, 2004).

## Some architectural design examples

Local organizations and municipalities should work together on the design and construction of streets and neighborhood areas in accordance with “living street” principles. In the context of the OPIECE project, the OPIECE team, led by Drio, worked with VFO Architects Urban Design to provide guidance and reference cases to build from. Two examples of the design of the OPIECE educational play street are provided below:



**Figure 2. Reference case 1: This case of a child-friendly living street will be relevant when there are no empty areas defined (VFO Architects Urban Design bv & Stichting Drio©)**



**Figure 3. Reference case 1: This case of a child-friendly living street is similar to the educational play street of the OPIECE project from Hendek Municipality, with a larger empty play area under it (VFO Architects Urban Design bv & Stichting Drio©)**

### Final note

The design of a child-friendly living street should successfully balance the interaction between the traffic and children. Essential dimensions of a living street are safety, play, and learning. Safety is created by a clear and readable overview of what is where and by the consequent expectations created in the users. In this line of thought, a car is a visitor to the street area. The design of the area and its elements should make the driver immediately perceive that he/she is entering in a specific type of street, that requires him/her a change of behavior. As the car increasingly enters the street's specific domain, providing safety to the children and other pedestrians, the street is required to force the cars to slowly drive and to give drivers a large field of view (e.g., corners should be avoided). If necessary, barriers towards the road should be provided, either by small hills or other elements (e.g., vegetation). Living streets are also wonderful places for children to play and learn about

themselves, others, and the world. At the outside environment, they can engage in many physical activities with their peers and can also perform some activities alone. Therefore, it is desirable to have spaces that afford independent and group play, as well as spaces that afford movement and mobility.

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## The Concept of a Child-Friendly City

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### Urbanization and Children

As a complex and large environment, the city has both advantages and disadvantages for all age groups (Churchman, 2003). Housing, residential neighborhoods, streets, parks, playgrounds, and schools are children's daily living spaces. Children who initially interact with the housing they live in, as they grow up, discover what is in front of their house, the streets, and the open spaces in the surrounding area. They begin to establish connections among the places they spend time, and their relationship with the city increases. However, with the rapid urbanization and heavy traffic, cities are no longer a safe environment especially for children. This situation diminishes the relationship between the child and the city, and parents push their children to places that are not suitable for socializing in a limited time. Furthermore, children constituting a significant portion of the urban population are not considered as the target group of the urban studies (Aerts, 2018; Tandoğan, 2014).

The city planner Kevin Lynch started a project called "Growing up in the Cities" in the 1970s to understand how cities affect children's holistic development. With the support of UNESCO, this project poses urban problems such as increased traffic, urban crime, social stigma, and lack of adequate gaming resources in neighborhoods of Poland, Argentina, Australia, and Mexico. Reports from the United Nations

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Population Unit show that the world's population is increasing day by day; half of them is in urban areas, and 50% of those are children. Lynch's *Growing Up in an Urbanizing World* project is an indication that the world continues to be an up-to-date text as urbanization continues (Nallari, 2011). Several studies have tried to understand the cities and their children, such as "Cities for Children: Children's Rights, Poverty and Urban Management (Bartlett, de la Barra, Hart, Missair, & Satterthwaite, 1999)"; "Growing Up in an Urbanising World (Chawla, 2000)", and "Building Better Cities with Children and Youth (Driskell, 2002)", in order to develop the necessary policies to improve children's quality of life in urban settings (Chatterjee, 2006). Besides, other studies have addressed child and youth issues related to problems about engagement of children and youth (Frances & Lorenzo, 2002), sustainable cities (Malone, 2001) and children's rights (Racelis & Aguirre, 2002). However, research on the conceptual exploration of child-friendly cities is still scarce.

The implementation of the Convention on the Rights of the Child, providing better living conditions for children and taking measures to improve the situation of children at risk, is possible through practices starting at the local level. In this sense, efforts towards the protection and realization of children's rights aim to create a Child Friendly City (CFC), protecting the rights of children and making children visible in the local government systems, starting from being child-friendly with their local government structures and approaches (Topsümer, Babacan, & Baytekin, 2009).

The basic philosophy is that awareness starting from cities will affect and change countries and the world as a result (Topsümer, Babacan, & Baytekin, 2009). Local governments provide many services that affect daily life at the local level. Therefore, local authorities have important duties in the framework of "The Convention on the Rights of the Child" within the framework of every child's right to have an adequate standard of living (Unicef, 2000). In this context, it is aimed to transfer sufficient resources directly and indirectly to the programs that children benefit. It is also aimed to increase these resources over time, to spread good examples of child-friendly practices within and outside the country, and to support children's access to the right to play in certain regions (Bakanlığı, 2015).

For children, the city means areas where they can have multiple experiences. A child-friendly city is a city that has the characteristics that support children's motor, cognitive, and socio-emotional development so that they can become mature individuals in the future. The planning and design of such cities need to include places for children to physically enjoy and feel safe and secure. In the symbolic sense, it should be a place that can convey the message that the children are also equally important parts of the society (Churchman, 2003). A child-friendly environment refers not only to the natural or built environment, but also to the physical, psychological, economic, political, and cultural environment. Therefore, these criteria also determine the lives of children based on their physical, psychosocial, cultural, economic, and even political assets. On the other hand, it is also based on human rights and democracy (Horelli, 2007).

### **Features of Child-Friendly Cities**

The child-friendly city envisions a good administrative system taking the child's rights into account and is responsible for ensuring the active participation of children in city administration and decision-making through all service units in the province. It is the city which is obliged to carry out the necessary arrangements and activities in order to evaluate all the relevant decisions from the perspective of child rights and to provide equal access to basic services (Child Friendly City Project Implementation Directive, 2006).

A child-friendly city means a place where children's voices, needs, priorities, rights, public policies, and practices become an integral part of the city (Korkmaz, 2006; Sivri Gökmen, 2013). A child-friendly city is a local government system that attaches importance to protect children's rights in everyday life.

Horelli (2007) identified ten dimensions of the child-friendly city or child-friendly environment by referring to the natural or settled environment and to the physical, psychological, economic, political, and cultural environment. These ten dimensions of a good environment comprise the individual's value of freedom and subjective well-being, which have equal opportunities to achieve their goals and efforts as a physical, psychosocial, cultural, economic, and even political entities (Horelli, 2007).

**Table 1. Ten dimensions of a child-friendly city by Horelly (2007)**

DIMENSIONS	ABSTRACT DEFINITIONS
Housing and sheltering	Flexible and safe housing alternatives. Processes that turn a house into a home.
Health, education, and transportation services	Easily accessible public and private basic services that make children's everyday life easier.
Participation	Opportunities for children's participation in planning and development.
Safety and security	Ensuring physical and psychological security by the state and municipalities: Child welfare and prevention of violence. A tolerant and pluralistic environment. Safe transport systems and public safety in general.
Family, relatives, friends, and neighbors	Opportunities for close social relationships with family, relatives, and friends.
Urban and environmental characteristics	High functional, aesthetic, and cultural standards in concrete elements of the local environment. Providing various interesting areas for events.
Existence and distribution of resources	Providing financial resources and job opportunities to young people who have a role in local economies.
Ecology	The application of the principles of nature protection and sustainable environment in the construction of built environment and society.
A sense of belonging and continuity	A cultural continuity and a sense of belonging to a particular place at a given time.
Well governance	A flexible local governance that takes young people's views into account on decision-making. Provision of participatory structures; youth councils and various participatory projects.

The fact that a place is friendly to people is a phenomenon that emerges as a result of the relations between humans and environment (Severcan, 2015). Although understanding how an area will be friendly to a child is essential, it is necessary to know the conditions for a child to accept the area as a friend. Supported on this idea, Doll (1996) has determined six basic features for the concept of child-friendly place based on the conditions of friendship (Chatterjee, 2006).

**Table 2. Six basic characteristics of a child-friendly place by Doll (1996)**

CHARACTERISTIC	DESCRIPTIONS
Mutual affection and personal regard	<p>A child develops love and respect for a space with unique qualities that cannot harm him or cause him any damage. When the child is given the opportunity to take care of such a space, it is likely that he will take care of the care and maintenance of that place.</p> <p>Children are friendly to places where they feel safe.</p>
Shared interests and activities to meaningful exchange with spaces	<p>Children accept other children as ready-to-play friends. Spaces allow children to fulfill their different interests and needs through action. Sharing activities, maintaining interaction for a certain period of time provides a better understanding of the other. This, then, develops friendship by engaging in gaming activities in common interests and makes the individual and the environment an integral part of a set of activities and opportunities.</p> <p>Children are friendly in places where their interests and needs are met.</p>
Commitment to Learning and Competence Through Space Experience	<p>Learning from the environment and gaining direct experience and competence in space are important factors in developing a relationship with the space and the environment. Friendship engagement emerges through environmental knowledge, learning from the environment, and gaining knowledge on behalf of the environment.</p> <p>Children are friendly to spaces that give them the opportunity to experience.</p>

CHARACTERISTIC	DESCRIPTIONS
Loyalty	<p>The spaces become identifiable by the actions of children over time. Children have control over these defined areas and protect their spaces from others.</p> <p>Children become friends with their own spaces where they can control.</p>
Self-disclosure and mutual understanding	<p>The private spaces created in the space allow children to share and protect confidential information, hidden truths, desires and subjective information, and retreat to these private spaces and interact with others.</p> <p>Children are friendly with their private spaces.</p>
Horizontality	<p>Children modify the structure of the space by joining forces to remove obstacles to express themselves freely in different ways such as art and music activities. They also modify the structure to create personal space. Children give new meanings to the space with these free shares.</p> <p>Children become friendly with spaces they can control for their activities without any hindrance.</p>

All these efforts to ensure that children's living spaces are child-friendly have been intensified as a result of the establishment of the Child-Friendly City Secretariat in 1997-2000 with the activities organized in Italy and the partners of Child-Friendly City and related actors to serve in this field. "The child-friendly city movement" in Italy seeks to establish the principle of "participation" in the Convention on the Rights of the Child as a reference point (Riggio, 2002; Sivri Gökmen, 2013).

In this context, the Child-Friendly City initiative aims to provide a healthy and safe environment in which children aged between 0-18 can live and participate in a real sense and where children's rights can be realized at the local level. An environment that supports the development of children, where basic services are provided in a sustainable and fair manner, is non-discriminatory and encourages solidarity, especially for children with individual differences (Topsümer et al., 2009).

Streets are one of the most popular public spaces for children. Therefore, child-friendly cities have child-friendly streets. Streets are the social centers of towns and cities where children learn their first knowledge of the world, and neighbors meet and communicate with each other (Appleyard, 1981).

Social behaviors develop much more outdoors than inside. The individual finds the opportunity to express himself and to feel and express that he/she belongs to a community in outdoor spaces such as the streets, squares, and regulated areas with where he/she communicates (Bal, 2005). In this context, Gough and Franch (2005) state that streets can be interpreted in different ways, such as social spaces for adults, playgrounds for children, and traffic arteries for vehicle users. Streets, the most accessible public spaces, are places where neighbors socialize, and young people and older people are equally interested in different activities. Çevik (1992 in Ergen, 2000) states that the sub-regions such as the bottom of the street, the eaves, the steps, the front of the door, and its surroundings are places where sight, encounter, greeting, chat, sitting, resting, playing, and participatory actions take place. For this reason, drivers, pedestrians, and cyclists are highly affected by the way the street is arranged physically and visually (Gökmen & Taşçı, 2010).

One of the most important problems of the city today is the loss of street life due to the density of vehicles on the streets. The increase in vehicle traffic has caused the streets to lose their social qualities, and the vehicles become the primary users of the streets. The damage that vehicles cause to street life is not only related to speed and safety but also about removing the users of the street from this environment because of the intensity and noise it creates (Gökmen & Taşçı, 2010).

For children, the street is the fourth environment of the urban context that comes after home, school, and planned playgrounds. The street is not only a fixed fund that prepares the ground for social practices, but also a living space and an area for the development of cultural identity (Taşçı, 2010). Therefore, in order to meet the rights and needs of children, it is necessary to organize child-friendly streets with dimensions and features in which they can walk safely, easily ride bikes, play, have fun, and move independently.

Although street improvement works show similarities with their contents and exit points in different countries, it is seen that they are carried out with different names such as “shared zone” in Australia, “side street” in Japan, “woonerf” in the Netherlands and “homezone” in the UK. It is possible to see living street examples supported and implemented by local governments in countries like Germany, Belgium, Australia, Spain, France, Poland, Sweden, and Switzerland (Taşçı, 2010). The main objective is to make the street a common sharing space for pedestrians, children, cyclists, and motor vehicles, rather than being a vehicle-only area. Thus, this public space of the street imposes important duties and responsibilities on municipalities, which are defined as public legal entities with administrative and financial autonomy and established to meet the residents’ common needs.

In this context, Baş (2016) made proposals for the municipalities under four headings for the creation of child-friendly streets in his study titled “Child-Friendly Street from Urban Design Perspective”.

#### **Evaluation, Street Selection, and Problem Detection**

It is important to evaluate the streets in order to detect the inappropriate characteristics that prevent children from spending time in the residential neighborhood and near schools. This way, changes can be made to apply the child-friendly notions to these streets.

#### **An Operation Model Trial for Child-Friendly Streets**

- Limiting the speed between 15-20 km/h on selected streets and hanging warning signs to support speed limit, and taking measures such as placing speed bumps or platforms at certain intervals, especially at the street entrances,
- Restricting traffic and parking at the school entrance and exit hours on selected streets or between certain hours on the weekend,
- Together with the residents, especially the children, determining the days and hours on which traffic and parking will be limited,
- Making announcements to inform people.

### **Urban Design**

- Clearly identifying street entrances and exits using urban furniture, sculpture, or artistic works,
- Setting up seats for adults, placing streetlights at 5 m intervals, well illuminating, and marking pedestrian crossings, and following the maintenance of the street at regular intervals,
- Keeping the maximum distance to cross the road up to 3.5 m, keeping pavement widths at a minimum of 150 meters, keeping the pavement heights up to a maximum of 10 cm, and placing ramps at the start- and end-points of the pavements,
- Keeping the width of the bike paths at a minimum of 2 meters in the streets where there is a bicycle access and need for a bicycle path,
- Making the appearance of the street fun and attractive by planting, adding playing and sitting elements, street art, sand, water, natural, secret-private places, interchangeable structures, materials, and equipment.

### **Phase - Legal Regulations**

- To make decisions in the city council and metropolitan municipality to reduce traffic direction and speed limits, and to make UKOME (Transport Coordination Center) approve these decisions in the city.

Considering the principles for creating child-friendly streets, and the needs' analysis of children, parents, and teachers, a child-friendly street was designed and implemented within the Outdoor-Oriented Practices in Early Childhood Education (OPIECE) project. The implementation process was carried out by Hendek Municipality followed 5 steps: 1. Determining the location (a public space, with no limitations for ownership and use, and which attends to locals' needs); 2. Making bureaucratic decisions (such as council agreement, UKAME agreement for transportation issues, and AYKOME agreement for infrastructure issues); 3. Designing the project (attending to child development, safety and accessibility issues, local conditions, and community needs) and preparing 3D models; 4. Presenting the project to the city council, neighborhood residents and project partners (and making the necessary adjustments); and 5. Implementing the project.

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# Families' Attitudes towards the Outdoors

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## Parental Barriers to Play Outside

Play is one of the most essential parts of a child's life, and families have a crucial role by providing children proper play environments and sufficient time to play. The outdoors is a significant setting for children's development and learning, where children play, make friends, develop their creativity, know themselves, and advance their physical, motor, social, and emotional, cognitive development. However, in the last decades, there has been a significant decline in children's outdoor play. In particular, a recent study showed that about half of the children was not taken out to play every day and that when they do, they generally go with their mothers (Tandon, Zhou, & Christakis, 2011). Such a decline has been related to families' lifestyles and attitudes towards the outdoors (Aarts, Wendel-Vos, van Oers, van de Goor, Schuit, 2010; Cevher-Kalburan, 2014).

The technological advances and the difficulties of managing working and family life have led families and children to spend more time indoors, using screens as entertainment (Rivkin, 2000). On the other hand, the structural changes of cities, in terms of urbanization, traffic, and population, have raised families' concerns about children's safety while outdoors (Witten, Kearns, Carroll, Asiasiga, & Tava'e, 2013). Research (Kytta, Hirvonen, Rudner, Pirjola, & Laatikainen, 2015; Lopes, Cordovil, & Neto, 2014;) has shown that these concerns have led parents to overprotect their children, limiting their actions and relationships, and restricting their independent mobility. Hence, children are now less independent of going outside alone to do things such as crossing, cycling, and going out in the evening (Bilton, 2010; Rivkin, 2000). Such parental security concerns also prevent children from playing freely outside their homes or even playing in their gardens without parental supervision (Cevher-Kalburan, 2014).

Urbanization changes are also responsible for outdoor play decline. The type of houses has changed, and access to outdoor spaces

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has decreased. In particular, children living in a detached or semi-detached house play more in the outdoors than those living in an apartment. The lack of a garden is an obstacle, especially for children of 4-6 years to play outside (Aarts et al., 2010). The fact that children have fewer opportunities to play out (whether in the house's garden, in the street in front of the house, or the neighborhood's street), makes the playground the unique play area. However, going to the playground depends on a parent's busy schedule and involves constant adults' monitoring and supervision (Cevher-Kalburan, 2014), therefore restricting children's spontaneous behaviors.

In fact, while parents see unstructured play spaces, such as neighborhood plots, empty lands, or streets, as undesirable, these places are considered by children as enjoyable play areas (Parsons, 2011). Children do prefer unstructured play environments, rather than pre-designed and controlled environments such as playgrounds, mostly because playgrounds' fixed structure does not facilitate the continuity of play (McCan, 2004).

Besides, although parents acknowledge that taking risks and making decisions in risky situations contribute to children's development and life skills (Gill, 2007; Sandseter, 2010), they find it challenging to relativize their safety concerns and allow children's risky play (Little, 2015). Therefore, parents end up failing to provide such experiences to their children (Roche, 2016), structuring and controlling their play behaviors (White & Stoecklin, 1998). Nevertheless, it is essential to note that as mothers' safety concerns diminish, the time spent in outdoor play increases (Kimbrow et al., 2011).

### ***A Study in Turkish Context***

In the light of the OPIECE project, one-to-one semi-structured interviews (2-4 minutes) were held with 14 voluntary parents and 13 children to determine their perspectives on outdoor play. The interviews lasted 2-4 minutes and were conducted by teachers working at a kindergarten in Hendek, Turkey.

Despite general concerns with safety, heavy traffic, hygiene, and bullying, only two parents reported that they were not taking their children outside. Almost all the parents mentioned safety as an issue, while only a few parents referred to bullying as a reason for not taking their children out to play.

When asked about their understanding of an "educational play street", parents mentioned safety and play areas, referring to the importance of having play equipment, sports, and family areas. Two parents mentioned the importance of having security cameras, and one parent pointed to a non-traffic zone. Besides, when asked about their perspectives on the benefits of educational play streets, all the parents

stated that they acknowledged the positive effects of educational play streets on children's development. In particular, most parents mentioned physical and mental health, and socialization, and half of the parents also indicated the possibility of eliminating the harmful effects of technology. The positive impact of "educational play streets" on children's self-confidence and self-expression, was also acknowledged by three parents.

When parents were asked to share their ideas regarding the activities that could be done at an "educational play street", there were similarities among the responses. The majority of the parents focused on traditional games that they would like to teach their children so that they could play together. Besides, board games, such as chess, were also mentioned to be important to be played at educational play streets.

Regarding the interviews carried out with children, all the children stated to have an outdoor play area available. Most children identified gardens of the apartments, playgrounds, and other vacant areas in their neighborhoods, rather than the street as an outdoor play area. Most children identified playing with friends as their preferred activities. Cycling, playing hide-and-seek, and playing with a ball were also identified as desired activities to play in the street. Besides, when children were asked about the things to be present at an "educational play street", the majority imagined it as a playground where they could play with their friends. Others indicated an area to drive battery-operated cars, having animals, a sand pool, sports pitches, and zones to climb or jump.

To sum up, despite safety concerns, parents and children perceive streets as playful and social places where children can optimize their development and strengthen their social and family ties.

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## **Families and Children's Outdoor Play**

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### **Generation differences: children's outdoor play**

There is a significant difference between the amount and the quality of time spent outdoors, between contemporary children and their parents or grandparents. According to Kemple, Oh, Kenney, and Smith-Bonahue (2016), when adults refer to their childhood, the majority of them remember unlimited opportunities to spend time outdoors in the yards, streets, parks, meadows, and forests. Unstructured and child-initiated games prevailed. The research (Clements, 2004) discloses that nowadays, only one out of four children play outdoors every day. In contrast, their parents used to play several more often, i.e., three-fourths of the previous generation used to play outside every day (Clements, 2004). The research (Clements, 2004) shows that children-initiated activities or games of running, jumping, collecting sticks or stones, and creating imagined objects decreased compared to the generation of their parents in childhood (from 85 % to 33%). On the other hand, the increase in the amount of time spent on adult-structured activities is visible, as well as time spent indoors (Clements, 2004). This scenario reveals that contemporary children not only spend less time outdoors, but their play and activities in open-air do not provide space for the expression of their imagination, creativity, and independence.

The main reasons for children's decreasing amount of outdoor play can be systematized into several groups. The first group of reasons includes the unwillingness of children themselves to go outside because contemporary children more willingly engage in activities with digital technologies, play computer games, are glued to smartphones, sit in front of the TV, or watch cartoons (Kemple et al., 2016; Levin, 2013; Waller et al., 2010). Such screen activities make children more physically passive and less motivated for active movement.

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Another group of causes is linked to the intensive engagement of children in adult-organized structured activities— children spend almost all day at childcare, attending extracurricular clubs and participating in various events. The amount of child's time spent outdoor depends on the quality of services provided by an educational institution, the clubs they attend, and the site of their activity (outdoor-indoor). Kernan (2010) explains how changes in urban environments (unsafety, lack of safe sites for outdoor play) and children's engagement in structured activities, lock children in separate islands (e.g., "home", "kindergarten", "school"), also preventing them from joining their local communities (those of yard, street, settlement).

Parents' work patterns make up one more group of reasons for a shrinking time of children's outdoor play. Most frequently, both parents work. Therefore, children are often confined indoors as their parents claim not to have time to go outside to the yard or a park with their children (Kemple et al., 2016). If green zones are not available near their homes, one has to have a means of transportation and more time to get there (Waite, 2011).

The fourth group of reasons refers to parents' fear for their children's safety and the shortage of safe play sites in town. The researchers identified a certain conflict between the child's developmental need to explore the outdoor environment, especially nature, and few restrictions on the one hand and the instinctual need of adults to protect children even from the slightest need on the other hand (Bohling, Saarela, & Miller, 2012). Parents living in the city point out that because of inadequate urban planning and expansion of car parks, there is an increasing shortage of safe sites for children's play. Streets make an unsafe site for play (Bohling et al, 2012; Kalpogianni, 2019; Kemple et al., 2016; Waller et al., 2010).

All these reasons explain why the current generation has increasingly lower expectations of the amount of time their children will spend playing outdoors and being in nature (Waller et al., 2010).

### **Parents' collaboration with educational institutions to promote children's outdoor play**

Since the majority of children under six-years spend a lot of time in educational institutions, early childhood education has to assume responsibility for children's outdoor play (Laughlin, 2013; Waite, 2010). Parents should have an opportunity to collaborate with educational institutions aiming to increase the total time children spend outdoors at childcare and at home.

The conducted research reveals barriers related to parents' attitude that result in an insufficient amount of time children spent outdoors: there are parents, who fail to prepare weather-appropriate

clothes for playing outdoor; some parents want their children to be educated inside, especially when the weather is bad; some are worried about their child falling ill or getting hurt while playing outside or during trips, but the bigger part of parents feel confident about childcare institutions, and for this reason, they think that children spend enough time outside and are not interested in the duration and quality of children outdoor play (Jayasuriya et al., 2016; Kalpogianni, 2019; McClintic, & Petty, 2015).

The research reveals that mothers identify outdoor play as a positive stimulus for health and physical development of their children. They also point to a positive influence on the development of social, creative, and cognitive skills (Clements, 2004). The scientific research also disclosed that staying outside naturally gives more possibilities for verbal communication, more intensive emotional expression, and fewer behavioral problems. Thus, outdoor educational services have a long-term benefit for children (Fiskum & Jacobsen, 2012). The outdoors is considered as a learning environment where a child's creativity, a sense of wonder, appreciation of beauty, and observation skills are improved, as well as qualities of values, attitudes, and behaviors start to form (Samuelsson & Kaga 2008). Moreover, Merewether (2015) acknowledges that free and unstructured means increased physical activity and provide unlimited opportunities for play.

According to Jayasuriya and colleagues (2016), almost two-thirds of parents want their children to spend at least one hour and more outside. However, parents seem to be hardly interested in children's outdoor play. As many as 62% of parents do not know how much time their children spend playing outside in the childcare institution and state that they do not initiate discussions with staff around the topic of outdoor play.

Discussions of parents with childcare providers about a multi-sided benefit of children's outdoor play to their education and development can encourage parents to more actively collaborate on issues related to children's outdoor activities. Moreover, hearing about how their child puts on protective rain gear and what they did on a rainy day outside could stimulate parents to adopt positive outdoor-oriented practices and use them in their home settings (Jayasuriya et al., 2016). Sharing of information, photographs, and good ideas about children's activities in the yard of an institution and in-home settings (in the yard, garden, city park, forest, etc.) enhance the interest in the quality of children's being and playing outdoor (Bohling et al, 2012). The collaboration of parents and teachers in the field of children's outdoor play can be encouraged by experience and commitment of teaching staff in educational institutions, inspiring experiences of children in childcare observed by parents, collective experiences of parents-children in

educational institutions and home settings, parents' individual initiatives, partnership, and cooperation with teachers (Bohling et al., 2012). Parents' personal stories, their experiences outdoor – unlimited space and freedom, adventures, risks, senses stimulate parents' expectations to provide their children with similar experiences (Waite, 2010).

When parents engage in children's outdoor play and activities, they notice the benefits of outdoor play for children's health and education (Bohling et al., 2012). Parents report improved sleeping habits in children, a greater sense of calm and focus, and more physical strength. Parents also identify the unique learning benefits exclusive from outdoor play as the creative use of open-ended natural elements such as sticks, stones, sand, sense of wind, smells and temperature, the risk-taking opportunities, and the learning under full relaxation.

### **How can parents stimulate their children's outdoor play and activities?**

The ways that promote their children's willingness to spend more time outdoor inspire and support their interest in the environment and parents can apply that are systematized in Figure 4. The picture is supported on the research and recommendations published by Kemple, Oh, Kenney, and Smith-Bonahue (2016), and Bohling, Saarela, and Miller (2012).

*Finding different places for children's play.* The places for children's play depend only on their parents. It is important to ensure that children in cities are provided with an opportunity to play not only in specially designed playgrounds but also in the parks, in the garden near their house, or in wild nature (in the forest, fields, by the lake, sea or river). Costs of time and transport are fully compensated by children's joy, their opportunity to run, to climb, to balance and to clamber, or to become an explorer or discoverer of unknown places.

*Enriching places for outdoor play.* If there is extra space in the yard of a house or a garden or children play in the neglected "nobody's" corner, parents can contribute to enriching common play space. They can turn their children's favorite play site into a multisensory area: plant some vegetation into unused flowerpots, old shoes, or tree trunks, etc., put or hang some plants in the children's playing sites, make plant walls. It is useful to include plants with an interesting smell, fracture, and appearance. Small "visitors" can also be attracted to places especially liked by children. For example, small houses, feeders, or watering-bowls for birds can be built, and insect "hotels" can be installed. Flowers can also be planted to attract butterflies, bees, flies, and ants.

*Protecting and maintaining common outdoor play sites.* Parents should assume responsibility for the protection and

maintenance of common play sites becoming a role model for their children. It is necessary to collect garbage and to repair everything that is broken. Children should be encouraged to take care of plants naturally growing in the site: to water them or to loosen the soil. It is important to teach children to take care of animals, to feed birds but not to scold them. Let the child only observe or touch only if this does not harm the animal. Also, teach them to leave everything as it is.

*Collecting and using natural materials.* The simplicity of natural materials is beneficial for children as they think of wonderful and creative games using simple open-ended natural materials, such as sticks, stones, shells, bents, sand, or snow. Parents should encourage their children to become far-sighted discoverers, to find natural materials for games and to develop their own plots that are free from any control and to think of as varied ways of using these materials as possible.

*Encouraging observations and nature exploring.* By being outside, children learn what they cannot learn inside. They also learn in other ways than being indoors. Parents can encourage their children to observe and discover new things outside, to notice, and record changes in nature. For example, to observe flowers that come up from the seed, grow, blossom, ripen their seeds, and see the butterfly's eggs, its larva, pupa, and finally the butterfly itself. Children can also be provided with some tools for observation, such as a magnifying glass or binoculars. Besides, parents may allow their children to take pictures of their discoveries using parents' telephones. It is also possible to have measuring cups, pieces of colored plastic, and other instruments for exploration.

*Accepting unusual activities of children: freedom, adventures, "mud kitchens".* Parents should give their children more freedom, to support or encourage the spirit of adventure, their imagination and fantasy. Some "mud kitchens" can be set up near the water or after the rain. Children explore some caves or wade through a brook, etc.

*Risk-taking games.* Parents should not forbid their children to engage in risk-taking activities: to climb the trees, to balance on the log, to jump from heights, etc. Next to their children, parents will be ready to help (to catch a falling child or to provide some support when necessary). On the other hand, parents should note that such situations enable children to learn how to keep themselves safe.

*Turning children's usually liked indoor activities into outdoor ones.* Parents can find a convenient place in the park, meadow, or by the water and read to children their favorite books or look through "silent" books. The books about nature, trees, grass, and small animals are particularly useful in such situations. Children can be encouraged to find the object they read about around them. They can take their favorite toys

(dolls, cars, doll strollers, etc.) outdoors for creative games with others. Some paper and art kits can be brought outside. Alternatively, children may try creating art with mud, plants, etc. Mathematical activities can also be moved out and children can be asked to find objects of different forms, colors, lines, or objects to be measured or counted.

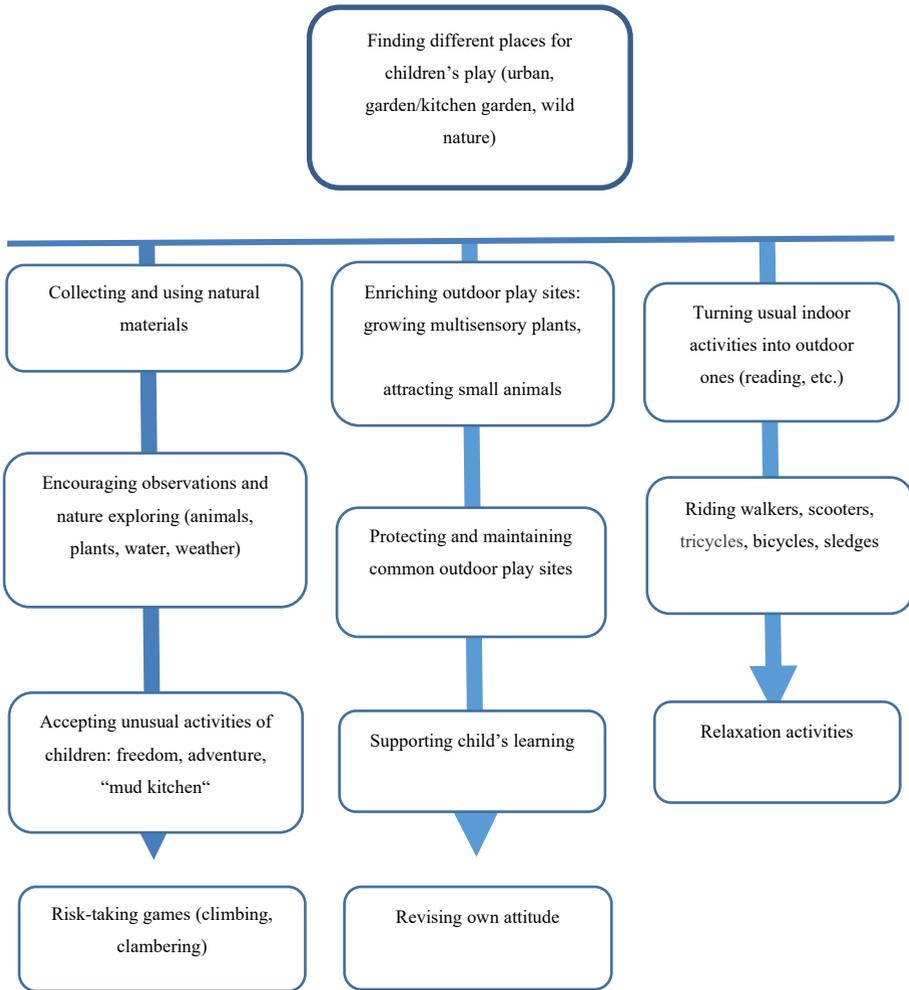
*Riding walkers, scooters, tricycles, bicycles, and sledges.* Children like being outdoors because they cannot only run there but also learn to ride a scooter or a bike. In the wintertime, they can sled down the hill and experience other joys. Sledding down the hill is even more fun when it turns into a family activity.

*Relaxation activities.* Outdoor activities enable children to relax. Parents can encourage their children to admire certain combinations of colors, invite them to listen to murmurs, sighing, and bird singing. Free and unlimited movement for children also help to learn under full relaxation. In nature, children do not need to sit calmly or to control the volume of their voice.

*Supporting child's learning.* Parents could observe what children are interested in and to name the object or phenomena of interest, to explain where and how a particular plant grows, why a specific animal is interesting, what it eats, and where it grows its offspring, etc. They could express their joy at their children's discoveries. It is important to talk to a child about the benefits nature brings and why we have to protect it. Parents should encourage children to think about how small animals feel when we disturb them and scold them and why it is important to respect their life and peace.

*Revising own attitude towards bad weather or child's getting dirty.* Parents' experience of going outside with their child in any weather helps them understand that there are no inappropriate days for a child to be outdoor. It is only necessary to provide a child with suitable clothing to protect him or her from the sun or rain. It is also useful to let children splash the water, get their faces or hands dirty to help them experience fun of being outdoors and in nature.

While observing their children and their need to experience indelible impressions, remembering their own childhood experiences, and searching for interesting ideas in books and/or on the Internet, parents can find more various outdoor activities.



**Figure 4. Ways of promoting children's games and activities outdoor (Compiled following Bohling, Saarela, & Miller, 2012; Kemple et al., 2016).**

It is also relevant to discuss what parents can do outdoors with children of different age (Outdoor play, 2019):

### **Babies**

- watching tree leaves and sticks move and listening to birds;
- enjoying tummy time on a towel, blanket or picnic rug;
- crawling on grass;
- looking at different colored cars, street signs, or traffic light signals.

### **Toddlers**

- wheeling, pushing or pulling different toys and objects;
- blowing bubbles and chasing them as they float away;
- throwing and chasing balls;
- walking, running or jumping around trees, over stones or cracks in the footpath, into puddles or towards favorite objects;
- playing in mud, sand or small amounts of water.

### **Pre-schoolers**

- moving in different ways with colorful flowers, leaves, scarves or streamers;
- making mud pies with dirt and old cooking utensils;
- going on a nature walk together and naming all of the different sounds you hear;
- playing games of hide-and-peek, chasey or kick-to-kick;
- climbing over fallen trees or crawling through tunnels;
- building a cubby house out of boxes, clothes, baskets or outdoor play equipment or furniture.

### **School-age children**

- playing tiggy, chasey, or tag;
- building and creating with equipment, furniture or other things they find outside;
- climbing trees.

A child's education rests on interactions between the child and the adult, the child, and the physical, intellectual, and social environments that surround him or her as well as the child and other children (Pramling, Pramling Samuelsson, 2011). Such a regular dialogue is an essential factor in a child's growth and development. Therefore, education in the family has to occur through interaction, providing a child with an opportunity to be free and independent but also giving him or her all the necessary support, encouraging a child's activity and initiative, enhancing motivation. All this acquires

importance while educating a young child in the kindergarten, at home, and in outdoor settings.

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# Teachers' Role in Outdoor Practices

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## Children and Play

Spending time outside affects children's learning process positively. The teacher's construction of this process results in children's development and learning to a great extent. Outdoors is the most suitable environments for early childhood education to be realized on the basis of play. When "early childhood period" and "play" concepts are used together, two principal areas are underlined. The first principal area is about how the play emerged and developed with its origin and theoretical basis, and the second one is related to its meaning and contribution as an activity to the child's development and learning (Vygotsky, 1967). That is why the role of play in early childhood is a widely discussed comprehensive topic. Statements such as "play belongs to childhood" or "play is the way the child learns" are not inclusive enough to highlight the importance of play for children and the childhood period (Johnson, Sevimli-Celik, & Al-Mansour, 2013). Furthermore, the significant role of play in the development and learning of the child has been included in the studies of researchers from different disciplines with various perspectives such as Piaget, Freud, Erikson, Vygotsky, Smilansky, and Parten.

On the other hand, Rubin Fein and Vandenberg (1983, in Coplan, Rubin & Findlay, 2006) state that an activity is to have the following characteristics to be defined as play. The characteristics are listed as follows:

- (1) Play is not governed by appetitive drives, compliance with social demands, or by inducements external to the behaviour itself; instead play is intrinsically motivated;
- (2) play is spontaneous, free from

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external sanctions, and its goals are self-imposed; (3) play asks "What can I do with this object or person?" (this differentiates play from exploration which asks "What is this object /person and what I do with it/him/her?"); (4) play is not a serious rendition of an activity or a behaviour it resembles; instead it consists of activities that can be labelled as pretense (i.e., play must comprise non-literality); (5) play is free from externally imposed rules (this distinguishes play from games-with-rules; and (6) play involves active engagement (this distinguishes play from daydreaming, lounging, and aimless loafing). (p.2-3)

### **Play and Outdoors**

The environment, where play happens, is also crucial for the development of a child since the environment offers crucial opportunities such as researching, questioning, reasoning, judgment, and discovery depending on the process. Particularly outdoor spaces are considered as the most basic playgrounds as they offer a setting where the previously mentioned characteristics of play can be realized. Moreover, outdoor spaces support children's social, emotional, spiritual, physical, and cognitive development with their natural and free learning environments and constitute an indispensable part of the educational process. Outdoor play environments offer different play opportunities that indoors cannot provide because of the features mentioned above and the rich stimuli they present (Bento & Dias, 2017). There are rules to be followed and objects to be used for certain purposes indoors. However, outdoor play environments have become a source for children's imagination since the rules to be followed in the outdoor environments are more flexible, and the present natural materials do not have a defined function or use (Hanscom, 2016).

The outdoors plays an important role in increasing the environmental awareness of children by interacting with the environment, discovering them through trial and error, developing their creativity by using natural materials differently, expressing their emotions easily, problem-solving, learning to share, and cooperation (Bento & Dias, 2017; Bilton, 2008; Louv, 2008). Besides, the outdoors provides the ability for children to hold and use objects, control the body, understand the way objects operate, and improve their communication skills (Burçak, 2018; Jones 2007). On the other hand, Stephenson (2003) points out that young children take more risks in outdoor environments and manage risk more effectively, thus increasing their self-confidence. Similarly, risk-taking in natural environments contributes to the diversity of children's learning paths and interests (Waller, 2005).

### **Outdoor as a Learning Environment**

Outdoor spaces also allow children to interact with each other and their teachers. Children learn by interacting with their peers, adults,

natural things such as plants, stones, soil, sand, pebbles, insects, and butterflies (DeBord, Moore, Hestenes, Cosco, & McGinnis, 2005). Vygotsky (1978), who introduced the concept of Zone of Proximal Development, especially for the cognitive development and learning potential of the child, emphasizes the importance of the interaction between teacher-child, child-child, and family-child in his socio-cultural theory. He states that outdoor spaces are an important part of the learning process in this respect (Nelson, 2012). From this perspective, teachers play an essential role in guiding children's interaction with each other and parents' interaction with children in the use of outdoor space in early childhood. In addition, the main role of teachers is to use the outdoor space as an effective educational and learning environment. However, teachers' use of outdoor space as an effective part of the education and learning process shapes children's perceptions, attitudes, emotions, and beliefs towards play and outdoor space (Nespor, 1987; Spodek, 1988; Tatto & Coupland, 2003).

### **Teachers and Outdoors**

Teachers generally think that the outdoor environment requires less teacher care and participation compared to the indoors. Besides, teachers believe that their primary role is to provide security and supervision when children play outdoors freely. Therefore, they consider outdoor spaces as a break time. While playing out is viewed as a break time by early childhood teachers, it has very different meanings for children. For them, the outdoor environment provides many important things that indoors can never offer. For example, most children enjoy merely being outdoors or doing outdoor activities such as running, climbing, and jumping, that usually cannot be done indoors. Outdoor provides children with richer sensory stimuli about scents, sounds, and natural events. Thus, the outdoor space is a dynamic learning and play environment where children discover and experience at first-hand natural events, including weather conditions, changing seasons, and shadows (Rivkin, 1997, 2000; White, 2008; Wilson, 2008).

Starting from the fact that outdoor play is an indispensable part of childhood, teachers support children's development and learning outdoors by enriching their play experiences. That is, while outside, teachers stay close to children, talk to them physically, ask open-ended questions, and make positive comments. Teachers need to be aware that children need support and opportunities to develop their exploration, experience, and collaboration skills, as in all developmental areas (Wilson, 2012).

According to Nelson (2012), when teachers interact with children, they observe, communicate, recognize, collaborate, evaluate, and accept them unconditionally. Research shows that when teachers have warm and emotional interaction with children and consider many

details during these interactions, children participate more in the activities (Raspa, McWilliam & Maher Ridley, 2001).

Most teachers are aware of the need to closely monitor children during outdoor practices. However, the focus is usually limited to the safety of children. In addition to security, close observation must include other conditions related to the child such as “What did children discover?”, “How did they use materials?”, “How did they interact with each other?”, “Did one play lead to the next play?”. For example, children may be interested in exploring the environment, rainbows in the sky after rain, and earthworms coming out of the soil in an outdoor activity. Teachers take part in the research with the children and ask them questions such as 'How did it occur?', 'Where do they live?'. Thus, teachers respond to children appropriately by discovering children's interests and needs through participatory observations (Wilson, 2012).

Bronfenbrenner (1977), who sees the development of the individual as a mutual interaction between organism and environment, claims that teachers who realize the positive effects of play on children's development may tend to use outdoors as an integral part of the learning process (Burçak, 2018). However, Maynard and Waters (2007) report that teachers limit their outdoor practices only to good weather and ordinary outdoor activities. The reasons for this are as follows: (1) the size, condition, and location of the outdoor space are not conducive to playing and learning; (2) teachers are not fully aware of the benefits of being outside, and playing outdoors is not seen as the primary role of teachers; (3) the idea of being outside for a long time is considered as unacceptable, and going out in all weather conditions throughout the year is seen as an extra burden for the teacher; (4) playing outside poses a risk, and teachers are obliged to protect children from dangers; (5) education policies are built on indoor knowledge and skills.

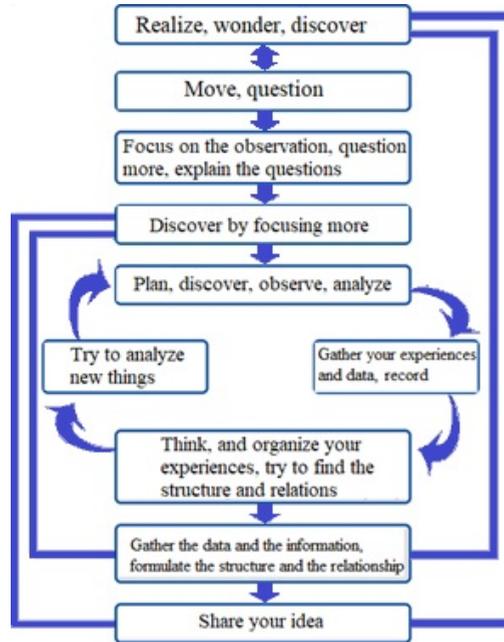
However, during outdoor play, teachers play a more important role in children's development and learning through their qualified interaction and communication with them. Davies (1997) states that the participation of qualified teachers in outdoors enriches children's play and leads to positive developmental outcomes. Nelson (2012) and Wilson (2012) list the important skills, and characteristics that teachers should have to provide an effective learning process in the following areas:

- To see and use outdoor education environments as an effective part of the learning process,
- To include outdoor space in the learning process,
- To ensure the flow of activity between indoor and outdoor environments,
- To participate actively in children's outdoor activities,
- To develop activities suitable for outdoor features,

- To design, organize, and evaluate outdoor educational environments,
- To provide an uninterrupted and extended time for outdoor activities,
- To be a model for children to develop desired attitudes and behaviors in outdoor educational environments.

The literature review emphasizes that structured and unstructured physical activities should be provided to children every day at certain times of the day in the context of early childhood education, and that this period should be kept longer if the weather conditions allow (Chakravarti, 2009; Cooper, 2015; Goodling, 2016; NASPE, 2002).

The teacher's role in supporting all areas of children's development and encouraging learning is primarily about encouraging research and social interaction and responding to children's individual attempts (Bredekamp & Rosegrant, 1992). Instead of providing information or direct instruction to children, the teacher creates environments for the child-initiated play and adopts specific strategies to support it (Jones & Reynolds, 1992). Since teachers often participate in children's play by commenting and chatting with them, some children may find it challenging to play independently of their teachers. In this case, teacher intervention is vital for these children. However, teachers should play an active teaching role in expanding the child's play by playing together, asking questions, and proposing solutions to problems. The reason is that outdoor space is the richest environment in which scientific knowledge is produced first-hand. For this, teachers should follow the process of children's questioning of the scientific phenomenon.



**Figure 5. Children's cycle of questioning a scientific phenomenon (Worth & Grollman, 2003).**

This cycle begins with a long introduction, in which children experience the phenomenon, ask questions about it, and share ideas while exploring it. It then follows a more directive stage by identifying the questions to be investigated. Questions can be asked either by children or the teacher. The aim of the questions is to start more focused and deeper discoveries about forecasting, planning, collecting, and recording data, organizing experiences, looking for new questions to share, and patterns and relationships that may arise (Worth, 2010). On the other hand, this structure shows the importance of teachers' questioning skills in the learning process.

Asking questions is an important teaching strategy that enables children's learning rather than controlling their knowledge (MacNaughton & Williams, 2004). Nevertheless, the few studies focused on the cognitive (e.g., comprehension, application, synthesis, evaluation) and structural (e.g., open-ended, closed) dimensions of preschool teachers' questions are generally closed-ended and direct information questions (Blatchford & Mani, 2008; Lee, 2010; Storey, 2004).

Asking higher order questions improves the child's thinking ability, makes it easier to understand and connect ideas, and increases curiosity. The purpose of asking questions is to reveal the idea, to establish a relationship between cause and effect, to be able to evaluate and to develop creativity. Questions, an essential part of learning, enable

the use of what is known, expand it by generating new ideas, and review ideas and information. Question types, forms of questioning, and given answers have positive effects on the development of learners' self-esteem and participation (Büyükalın Filiz, 2009).

The questions enable children to think and learn in the process. In particular, open-ended questions with multiple answers allows the child to think and help the child to reveal knowledge. Asking questions in this way encourages conversation, shows that there are many solutions to a problem, confirms children's ideas, and improves creative thinking.

Some open-ended questions can be challenging for children. However, these questions improve children's thinking skills. Children who are encouraged to think through clear open-ended questions show the highest development. These questions are often formulated as "What would you do?", and they can be asked in different ways.

Guessing questions: You found a feather on the street. Where could this feather come from?

Questions to expand thought: How would we dig the earth without our shovel?

Seeing the result beforehand: It's raining. What happens to the sand tower you built in the garden?

Emotion evaluation questions: How do you feel when your pants get muddy when you play in the garden? Why?

Questions about similarities and differences: What are the similar and different characteristics of worms and snails?

Questions for problem-solving: How can you plant flowers in the garden without a shovel?

Evaluation questions: How do you persuade your friend to play with you in the garden?

As a result, the primary roles of early childhood teachers include the development of their perceptions and attitudes towards using the outdoor environments for educational purposes, play-based outdoor activity planning and implementation, and questioning skills.

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**PART II**

**Outdoor Oriented Practices: A Practical Approach**

**Outdoor Play Activities**

## **Planning and Developing Outdoor-Oriented Practices with Children**

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Promoting children's outdoor play depends much on adults' knowledge, beliefs, and attitudes regarding children's development and the outdoor. An inappropriate approach to outdoor practices can hold back parents and teachers from going outside, making children feel afraid of exploring and preventing them from taking the best from the outdoors. This chapter aims to support the planning and development of outdoor activities, highlight key aspects that should always be accounted.

### **Exploration precedes Play**

It is essential to differentiate play from exploration. Exploration is a precursor of play, an information-gathering venture that enables children to understand the characteristics of the environment. Before playing, children need time and space to explore the environment and the objects around them (Pellegrini, 2009). Such sense of freedom and independence will drive children to deeply experience their surroundings, finding answers to their questions: "What is it?", "What does it feel, look, smell, taste like?", "Where have I seen something like this before?", "What is it for?" (Ouvry, 2003). Only after the surroundings and the objects become familiar, children will play (Pellegrini, 2009). Therefore, every outdoor-oriented activity should be preceded by a moment of exploration of the space and the objects around. For example, if we plan to play "Grabbing the handkerchief"

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with our children, we should first let children freely run around the area, run in circles, run while holding a handkerchief in hands, throw the handkerchief to the air and let it fall, etc. The adult should always keep in mind that children need time to accommodate their surroundings and make their own sense of the world, before relishing adults' proposals.

### **The need of active play**

Moreover, we should also consider that nowadays' children spend much time indoors, therefore being prevented from releasing their energy and emotions through movement. Indeed, empirical studies (Pellegrini & Davis, 1993; Pellegrini, Huberty, & Jones, 1995; Smith & Hagan, 1980) have shown that after being impeded from engaging in physical activity, children need to compensate for such privation by engaging in longer and more intense physical play. It is important to allow such biological necessity and accept that when children have the chance to go outside, they will probably engage in active and rough play, which enables them rechanneling surplus energy and emotions, accumulated indoors (Veiga, et al., 2017). Hence, when planning outdoor activities, ones should account for a progressive decrease of physical activity levels, starting with active and boisterous activities (e.g., Around Tires), then evolve to more controlled activities that require inhibitory control (e.g., One, Two, Three, Little Monkey on the Tree) and finally propose calmer activities involving relaxation (e.g., Relaxing Body), body or artistic expressiveness (e.g., Express your Body; Journey Stick), attention (e.g., Leaf Detectives), or memory (e.g., Hidden Objects).

### **Preschoolers still struggle socially**

The early childhood period is a time of rapid increase of emotional abilities, which have a great impact on social success. Preschoolers become gradually better at inhibiting inappropriate actions, delaying gratification, and complying with instructions, which makes them increasingly skillful at initiating and maintaining social interactions (Rose-Krasnor & Denham, 2009). As a gradual process, some preschools still struggle with emotion regulation and social relationships (Denham, et al., 2003). Therefore, activities' planning should also account for the social-emotional skills required. That is, with younger children it is preferable to start with activities in which children do not depend on others (e.g., Snake) and progressively evolve to cooperation (e.g., Rescue Team) and later to competitive activities (e.g., Sack Race). One should note that only by 4- or 5- years old children become able to play cooperatively. Cooperation and competitive activities should be first carried out in pairs (e.g., The Mirror), and later with bigger groups (e.g., Dodge Ball).

### **Observation of children's spontaneous behavior**

Besides, if adults want to extend children’s learning through outdoor practices, they need to carefully observe children’s spontaneous behaviors and interactions to understand the learning goals children already accomplished and their developmental needs (Ouvry, 2003). Such observation and reflection should always precede the planning of outdoor activities.

### Planning Outdoor Activities

A well-planned activity covers different areas of development at once. For example, the traditional “Fish and fishing net” involves locomotor skills, attention, planning, information processing speed, and relationship skills, therefore extending children’s motor, cognitive, and social-emotional development. The activities proposed in this book may have a preparation or a follow-up, indoors or outdoors, when children have the opportunity to explore the objects or the concepts in a different way.

The next pages of the book will present 47 outdoor-oriented activities. Each activity will be characterized in terms of the developmental domains and the respective skills (see Table 3) involved, four types of questions that extend children’s learning, and adaptations for children with disabilities (e.g., children with hearing loss, children with movement difficulties).

**Table 3. Specification of Developmental Domains and Respective Skills**

Domain	Skills
Cognitive	attention, memory, inhibitory control, information processing speed, planning, creativity
Motor	locomotor skills, postural control skills, manipulative skills, body schema
Socio-emotional	self-awareness, self-management, social awareness, relationship skills, responsible decision-making
Expression and Communication	musical expression and communication, dramatic expression and communication, plastic expression and communication, oral expression and communication

Majorie Ouvry (2003, p. 54-55) proposes 8 questions that should underly the planning of each activity:

- “1. What are the children’s current interest?

2. What do I want the children to learn from this activity in terms of knowledge, skills, and attitudes? (specify learning goals)

3. Using play, first-hand experience, exploration and/or discussion what experiences am I going to plan? What words will I use? What questions will I ask?

4. What resources will support this learning, both inside and out? (materials, songs, poems, etc.)

5. Which children will be involved in this activity? Which children will I focus on, and why? Will the group be self- or adult-chosen? How and where will they be grouped, inside or out?

6. Which adult will plan/lead the activity?

7. How will I know if the activity has been successful? By asking? Observing? Listening to hear if the children are using the new words introduced? Seeing if the children are repeating the activity at their own pace?

8. How did it go, and what will I do next from what I observed and heard from the children's reaction?"

Additionally, the planning should also consider children with disabilities in the group and the required adaptations.

### **Planning for everyone**

Indeed, activities' planning should always respond to each child's specific needs in order to promote optimal development. While it is true that all children are different, it is also true that such differences are usually most noticeable in children with disabilities. Adults should find appropriate strategies to include children with disabilities in their educational activities, so that they can benefit from the same educational and developmental opportunities as their peers. Therefore, frequently, outdoor-oriented activities will have to be adapted and modified according to the skills and needs of children with disabilities. Hence, we describe possible adaptations for the 47 proposed outdoor-oriented activities, to promote the participation of children with disabilities. We hope that such examples stimulate readers to find adaptations for their own activities.

One should note that promoting inclusive contexts requires adaptations regarding the equipment, the space, the task, the instruction, and the people among others (Black & Williamson, 2011; Kiuppis, 2018). Below, we provide some general examples of adaptations:

#### **Equipment.**

- Large and light balls are easier to keep in the air (as well as balloons);

- Large balls are easier to be conducted and stroked by wheelchairs;
- Balls with bells (or wrapped in plastic bags) make noise and therefore can be easier to track;
- Grab balls can be easier to be cached;
- Colored equipment (e.g., brightly colored balls) is easier to track visually;
- Velcro gloves can make it easier to catch a ball;
- Ramps can be used, so children in wheelchairs throw balls to the field;
- Parachute games encourage social inclusion.

### **Space.**

- Hard surfaces are better for wheelchairs;
- The dimensions of the playfield can be changed, facilitating the participation of children with mobility limitations;
- Tactile lines (or different types of surfaces) facilitate the orientation of children with visual impairments;
- Different skills can be performed in specific zones of the field, allowing, for instance, that a ball can be played in various ways according to the zone;
- Distanced to be covered can be reduced or increased according to the children's skills

### **Play Activity.**

- Rules can be changed (e.g., winning can require that all players participate/interact; balls can be thrown or received in easier ways);
- Noise should be avoided (or reduced) when playing with children with sensory integration difficulties and with children with hearing loss;
- The velocity of the players can be constrained (e.g., walking, hopping, sliding) so they move at the same pace of children with movement difficulties;
- A sound (hands clapping, a radio) near the target can be added for children with visual impairments.

### **Instruction.**

- Instruction should be simple and clear;
- Instructions can be repeated anytime needed;
- Part-to-whole and simple-to-complex educational strategies can be used when describing the activity;
- The abilities involved in the activities can be demonstrated in vivo or using videos as an alternative;

- Physical guidance can be used with children with visual impairments;
- Sign language or visual supports can be used with children with hearing loss;

### **People.**

- Children with and without disabilities should be paired (supporting possibilities include guidance, pushing the wheelchair, receiving a ball and delivering it in hands, etc.);
- Teams may have unequal numbers to balance their strengths and limitations;
- The number of players can be decreased by forming two groups that perform the same activity simultaneously;
- Groups of children can be assembled according to their ability level;
- People with specific knowledge in special education can help and give additional information and support.

### **Strategies to promote meaningful learning**

In order to expand children's meaningful learning, adults need to interact and collaborate with children, but also facilitate and interpret, when necessary (Bilton, 2010).

Adults can use different modes of interaction: modelling and demonstrating (i.e., the adult does), pretending (i.e., playing alongside the children), suggesting or showing another way of doing things, and telling and instructing how to do things (choosing simple words and short sentences) (Mosston & Ashworth, 2008).

To facilitate and help to interpret, adults can describe how children are doing the activities, document in pictures and/or video in order to show them later the progress achieved, encourage and give feedback, precisely telling back to the child how he/she is doing in a certain activity (Ouvry, 2003). In fact, feedback is fundamental to the learning process at two levels: First, it helps reinforce or change the child's matter, behavior, or logistics, and second, it helps to shape the child's self-concept (Mosston & Ashworth, 2008). Besides, questioning is also an important technique to improve the children's learning process, by helping children to reflect upon the outdoor play experiences and the interactions with others in that setting (Ouvry, 2003).

### **The importance of questioning**

Questions can help children to reflect on their behaviors and thoughts, challenging them to deepen their awareness about the activity, therefore promoting learning and development. Hence, we present four different types of questions (Descriptive, Cognitive, Emotional, and

Connective questions) for the 47 proposed outdoor activities. Before questioning, the adult should first help children recall what happened during the activity, catching their attention, and stimulating their memory.

Descriptive questions aim to describe the activity in terms of rules, goals, roles, instructions, or outcomes.

Examples: Can you describe the muds you built? (Mud faces); What did you have to do to as a leaf detective? (Leaf detectives); What should you do when you hear the word turn? (Around Tires); What were the rules of this play? (Snake); What is the goal? (Sake race); What do you need to do when you are in the center of the square? (Cat in the corner).

Cognitive questions stimulate practical problems-solving, reasoning-process, and logical thinking through reasoning and reflection. Questions are related to the cognitive concepts and abilities involved in the activity.

Examples: What was your strategy for not being caught? (Skipper May I cross?); What is the difference between a giraffe and a bear? (Express your body); Can this play be played at night? (Catch your own shadow) Which rule of this play would you change? (Dodgeball); What geometric shapes are drawn on the floor? (Hopscotch); How high can you count on your fingers? (Playing with numbers).

Emotional questions focus on children's awareness of their own and others' emotions, emotional expression, emotion regulation strategies, and relationship skills. Considering children's young age, body awareness of emotions is repeatedly focused.

Examples: How did you feel when you were caught? Which other situations made you feel that way? (Skipper, May I Cross?) How do your face and body look like when you feel angry? (Express your Body) Did you heard your heart beating? How was your breathing? (Somebody on the ground); Could you feel your legs tense? In which situations do you also feel that way? (Moving a tire) How did you feel when someone hit you hard? Were you able to calm down? (Dodgeball) How did you feel after blowing the leaves? In which situations do you feel you need to take a deep breath? (Leaf Detectives) Did you always agree with your friend about the construction? How did you manage your disagreements? Did you negotiate? (What's that?).

Connective questions aim the transfer from the activity to children's daily-life situations and contexts.

Examples: Where can we find a doctor? (Express your Body); Which other daily life situations do you have to hold hands with someone else? (Nightingale in the Cage); Do you usually walk or play in places that have trees? (Leaf Detectives); Which pumpkin meals do you know? (Are your Pumpkins Cooked?); How could this play be used in daily life? (Photographic Memory)

Although the book provides multiple questions for each activity, such questions are only suggestions. Each adult (whether the father, the

mother, or the teacher) knows what is best for his/her child. It is important to note that while preschoolers are expected to have developed the necessary cognitive, receptive, and expressive language skills, some children may have difficulty maintaining a conversation and answering adults' questions. Therefore, when questioning, cognitive and language abilities should be considered beforehand. Especially with younger children, adults should adapt their language, using age-appropriate words, adding verbal cues, and reformulating their questions. It is essential to avoid complex syntactic construction and to prefer short questions, instead of linguistically complex unitedness. Besides, it is preferable to ask one question at a time and one child at a time, as well as to give children time to think and consider their responses.

### **The role of the adult**

The inherent characteristics of outdoor environments mentioned in previous chapters, encourage children to freely make their own decisions about the ways of exploring both the environment and the activities (Maynard & Waters, 2014). However, adults' attitudes and behaviors regarding outdoor play have a profound impact on how children interact with the setting, its elements, and how learning takes place. Children need to feel supported and secure in order to explore the environment without significant constraints. Adults have a crucial role in providing such safety and encouragement towards the outdoors. For example, adults should (a) create opportunities for children to freely and spontaneously initiate outdoor play; (b) provide regular opportunities for outdoor play in different physical environments, including natural spaces; (c) teach children about the natural world and caring for the environment; and (d) support appropriate challenging and risky games. Besides, it is crucial that, when developing outdoor-oriented activities, adults build their relationship with children, facilitate communication, and enter children's world, identifying and creating within the children's interests related to the outdoors, scaffolding play, and shared thinking (Waller, 2011).

### **Setting outdoors' rules as positive behaviors**

Providing an outdoor learning environment demands that we trust on children's self-preserving instinct and counteract the recent obsession with safety and the fear of getting hurt, which is depriving our children of being outside or, at least, restricting their behaviors. As outdoor play advocates, we should point out the nonsense of some outdoor places' regulations, such as: no running, no chasing, no bare feet, no football, and its consequences. If we observe parents in a playground, we continuously hear directives such as: do not climb up the slide, do not put hands on the ground, that toy isn't yours, leave it, etc. These rules are refraining children's motor competence, divergent

thinking, self-confidence, social skills, among others. Besides, when adults put a bunch of rules in place, they create an authoritarian atmosphere that leads to a constant need for correction and punishment, undermining their relationship. Such rules also hinder children's self-awareness, self-confidence, and social responsibility.

The outdoors is a highly stimulating setting where emotions can run high, and conflicts and risk-taking behaviors are expected. Therefore, the challenge is to help children find out the basic principles for a positive experience outside. The idea is to facilitate the emergence of the rules by children's interactions in the outdoors. When a conflict happens, the adult should face it as an opportunity of setting outdoors's rules as positive behaviors. Ouvry (2003, p.89) suggests a set of rules rephrased into positive behaviors:

- “We take care with sand – sand hurts if it gets in our eyes.
- We take care when we are on the climbing frame with others.
- We dry the climbing frame after rain, before climbing on it.
- We take turns on the bike.
- We climb up the steps before we go down the slide.
- We put things back in the trolley where we found them when it's time to tidy up.
- We hang up our dressing-up clothes before climbing or going on a wheeled toy.
- We are kind to our friends.”

### **The importance of adults' beliefs and enthusiasm about the outdoors**

Finally, it is noteworthy that our beliefs deeply affect our desires, choices, and behaviors, and children learn by modeling the significant others, observing them, hearing them, and interacting with them. The quality of outdoor-oriented practices will depend much on the adults' beliefs about the richness of the outdoors and the enthusiasm they feel and express when outside. If children see bored adults out, they will model their behavior and become bored themselves. Therefore, it is crucial that adults are enthusiastic about the outdoors and can have fun when outside. Moreover, the quality and the length of children's play and interactions will increase if adults are interested and involved, without directing children's play and discoveries outside (Ouvry, 2003).

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## MOM, MAY I?



### Traditional Portuguese

#### DESCRIPTION

Children are lined up at one end of the space, side by side.

- Choose someone to be the "mom". The "mom" stands in front of the others, at the other end of the space and faces away from children, at ten or more meters.
- One child at a time asks the "mom":
- "Mom, may I?"
- "Yes."
- "How many steps?"
- "Five baby steps."
- Then the child is allowed to make whatever movement he/she was requested (e.g., the child advances, taking five tiny steps). The responses (orders) of the "mom" can be varied: giant (large) steps, crab steps (backwards), a piggyback (jump), scissors (lateral opening of the lower extremities), etc.
- Children continue taking turns. The first child reaches the "mom" becomes the winner, taking her place and restarting the play.



**MATERIALS**

None.

**Number of Children:** 3-10

**Skills:** Locomotor skills, postural control skills, inhibitory control, planning, and relationship skills.



DEVELOPMENTAL DOMAINS			
Motor (4/4)	Cognitive (2/4)	Social-Emotional (2/4)	Expression and Communication (1/4)



### QUESTIONS

**Descriptive:** What kind of steps did we take? What does the mother have to do? What should you do when the mother is talking to another son/daughter?

**Cognitive:** Which kind of steps are the best to win? Which kind of steps make you slower? Can you think of other animal steps?

**Emotional:** How did you feel when you won? How did you feel when you were the mother?

**Connective:** In which situations you feel like doing baby steps? When do you want to make large steps?



### Adaptations for Children with Disabilities

Children with visual impairment can use a human guide (hand in hand or holding the guide's arm just above the elbow), or as an alternative, move following a straight line using a guide rail between the initial position and the position of the "mom". Children with visual impairment can also play without a human guide, just following the voice of the "mom".

For children with hearing loss, prepare cardboards with pictures representing the movements; the "mom" should select the movement from those represented in cardboards and show it above the head to other children while saying it orally. Afterwards, if the mother's answering with a "yes" or "no", the teacher gestures for the children with hearing loss to move or be quiet, respectively. Children in a manual wheelchair should convert steps into wheelchair pushes. Children in an electric wheelchair are allowed to move their wheelchairs themselves while the adult is clapping once for each wheelchair push/movement.

## DROP THE HANDKERCHIEF



### Traditional Portuguese

#### DESCRIPTION

Seated or standing in a circle, children put their hands behind their back.

- While children are singing a rhyme, one child walks or runs around the circle holding a handkerchief (the others cannot look back). At a particular moment, the child discreetly drops the handkerchief behind another child,
- Rhyme:
  - a. “O lencinho vai na mão, Vai cair no meio do chão.”
  - b. or
  - c. “O Lencinho da botica, Quem lá vai lá fica.”
  - d. “A tisket, a tasket, A green and yellow basket,
  - e. I wrote a letter to my mother, on the way I dropped it,
  - f. and one of you has picked it up and put it in your pocket.
  - g. Not you, not you, not you, not you ...”
- When the child notices that the handkerchief is behind him/her, he/she must start chasing the other child around the circle, trying to catch him/her before he/she sits,
- If the child who dropped the handkerchief is caught, he/she should go to the center of the circle and crouch down until another child is caught and goes to the center of the circle.



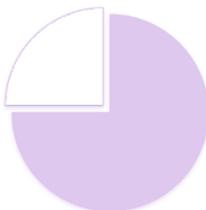
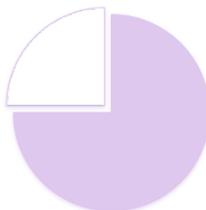
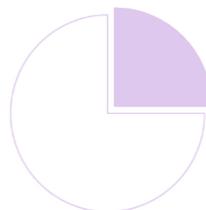
**MATERIALS**

One handkerchief.

**Number of Children:** 5-24

**Skills:** Attention, information processing speed, locomotor skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

**QUESTIONS**



**Descriptive:** What should you do so that you can quickly notice the handkerchief behind you? What are you supposed to do when you are caught by the runner?

**Cognitive:** Who do you think is faster? A child or an adult? A child or an old person?

**Emotional:** How did you feel when you realized the scarf had been dropped behind you? Could you feel something different in your body? How did you feel when you were caught and went to the center?

**Connective:** In which daily life situations, do you feel the need to be very attentive and quick to respond?

### **Adaptations for Children with Disabilities**



For children with visual impairment, the child that walks around the circle drops the handkerchief onto the shoulder of the child with visual impairment and then moves away by stepping (or using another form of locomotion that slows the pace).

Children with visual impairment use a human guide or run without a guide by touching in each colleague (which are close to each other) for direction. For children in a wheelchair, the child that walks around the circle drops the handkerchief onto the shoulder of the child in the wheelchair, and then runs away using a locomotion pattern (e.g., slide, stepping) that slows the pace.

# ONE, TWO, THREE, LITTLE MONKEY ON THE TREE



## Traditional Portuguese

### DESCRIPTION

Children choose someone to be the leader. The leader stands near a wall, with his/her face away from other children. Others are lined up, at ten or more meters.

- The leader says, “One, two, three, little monkey on the tree” while stomping his/her hand on the wall,
  - In Portuguese: “Um, dois, três, macaquinho do Chinês”
- While this sentence is being said, other children move as quickly as possible towards the wall and before the other child turns, they should freeze like a funny statue,
- The child turns to the other children only after finishing the sentence. He/she can change the velocity of the rhyme,
- He/she can try to distract the others to make them move. Children who are caught moving return to the starting point,
- The first one who can touch the wall without being caught moving wins the play.



**MATERIALS**



None.

**Number of Children:** 4 - 24

**Skills:** Postural control skills, locomotor skills, attention, planning, inhibitory control, information processing speed, dramatic expression, and communication.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** What do you have to do after the word “tree”? What do you have to do when the leader starts the rhyme?

**Cognitive:** What was your strategy to win? When you were the leader, did you always tell the rhyme at the same pace? Why?

**Emotional:** Did you feel tense when you froze like a statue? Did you feel anxious when you were about to win? How did you feel that in your body? How did you feel when you were caught while moving? Which strategy did you use not to laugh when you were standing like a statue?

**Connective:** In which daily situations you need to be very quiet and still? How long do you think you can stand without moving?



### **Adaptations for Children with Disabilities**

Children with visual impairment can use a human guide, or as an alternative, move by following a straight line using a guide rail between his/her initial position and the position of the leader. Children with hearing loss should observe the gestures of the 'it' (as he/she is stomping the hand on the wall while saying "one, two, three, little monkey on the tree"). Children in a wheelchair can move their wheelchairs for locomotion.

## WHAT'S THAT?



### Portugal

#### DESCRIPTION

Children stand in a circle, and the adult explains the activity.

- Children are asked to gather different elements of nature/environment (natural loose parts) with different sizes and shapes (e.g., stones, sticks, leaves, flowers),
- The adult puts all the natural loose parts in a large box. Blindfolded, each child takes one element and uses his/her senses to describe their features (e.g., big/small; rough/smooth; round/square) trying to identify the element,
- With the natural loose parts in front of the group, the adult asks children to group them according to different categories (e.g., by color, shape, size, quantity, number),
- In groups, children are asked to think about an animal, vehicle, or another category and make the respective constructions on the floor using loose parts.





**MATERIALS**

Natural loose parts (e.g., soil, sticks, leaves, rocks, seeds/nuts, pinecones, shells, grass, corn cobs, seed pods, gravel), box, handkerchiefs or scarfs, tape, glue, thread.

**Number of Children:** 2 - 20

**Skills:** Attention, planning creativity, oral expression and communication, plastic expression and communication, social awareness, relationship skills, manipulative skills expression, and communication.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** How many different types of elements have you managed to find? What constructions were you able to do?

**Cognitive:** Which colors could you find? Which shapes? Did you gather more stones or more leaves?

**Emotional:** How did you feel when blindfolded? Which emotions were you feeling? How did you feel when you were able to guess the natural element? Which emotions did you feel? Did you always agree with your friends about the construction? How did you manage your disagreements? Did you negotiate?

**Connective:** Where else can you find these elements? Which daily life objects are similar to the objects you found?



### **Adaptations for Children with Disabilities**

Children with visual impairment should work with a human guide to gather different elements of nature/environment. Children with hearing loss should receive information by sign language and/or by cardboards representing the categories in which the objects should be grouped and the type of constructions to be made.

For children in a wheelchair, the floor can be replaced with a table, and it will be necessary to have close support from other colleagues and/or from the educational personnel.

## LET'S FEEL, LISTEN, AND MOVE



### Portugal

#### DESCRIPTION

Children sit in a circle with synthetic loose parts (e.g., plastic bottles) and natural loose parts in the center of the circle.

- Children are asked to build typical musical instruments (e.g., drums with a food can, maracas with bottles, and stones inside) and improvised musical instruments,
- In silence and keeping their eyes closed, children are asked to listen to all the sounds of the environment for 30 seconds. After identifying the sounds, children are asked to reproduce the sounds using their instruments,
- The adult describes a sound (e.g., a ball bouncing, thunderstorm, car breaks), and children recreate the sound with the instruments individually and in a group.,
- Children form two circles: While children of the outer circle play the instruments, children of the inner circle observe them and imitate the rhythm of the music only using their bodies (e.g., clapping hands on the hips, moving shoulders),
- A symbol or color is attributed to each instrument (e.g., square corresponds to drums). The adult draws a sequence of symbols, and children are asked to play the musical instrument(s) accordingly. Forming two groups, after a group draws a sequence, the other plays it.



**MATERIALS**

Natural loose parts (e.g., soil, sticks, leaves, rocks, seeds/nuts, pinecones, shells, grass, corn cobs, seed pods, gravel), synthetic loose parts (e.g., plastic bottles, food can, blindfold), glue, thread, tape.

**Number of Children:** 2 - 24

**Skills:** Musical expression and communication, creativity, memory, attention, planning, and manipulative skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication



### QUESTIONS

**Descriptive:** What did you use to construct your musical instrument? Which sounds did the teacher (I) mentioned and you imitated?

**Cognitive:** Which strong sounds were you able to listen? And which weak sounds did you listen? Which similarities do you find between a ball bouncing sound and a car break?

**Emotional:** How did you feel when you were in silence? How did you feel while listening to the musical instruments? Was it difficult to have your eyes closed? Why? How did you feel?

**Connective:** In which daily-life situations do you need to be in silence and pay attention to your surroundings?



### Adaptations for Children with Disabilities

Children with visual impairment and hearing loss should have the guidance/support of the education personnel and/or of other children. Specifically, deaf children can observe the body movement of other children to capture the rhythm and then try to reproduce them with their bodies. Also, other children can reproduce the rhythm by touching the body of deaf children, who then try to reproduce it using their bodies solely or loose parts.

## AROUND TIRES



### Portugal

#### DESCRIPTION

Children stand in a circle, and the adult explains the activity.

- The adult randomly displaces car tires, small ropes, and hoops in the play area,
- Children are asked to freely walk, run, and jump around the materials,
- Using the tires/ropes/hoops, children are asked to choose and perform different movements: walk on, jump in/out, walk around, walk around on tiptoes, walk around on heels, walk on heavily (as an elephant), walk on smoothly (as a leopard), walk on alternating heavy and smoothly paces, etc.
- The adult uses car tires, small ropes, and hoops to form a big circle or square,
- Children are told that when they hear (1) one clap they have to run around the tire/rope/hoop; (2) two claps they have to walk slowly around the tire/rope/hoop; (3) the word “turn” they have to change direction; (4) snapping fingers they have to stop and freeze.



**MATERIALS**

Car tires, hoops, ropes.



**Number of Children:** 2 - 24

**Skills:** Locomotor skills, postural control skills, attention, memory, information processing speed, planning.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** How did you move around the route? What should you do when you hear a clap? What should you do when you hear the word turn? And two claps?

**Cognitive:** What is the difference between heavy and light movements? What do an elephant and a leopard have in common? Which differences can you find between them?

**Emotional:** How did you feel when you were jumping in and out? Could you feel your heart beating? Could you feel your legs tense? In which situations do you also feel that way?

**Connective:** Which daily life situation requires you to walk jump, run, or walk on tiptoes? Why?



### **Adaptations for Children with Disabilities**

Children with visual impairment should use a guide. For children with hearing loss, replace auditory signals by visual signals (step 3). For children in a wheelchair, introduce other skills (e.g., slalom, reverse turn, 360° turn, moving backward) in order to replace those that they are unable to perform.

## MOVING A TIRE



### Portugal



#### DESCRIPTION

The adult uses a car tire, hoop, or small rope in the center of a circle of children:

- When a child hears his/her name, he/she has to run to the tire/hoop/rope while the others repeat his/her name. After reaching the tire, another name is said, and the child needs to immediately return to the place of the child who is now running to the tire/hoop/rope,
- With older children, we can attribute them numbers or other names (e.g., of animals, colors, other friends' names). The adult can say the names of children who are not present or names of children who have the same name,
- With older children, they can be asked to move to the tire/hoop/rope using different abilities (e.g., running, walking, walking backward, jumping in one leg, etc.),
- Children form a big circle,
- Using a car tire or a hoop, one child is asked to roll the tire/hoop to another child of the group,
- After mastering the movement, the child who moves the tire/hoop has to say the name of the child who is receiving the tire/hoop,
- With older children, we can add a cognitive task (e.g., the child must spell his/her favorite animal, say something nice to the child who is receiving, etc.) to the motor task.



**MATERIALS**

Car tires, hoops, ropes.

**Number of Children:** 3 - 25

**Skills:** Locomotor skills, manipulative skills, attention, information processing speed.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication



## QUESTIONS

**Descriptive:** Can you remember what you had to say while rolling the tire to your friend? What did you have to do to roll the tire to your friend? Which strategy did you follow?

**Cognitive:** How many animals can we think of? How can we categorize those animals (e.g., jungle, farm, sea)? Which kinds of transports do you know that have tires? Are the tires all the same size? How do they vary?

**Emotional:** How did you feel when you were running? Could you feel your heart beating? Could you feel your legs tense? In which situations do you also feel that way?

**Connective:** In your daily life, which other objects look like a tire? Tiptoes? Why?



## Adaptations for Children with Disabilities

For children with visual impairment, use a human guide. As an alternative, use a guide rail between his/her position and the center of the circle. If necessary, use tactile instruction to explain the movement patterns to be performed. For children with hearing loss, audio signals should be replaced by visual cues (e.g., the child is “called” by a hand gesture), and movement patterns and exercises should be demonstrated by other children.

For children in a wheelchair, different movement patterns should be used (e.g., slalom, and backward moving). If necessary (due to poor hand control and strength), children can use a ramp for throwing a ball to other children.

## THE MIRROR



### Portugal

#### DESCRIPTION

In pairs, children stand facing each other.

- One child must move his/her body continuously in an expressive way so that the other child can reproduce all movements symmetrically like a mirror,
- Movements can be done first very slowly and then very fast,
- The other child must reproduce the movements like a mirror. That is, if the child moves her/his right arm, the “mirror” must move the left arm.
- For older children:
  - One of the children starts a movement, and the other one completes it,
  - Movements should be performed according to the rhythm of the music,
  - In contrast to 2, now the second child must reproduce movements of the first child by using the correspondent limb, i.e., if the first child moves her/his right arm, the second child must move also the right arm.



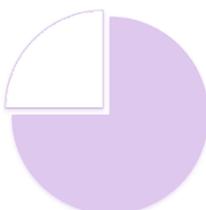
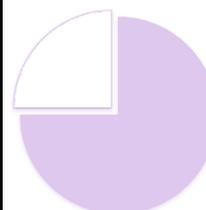
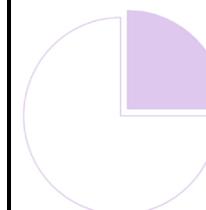
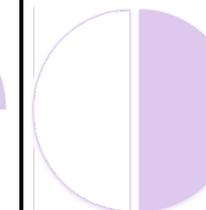


**MATERIALS**

Music.

**Number of Children:** 2 - 24

**Skills:** Body schema, attention, planning, dramatic expression, and communication.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			



**QUESTIONS**

**Descriptive:** Were you coordinated most of the times? Which different ways of moving did you do?

**Cognitive:** Which hand is your right hand? When your friend is in front of you, which hand is his right hand?

**Emotional:** How did you feel when facing your friend? How did you feel when you could not follow your friend?

**Connective:** Which objects can you find in your daily life that work as a mirror?



### **Adaptations for Children with Disabilities**

For children with visual impairment, give simple verbal instructions (e.g., “touch the knees, the hips, and then raise both hands”) and ask the children to move accordingly. As an alternative, move his/her body segments and then ask the children to reproduce the same movement.

For children with hearing loss, the rhythm pace could be perceived by visualizing someone clapping the hands using different rhythms. For children in wheelchairs, use movements with the upper part of the body, including the head. As an alternative, ask children in electric wheelchairs to imitate the direction of the movement (e.g., left-right, front-back, 360° turn) using the wheelchair.

## FOLLOW THE LEADER



### Portugal

#### DESCRIPTION

A leader is chosen. The others line up behind the leader.

- The leader moves around, and all children have to mimic the leader's actions. The leader can change the pace and the direction of the queue. All children should be (in turns) the leader.
  - When the adult claps once, children must freeze,
  - When the adult says turn, the tail of the line becomes the leader,
  - In the final round, the adult should tell children to pay attention to his/her place in the queue (so the adult can explore cognitive questions).
- With older children, the leader moves according to the rhythm of the music.



**MATERIALS**

Music.

**Number of Children:** 2 - 25

**Skills:** Body schema, attention, planning, inhibitory control, dramatically expression and communication, musical expression, and communication.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** What do you have to do when you are in the queue? What does the leader have to do?

**Cognitive:** Regarding the last time we played, who was in front of you? Who was behind? Who was the last in the queue? Who was the antepenultimate?

**Emotional:** How did you feel when you were the leader?

**Connective:** In which everyday life situations, do you need to follow a leader?

**Adaptations for Children with Disabilities**



For children with visual impairments, the leader should describe the action to be mimicked by the children while it is being demonstrated. For children with hearing loss, when in the role of a leader, he/she should follow a previous rhythm. For children in a wheelchair, when in the role of a leader, everyone should follow the direction and/or spins decided by him/her.

## RELAXING BODY



### Portugal

#### DESCRIPTION I

Children stand with feet apart. An adult describes and demonstrates the following sequence:

- Children should extend their arms to the sky, imagining that they are climbing one by one the steps of a ladder (arms go up alternately),
- The heels are no longer in contact with the floor, and the whole body is stretched as much as possible,
- Then, in one go and while giving a great sigh, children let their torso, arms, and head “fall”, while squatting,
- Arms balance until they are still.



## DESCRIPTION II

Children stand with feet apart. An adult describes and demonstrates the following sequence:

- Children imagine that a pile of dry leaves is gathered on the ground,
- Children pick up the leaves and then throw them as far and high as they can,
- While picking up the leaves, children should breathe in, and when they throw them away, they should breathe out and shout.



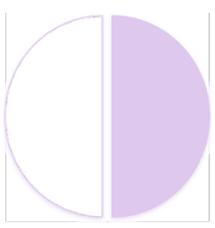
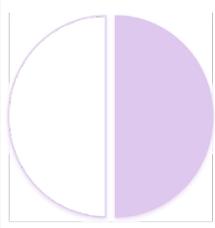
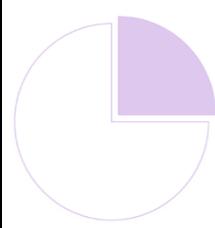
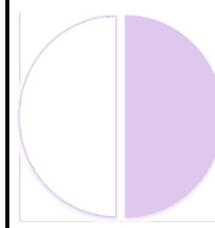
## MATERIALS

None.

**Number of Children:** 2 - 25

**Skills:** Postural control skills, body schema, dramatic expression, and communication.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			



### QUESTIONS

**Descriptive:** Can you explain your friends how we should throw away the leaves?

**Cognitive:** Which season of the year is it easier to find fallen leaves? Why do leaves fall in this season?

**Emotional:** How do you feel when you stretch your body? How do you feel your body when you stand still in silence? Which emotions do you feel when you shout out? Do you like to shout out?

**Connective:** Do you like to stretch? Which times of the day do you feel you need to stretch your body, breathe in and out? When do you feel you need to shout out loud?



### Adaptations for Children with Disabilities

For children with visual impairments, the adult should make clear descriptions of the sequence of the movements. If necessary, the adult should also add some help with the manipulation of the children's limbs. For children with hearing loss, the adult must clearly demonstrate the sequence of the movements with particular emphasis on the breathing movements described in 2c.

## EXPRESS YOUR BODY



### Portugal

#### DESCRIPTION

- Children are asked by an adult to move around the space, imitating different animals (e.g., spider, alligator, lion, giraffe, turtle, ant, bear etc.),
- Children are asked by an adult to represent action words (e.g., splashing, singing, camping, fishing, swimming, riding, etc.),
- Children are asked by an adult to represent everyday tasks (e.g., making a cake, brushing teeth, taking a shower, etc.),
- Children are asked by an adult to represent some professions and occupations (e.g., police, hairdresser, doctor, postman, detective, singer, boxer, etc.),
- Children are asked by an adult to express sounds using movement (e.g., tick-tack watches, vacuum cleaner, fireworks, wind and thunders, rain falling, etc.),
- Children are encouraged by an adult to use the entire body to express emotions (e.g., happiness, fear, sadness, surprise, disgust, anger, etc.) and emotional situations (e.g., a broken gift; a football match, missing someone, a walk in the dark, find a missed friend, etc.).



**MATERIALS**

None.

**Number of Children:** 4 - 25

**Skills:** Dramatic expression and communication, body schema, locomotor skills, memory, creativity, and self-awareness.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** How does the animal move? How does the professional work?

**Cognitive:** What is the difference between a giraffe and a bear? Which similarities do they have?

**Emotional:** How does your face and body look when you feel happy? And angry? And sad? How do you move while feeling happy? Angry? Sad?

**Connective:** Where can we find a doctor? And a police officer? Which daily-life tasks do you do every day? And only sometimes?



**Adaptations for Children with Disabilities**

Children with visual impairments should move around the space with the help of a human guide. Children with hearing loss should receive information by sign language and/or by cardboards with images/symbols representing the concepts to imitate.

## PLAYING WITH NUMBERS



### Portugal

#### DESCRIPTION I

While running slowly, children are asked to:

- move freely around the space,
- move in curvilinear movements around the space,
- move in straight lines around the space,
- with older children, the adult asks to draw numbers with movement.
- With older children, the adult asks to draw numbers with different materials (sticks, rocks, water).

Children are in a circle and are asked to draw numbers with their bodies.

- First by themselves.
- Then in groups of 2.



**DESCRIPTION II**

Children are divided into teams. In each team, each child is given a number. Teams are lined in front of each other, within a 4 meters distance. The adult is in the center and has a small stick in his/her hand.

- The adult says a number (e.g., “number 3”), and the two children who were given number 3 should run to the adult, try to take the stick, and come back to their team without being tagged by the other child. The others should not move,
- With older children, the group can set other commands such as freeze (no one moves, the team who moves loses), fire (everyone goes), odds (only odd numbers go), and even (only even numbers go),
- With other children, the commands can be the opposite of the action: stop (everyone goes), altogether (only number 1 can go), odds (only evens numbers go), etc.



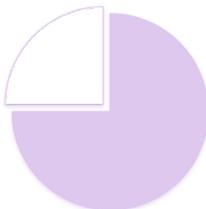
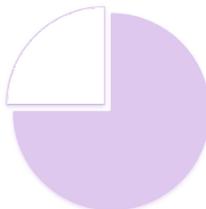
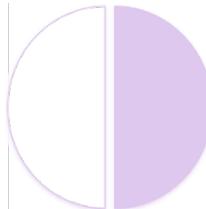
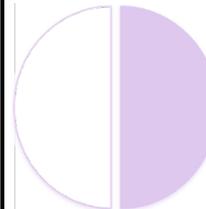
**MATERIALS**

Stick, rocks.

**Number of Children:** 4 - 25

**Skills:** Locomotor skills, manipulative skills, body schema, planning, attention, information processing speed, and inhibitory control.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			



### QUESTIONS

**Descriptive:** How many different ways did you find to move around the space? Can you tell how did you move your body to draw the number...?

**Cognitive:** Which numbers did you draw with the materials? How high can you count on your fingers?

**Emotional:** How did you feel when you were moving freely around space? And when you joined a friend? How did you feel when you were playing in team? How did you feel when you were able to take the stick? And how did you feel when you could not make it?

**Connective:** Which everyday objects are curved? Which daily-life objects do you use in pairs? Shoes or pants?



### Adaptations for Children with Disabilities

Children with visual impairments should move around the space with the help of a human guide (1a-e; 3a-c). A human guide is also suggested for helping to represent numbers with the body positioning (2a-b). Children with hearing loss should receive information by sign language and/or by cardboards with numbers/symbols representing the concepts to imitate (1a-e; 2a-b). The adult should also use his/her hands and fingers to call for “a number” (3a).

## CAN TOSS GAME



### The Netherlands

#### DESCRIPTION

Previously, the adult and children paint cans with different colors. Cans are disposed in the floor, and a starting line is marked at a certain distance from the cans,

- Children must throw a ball to knock the cans down,
- Children are given specific instructions about the cans that should be knocked down (e.g., a specific color, an order of colors, a certain number of cans, etc.),
- With older children, cans can be replaced by numbers, and the instructions can be more complex (e.g., throw only cans with a specific number, throw cans according to a sequence of numbers, throw only even/odd numbers, throw cans to achieve a certain quantity, etc.).



**MATERIALS**

Paints, brushes, cans, soft balls.

**Number of Children:** 2 - 24

**Skills:** Manipulative skills planning, plastic expression, and communication.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** What should you do when you have the ball?

**Cognitive:** What do you think is the best strategy to knock down more cans? Do you think it would be easier if the line were more distant from the cans?

**Emotional:** How did you feel when you knocked down all the cans? How did you feel when you could not knock the cans down?

**Connective:** Where else can you throw objects down and feel good about it?

**Adaptations for Children with Disabilities**



The starting line could be moved closer to the cans. For orienting children with visual impairments, a colleague positioned beyond the tower of cans claps his/her hands several times.

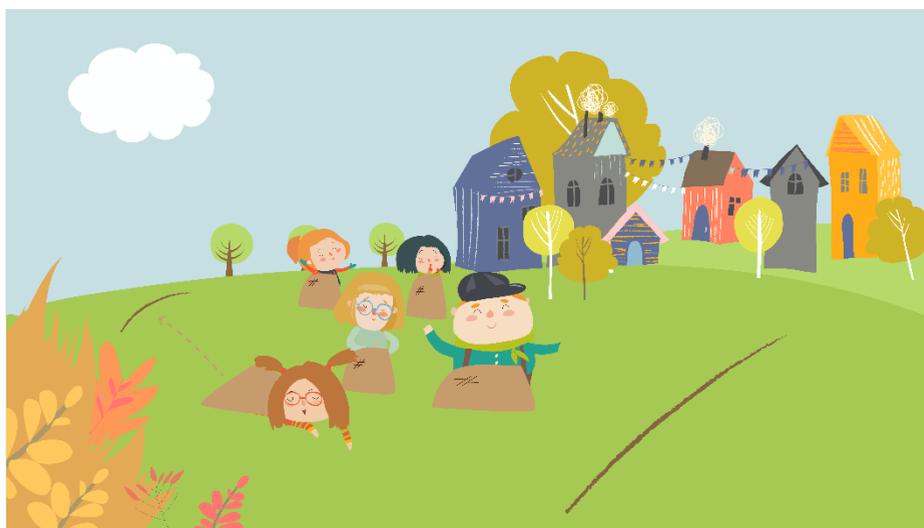
## SACK RACE



### The Netherlands

#### DESCRIPTION

- A starting line is marked behind a clear route laid out for about 10 meters,
- Children stand next to each other on the starting line with their feet and lower half of their legs in a jute (or similar) sack.
- Feet must be in the sack, and children should hold the sack, so it does not fall below the knee.,
- If the child or the sack falls, children should go to the starting line to start again,
- After the starting signal, each child follows the route jumping while their legs are in the sack trying to reach the finish line first,
- For older children, the route can be extended to 20 meters or more,
- For children who cannot jump with the sack, the adult can ask them to jump with two feet together.



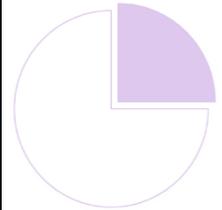
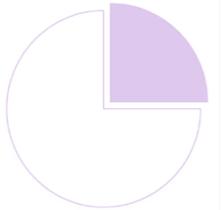
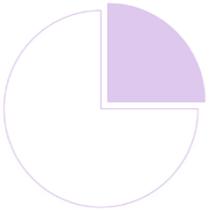
**MATERIALS**

One jute sack for each child.

**Number of Children:** 5 – 24, (if the playing area is small, children can play as teams).

**Skills:** Locomotor skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

**QUESTIONS**

**Descriptive:** What is the goal? What happens if the sack falls?

**Cognitive:** Which animals do you know that move the same way you moved?

**Emotional:** How did you feel when you were competing with your friends?

**Connective:** Which daily life situations require you to be fast?



**Adaptations for Children with Disabilities**

For children with visual impairments, a human guide should follow and support during the race holding the children's elbow. Children in a wheelchair should perform a slalom side-by-side with the other children.



## SKIPPER, MAY I CROSS?



### The Netherlands

#### DESCRIPTION

Children stand in a long line on one side of the playing field.

- One person stands in the middle of the field. He/she is the skipper,
- The children in line want to "sail" to the other side,
- They, therefore, sing "Skipper may I cross, yes or no?" To which the skipper answers, "yes", and the group sings "Should I then also pay toll yes or no?" The skipper can then answer, "no", the children run to the other side,
- The skipper can also answer "yes" to which the group of children asks "How?" The skipper then tells how the children can cross to the other side. For example, they can cross by hopping, walking backwards, shouting, etc. When they cross, the skipper tries to tap the children. He also has to hop, walk backwards etc,
- The first one to be taken stands near the skipper waiting for others who are caught. The last child who is not caught is the next "skipper."



**MATERIALS**

None.

**Number of Children:** 10 – 24.

**Skills:** Locomotor skills, planning, information processing speed, and relationship skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**

**Descriptive:** What do you need to do to become the skipper?

**Cognitive:** What was your strategy for not being caught?

**Emotional:** How did you feel when you were caught? Which other situations made you feel that way?

**Connective:** In which daily life situations, do you need to certify that you can cross something beforehand? Why is it important?



**Adaptations for Children with Disabilities**

Children in a wheelchair can always go straight when he/she is crossing. Children with visual impairment should play with a human guide. For children with hearing loss, the skipper must answer “yes” or “no” using “thumbs up” or “thumbs down” and should demonstrate the skill to be performed to cross to the other side.



## LEAF DETECTIVES



### The Netherlands

#### DESCRIPTION I

Beforehand, the adult takes a sample of leaves from each tree around.

- Mixed leaf forms and colors are examined by children. They discuss the color, shape, and texture of the leaves,
- Each child (or in pairs) is given a leaf. As a leaf detective, they have to observe the leaf very carefully.



#### DESCRIPTION II

- Adult and children take a tour around and stop by every tree.
- Children observe the tree and its leaves and are asked if the leaves of the tree they are observing are similar to the one that was given before,
- The adult shares the name of the tree, the fruit the tree gives, what type of leaf (perennial or deciduous) it is, and other relevant information about the tree.



### DESCRIPTION III

- Children compete with leaves by blowing them until the finishing line,
- With the collected leaves, fruit, and twig pieces, a big mandala is done in group.



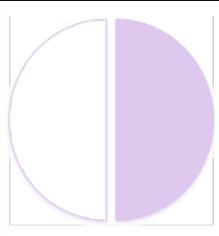
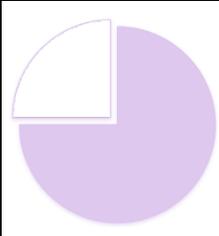
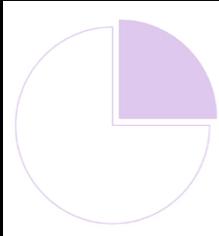
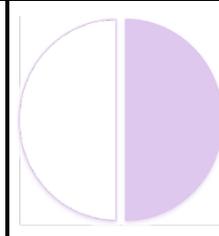


**MATERIALS**

Trees, leaves, nature objects, twigs, glue.

**Number of Children:** 4 – 24.

**Skills:** Attention, planning, creativity, manipulative skills, plastic expression, and communication skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

**QUESTIONS**

**Descriptive:** What did you have to do to as a leaf detective?

**Cognitive:** Why do the leaves fall in autumn? Why does the color of the leaves turn yellow or brown? Is there any tree that remains green in every season? Which one?

**Emotional:** How did you feel after blowing the leaves? Do you feel calm? Tense? In which situations do you feel you need to take a deep breath?

**Connective:** Do you usually walk or play in places that have trees?



**Adaptations for Children with Disabilities**

Children with visual impairment can have a human guide (an adult or a colleague). When the group stops next to a tree, a leaf from that tree should be picked by the guide and compared by touching by the child with visual impairments. The adult should make sure that children in a wheelchair can access the trees safely.



## HIDDEN OBJECTS



### The Netherlands

#### DESCRIPTION I

All children collect natural loose parts (e.g., leaves, branches, acorn, cones, stones, etc.).

- While all children close their eyes with their hands, one child hides one object around the space. If necessary, the adult can help him/her,
- With the signal, the other children try to find the hidden object.



#### DESCRIPTION II

- The other child can give clues (e.g., cold, when children are moving away from the object; heat, when children are becoming closer to the object),
- Children change roles so that all objects are hidden and found,
- Children are asked to group the objects by color or shape.



### DESCRIPTION III

- In groups children are asked to design models (animal, human, building, transports, etc.) using the objects,
- The adult draws boards of 3x3 grid on the ground. Using two different types of natural loose parts, children play tic-tac-toe.

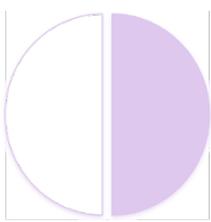
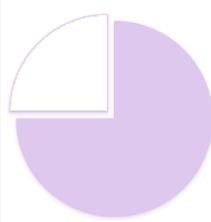
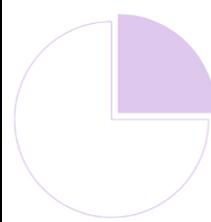
**MATERIALS**

Natural loose parts, tape, thread, glue.

**Number of Children:** 5 – 10.

**Skills:** Attention, memory, planning, creativity, plastic expression and communication, manipulative skills, and relationship skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

**QUESTIONS**

**Descriptive:** Where were the natural loose parts hidden? Which code did you use to help your friends find the object?

**Cognitive:** How can we organize these objects in groups? (by size, color, shape, weight, etc.)

**Emotional:** Did you all agree with the model you designed? How did you feel when you found your friend had a different perspective? How did you manage it?

**Connective:** Do you usually have hidden objects at your place? Why? What could you do not to have hidden objects at your home?

**Adaptations for Children with Disabilities**

For children with hearing loss, two signs representing cold and heat (e.g., a snowflake and a fire) could be presented to the child when he/she is getting closer or further from the hidden object.

## RESCUE TEAM



### The Netherlands

#### DESCRIPTION

A start and finish line are defined. Children are divided into two groups. Each group line up in a row from the start to the finish line.

- The first child in the line is asked to throw the ball to the next child. This move can be however the child wants to do it (e.g., by passing over his head or between his legs etc.),
- Continuing in this way, children must put all the balls after the finish line,
- The team who first puts all the balls after the finish line wins,
- If they are nearby a river or the sea, children can pass buckets of water,
- Older children can play holding a spoon on which a table tennis ball is placed,
- For older children, the distance can be increased so that they need to walk through obstacles.



**MATERIALS**

Balls, buckets, spoons, table tennis ball.

**Number of Children:** 20 – 30.

**Skills:** Relationship skills, manipulative skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**

**Descriptive:** Which different ways did you find to pass the ball?

**Cognitive:** How do you think it would be easier to play, with a smaller ball or with a bigger ball? Why?

**Emotional:** How would you feel if you dropped the ball? Angry? Excited? How would you express it with your body? Do you feel your team was able to make a good team-work? How did you do?

**Connective:** In which daily life situations is it important to have a team working for the same goal?



**Adaptations for Children with Disabilities**

Adaptations are not necessary for this activity.



## CONE GAME



### The Netherlands

#### DESCRIPTION I

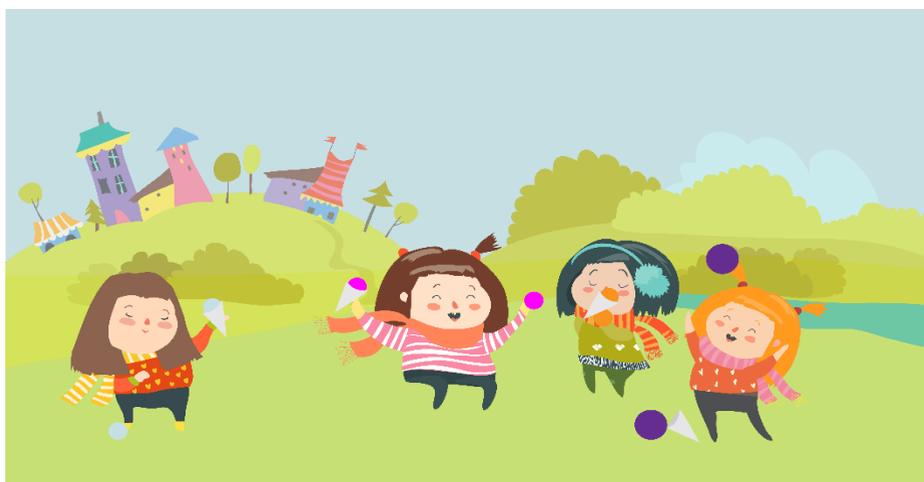
Children explore soft balls by throwing them to the air and catching them.

- In pairs, children throw and catch soft balls (or other type of balls, e.g., tennis balls),
- After exploring aiming and catching movements, children are divided into 2 teams. The opposing teams are lined on both sides of an area.



## DESCRIPTION II

- Each child needs his/her own cone and two soft balls. One of the soft balls is placed on top of the cone,
- Children stand in front of their cone to defend it, yet they have to try to knock-off each other's soft balls from the cones by throwing soft balls,
- Teams can cross the middle line to the opponent's side,
- When a child's soft ball falls off the cone, he/she picks up the cone and ball and go sit down,
- The play ends when there is only one player remaining,
- With older children, if a child catches a ball before it hits the ground, he/she gets to choose one player from their team who is out to come back in.



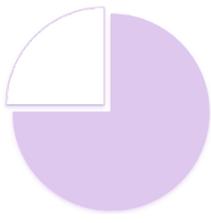
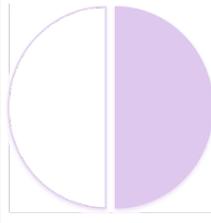
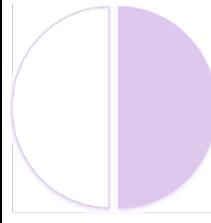
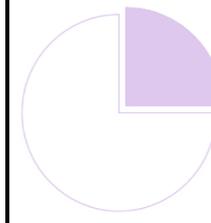
## MATERIALS

Cones, soft balls.

**Number of Children:** 4 – 24.

**Skills:** Manipulative skills, planning, information processing speed, and relationship skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

### QUESTIONS



**Descriptive:** What do you have to do when your ball falls down the cone? How can you go back to the field? How many cones do we need to play the game? How many balls?

**Cognitive:** If each child needs a ball to play this game, how many balls will you need to play with a friend? And how many cones?

**Emotional:** How did you feel when your ball fell down the cone? How did you feel when you were able to rescue a friend from your team? How did you feel when you were rescued?

**Connective:** In which situations do you need to sit and wait for someone to call you?

### Adaptations for Children with Disabilities

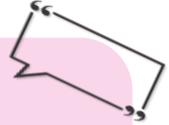


For children with visual impairments, one can allow to throw the soft ball without opposition at a certain distance. In this case, a colleague can stand behind the cone clapping his/her hands to orient the child with a visual impairment. It is also possible to play with a smaller group and/or using a beeper ball to put on the top of the cone. For children in a manual wheelchair cones, they should be placed in such a distance that enables the wheelchair to cross over. Besides, if necessary, children can throw the ball on the floor and use a stick that enables catching.

## EXCHANGE TREE (BOOMPJE VERWISSELEN)



### The Netherlands



#### DESCRIPTION I

The adult marks trees with a ribbon. Half of the children is blindfolded, and children play in pairs.

- By the whistle of the adult, children which are blindfolded try to reach (by walking) the adult who is whistling. Their pairs (not blindfolded) stay close and provide guidance (if necessary),
- Pairs change so each child can repeat the activity twice blindfolded and twice guiding.





## DESCRIPTION II

More trees are marked to have a tree for each child, except one.

- By the whistle of the adult, children run from the start line to the marked trees and hold a tree. The child who arrives the last and cannot find a tree becomes the “frog”,
- From that moment, children focus on the adult’s signal. When the adult whistles again, the children should find a different tree to hold. During this event, the frog should try to arrive first to a tree, so one of the other children becomes the “frog”,
- After some rounds of running, the adult can ask children to move while jumping, running backwards, running as scissors, galloping, etc,
- With older children, the adult can change the code (one whistle children release and run, two whistles children hold a tree).



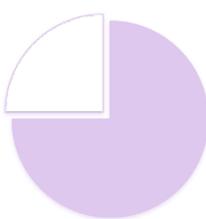
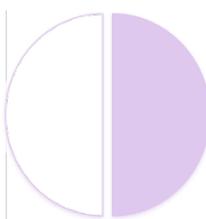
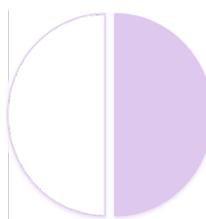
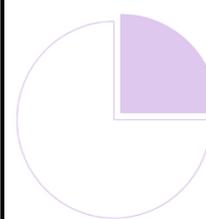


**MATERIALS**

Scarf, whistle, ribbon, trees (if the area does not have trees, cones can be used).

**Number of Children:** 4-25

**Skills:** Locomotor skills, attention, information processing speed, planning, and relationship skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			



**QUESTIONS**

**Descriptive:** What do you need to do when you hear one whistle? What do you need to do when you hear two whistles?

**Cognitive:** How many are we? How many trees had a ribbon? How many trees do we need so no one becomes the frog? What if we were playing in pairs, how many trees we would mark?

**Emotional:** How did you feel when you were the frog? How does it feel not having a place to hold?

**Connective:** In which situations you need to be quick to find a place?

### **Adaptations for Children with Disabilities**



In activity II, a human guide should be considered for children with visual impairments. When there is a child (or more) in wheelchair, the other children should perform a slower locomotor pattern (e.g., stepping, walking backwards, hopping). In activity II, a gesture should be used (e.g., raising arm) by the adult to signal the whistle.

## NIGHTINGALE IN THE CAGE



### TURKEY

#### DESCRIPTION

An adult draws a large circle on the ground in a flat area where children can move freely.

- Two of the children are chosen as nightingales, and the other kids hold hands to form a circle around them,
- The aim of the nightingales is to get out of the circle by crossing under their friends' held hands, and the other children's aim is to not let the nightingales escape,
- To deceive the children in the circle and to create a chance for the other nightingale, one of the nightingales may pretend that it is trying to escape,
- When one nightingale gets out of the circle, the other nightingale gets out, too,
- The children who let the nightingales escape become the new nightingales,
- This play can be played with older children by increasing the number of players.



**MATERIALS**



Chalk to draw a circle on the ground.

**Number of Children:** 12 - 18

**Skills:** Attention, information processing speed, planning, locomotor skills, dramatic expression, and communication.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** What were the rules of this play?

**Cognitive:** What do you think is the best strategy to win this game?

**Emotional:** How did you feel when your friends did not let you go out?

**Connective:** Which other daily life situations do you have to hold hands with someone else? Why is it important?

**Adaptations for Children with Disabilities**



Children with visual impairments could use a human guide when in the role of the nightingale. Children in wheelchairs could be around the circle and try to catch the nightingale that gets out of the circle.

## CAT IN THE CORNER



### TURKEY

#### DESCRIPTION

A flat soil or a concrete area is chosen where children can move freely. A big square is drawn on the floor, and a circle (big enough for a player to stand) is drawn on each corner of the square.

- One of the children is designated as the “it”,
- The “it” stands in the middle of the square while each of the other four players waits on each corner of the square,
- Four players try to swap places with one another without being caught by the “it”. If the player is caught, he/she becomes the “it”,
- As an alternative, the “it” enters one of the circles before the other players, the player left without a circle becomes the “it”,
- With older children, draw bigger circles or other shapes with more corners such as pentagons, hexagons, heptagons, and octagons on the ground.



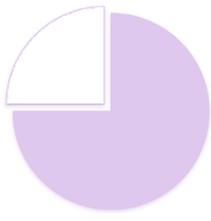
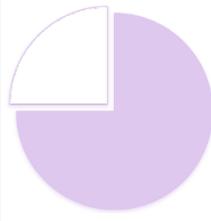
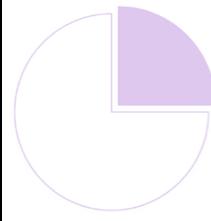
**MATERIALS**

Chalk or small stick to draw a circle on the ground.

**Number of Children:** 5 - 9

**Skills:** Locomotor skills, attention, information processing speed, and planning.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

**QUESTIONS**

**Descriptive:** What do you need to do when you are in the center of the square?

**Cognitive:** What if we played this game with a triangle instead of the square? How many of us would be playing? Do you think it would be easier? What if we had a bigger square?

**Emotional:** How did you feel when you were left without a circle? What did you think? How did you feel when you were the "it"?

**Connective:** In everyday life, what other shapes can you find drawn on the floor?

**Adaptations for Children with Disabilities**

If there is a child with an intellectual disability in the classroom, the play is first watched and then played by that child. In addition, this child plays on the triangle drawn on the ground. Children with visual impairment should play with a human guide. To include children in wheelchairs, slow the movement of the other children by changing their locomotion mode (e.g., stepping or slide).



## SNAKE



### TURKEY

#### DESCRIPTION

- Soil or concrete flat area is chosen,
- An adult draws shapes like a snake on the ground,
- Children must reach the mouth of the snake by starting from the tail and by pushing the cap with a stick and following the curves without removing the cap from the curves of the snake,
- If the cap gets out of the line drawn as the curves of the snake, that child must restart from the tail,
- The snake is made thin and very curvy when playing with older children,
- With older children the cap can be pushed with a foot while standing in one leg,
- Instead of caps, marbles can be used.



**MATERIALS**



Chalk or small stick to draw the figure on the ground, 50 cm tall stick and crown cap.



**Figure:** Snake Drawing.

**Number of Children:** 2 - 8

**Skills:** Manipulative skills, locomotor skills, attention, and planning.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

## QUESTIONS



**Descriptive:** How do you need to hold the stick so that you can meet the mouth of the snake? What should you do if the cap gets out of the line? What were the rules of this play?

**Cognitive:** How should we draw the snake so you could be faster? And how should we draw it to make it more difficult? What do you need to pay attention to in this play?

**Emotional:** Did you feel concentrated? Fidgety? How do you feel when you are fidgeting? How do you feel when you are focused?

**Connective:** Which kind of transport can be driven on such a curvy road? Which kind of public transportation drives on straight roads?

## Adaptations for Children with Disabilities



For children in manual wheelchair, the stick should be longer to reach the cap. For children with visual impairment, the play should be played in soil and not in concrete floor. The snake should not be drawn, but instead the adult should make a ditch with the form of a snake. Also, a heavier object should be used instead of a can.

## DODGEBALL



### TURKEY

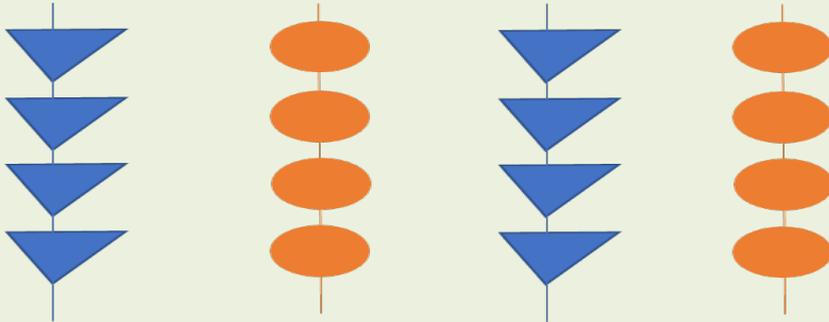
#### DESCRIPTION

- A flat area of soil or grass is chosen where children can move freely,
- It is an activity to be played with two teams. The teams should consist of at least six children. A team is divided into two groups,
- One half of the first team stands facing the other half of the second team, 20 steps from each other,
- Outside players from each team should throw the ball at the children of the other team that are in the middle to get them out,
- The children of both teams that are in the middle should make an effort not to get hit,
- The player who is hit by the ball leaves the play field,
- If a player who is in the middle catches the ball thrown by the opposite team, his group gets one point and the chance to throw the ball at the other team,
- The play continues like this,
- The aim is for the group to throw the ball at the players of the other team and take all them out,
- If the child who has previously earned points is hit, he continues to play in exchange for the points he has received.



### MATERIALS

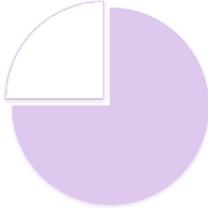
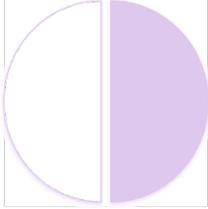
Ball



Example of children's disposition figure.

**Number of Children:** 12 - 20

**Skills:** Manipulative skills, locomotor skills, attention, inhibitory control, information processing speed, planning, and relationship skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

### QUESTIONS



**Descriptive:** Which goals do you have when you are outside? Which goals do you have when you are inside? How can you get points?

**Cognitive:** Which rule of this play would you change? Why?

**Emotional:** How did you feel when someone hit you hard? Were you able to calm down? Could you feel something different in your body when you were hit? How did you feel when you missed your target?

**Connective:** Who would love this play most in your family?

### Adaptations for Children with Disabilities



If a child has a visual impairment, he/she takes two steps forward and should be guided by a group member to throw the ball towards the right direction.

## SEVEN TILES



### TURKEY

#### DESCRIPTION

- A flat area of soil is chosen where children can move freely. A circle is drawn on the floor with a small stick.
- Two groups are formed: shooters and keepers.
- In the circle 7 tile pieces are stacked on top of each other.
- A child from the shooter team tries to knock over the tiles by throwing a ball while staying behind a line drawn 15 steps away the tile.
- One member of the keeper team stands next to the tiles. All members of the shooter team throw the ball in turn until all the tiles are knocked over.
- If the shooter team does not knock all the tiles, it will be the keeper group's turn, and the roles will change.
- However, if the shooter team manages to knock the tiles, the children of the keeper team will try to hit the last shooter with the ball before the other members of the shooter team line up the tiles again.
- The shooter team wins if the tiles are stacked before the shooter is hit by the ball. The keeper team wins if the shooter is hit before his/her team finish lining up the tiles.
- It is played with more tiles with older children.





**MATERIALS**

Ball, small stick, tile pieces.



**Number of Children:** 8 - 12

**Skills:** Manipulative skills, planning, relationship skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

## QUESTIONS



**Descriptive:** What happens if the shooter is hit? How can you win the game? What kinds of accidents can occur in this play? What should we do to prevent them?

**Cognitive:** What should be done to make sure the tiles don't fall while piling them on top of each other? What if we used bigger tiles? Would it be easier or harder to pile them?

**Emotional:** How does it feel to compete? Do you feel changes in your body when you are competing?

**Connective:** What else do we pile on top of each other, in our places? What for?

## Adaptations for Children with Disabilities



The shooting line could be moved closer to the tiles. For orienting children with visual impairments, a colleague positioned beyond the tiles claps his/her hands several times. If the children with visual impairments is the last shooter, (s)he should run with help of a guide.

## SPINNING TOP



TURKEY

### DESCRIPTION

- In a straight hard place, children play individually or as a team with a cone-shaped wooden top and a rope wrapped around it.
- The children wrap the ropes around their spinning tops. While pulling the rope, they spin their tops forward.
- The aim is that the spinning top falls down onto the ground spinning and continues to spin on the ground.
- The child who spins the spinning top longest wins.



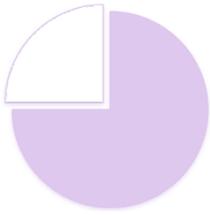
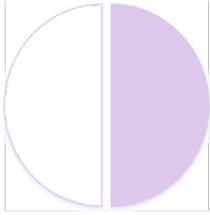
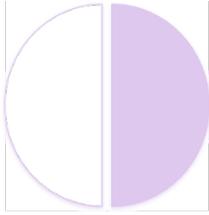
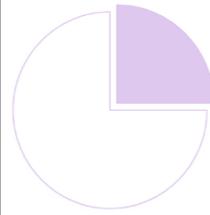
### MATERIALS

Wood top, rope.

**Number of Children:** 2 – 16 (in pairs)

**Skills:** Manipulative skills, planning, relationships skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

### QUESTIONS



**Descriptive:** What do you need to do to win?

**Cognitive:** Who drives faster? A motorcycle or a bicycle? A train or an airplane?

**Emotional:** How does it feel to spin? In which situations do you feel like to spin?

**Connective:** What are the goods that work by rotating at your home?

### Adaptations for Children with Disabilities



For children with visual impairments the adult should provide feedback on his/her performance.

## WHOSE BODY IS IT? WHOSE HAND IS IT?



### TURKEY

#### DESCRIPTION

This activity is played close to a wall.

#### I

- In pairs, a child leans against the wall and the other outlines his/her body with chalk. Everyone's figure appears on the wall.
- Each child draws his/her facial expressions, according to the emotion his/her is feeling and other details that identify him/her (e.g., long hair, favourite toy, skirt).

#### II

- One child faces the wall, closing his/her face and eyes with his/her hands.
- The other children place their hands on the back of their friends one by one, saying, "Hand over hand, whose hand is it?".
- The child facing the tree or wall, tries to spot the child who touches last, based on his/her voice and touch, and identifies his/her body on the wall.
- If he/she guesses the child, that child faces the tree or wall, and the play is restarted.



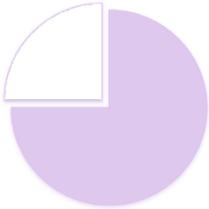
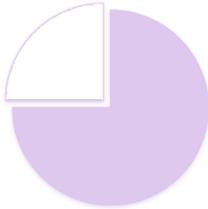
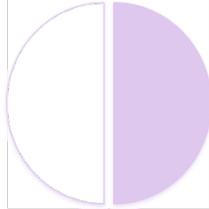
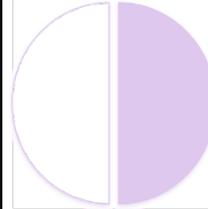
**MATERIALS**



Chalk (the wall can be replaced by a tree and a cement area to draw)

**Number of Children:** 5-10

**Skills:** Attention, planning, body schema, self-awareness, relationship-skills, plastic expression, and communication.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

## QUESTIONS



**Descriptive:** Why did you have to keep your eyes closed? How did you guess who was the last person to touch your back?

**Cognitive:** In a round, how many times do you hear the question? What if you were a group of ten?

**Emotional:** How did you feel when your friends touched your back? How did you feel when you correctly guessed whose hand it was? Which emotions were drawn? Can we think about other emotions? Let's mimic them.

**Connective:** Which emotions do you feel in daily life situations? Can you associate different emotions to different kind of situations?

## Adaptations for Children with Disabilities



In activity II, for children with autism (who are sensitive to touch), this activity should be played using only the voice. In activity II, for children with hearing loss that is facing the wall, every child should tap one to four times in his/her back. The child should try to correctly count the number of taps in the back performed by the last colleague. In activity II, if a child has a visual impairment and is not facing the wall, the adult helps him/her to touch his friends' back.

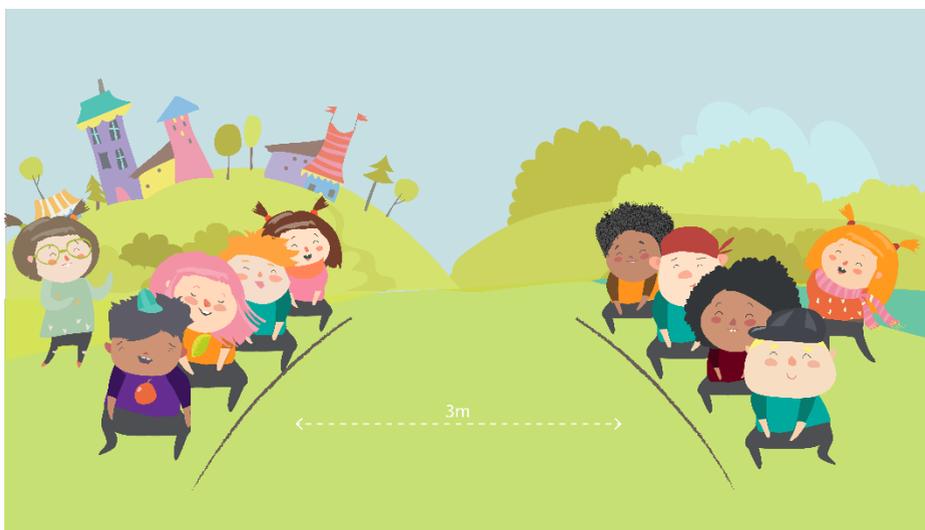
## ARE YOUR PUMPKINS COOKED?



### TURKEY

#### DESCRIPTION I

- Soil or concrete flat area is chosen. The adult draws a line on the ground, 3 meters apart.
- Children are divided into two teams with equal number of players in each. Each group designates a leader. Each leader assigns his/her friends the names of flowers, plants, fruits, cartoons, story tales, etc.
- The two teams stand on a line, crouching side by side.



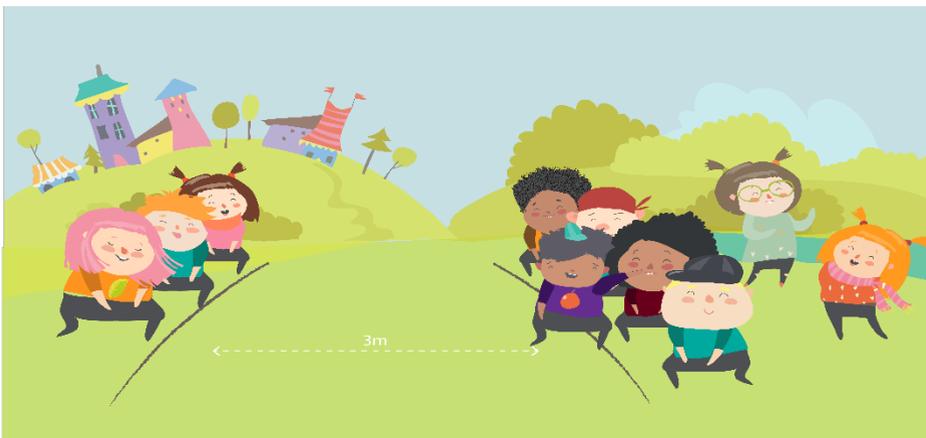
#### DESCRIPTION II

- One of the leaders hops to reach the opposing team and says to the leader of that team: “I have arrived hopping, are your pumpkins cooked?” The other leader says that his/her pumpkins are cooked.
- The leader who asked the question chooses a child by touching his/her head and closes his/her eyes with his hands.



### DESCRIPTION III

- He/she calls a child from his/her team with the nickname assigned.
- That child comes quietly, squeezes the nose of the blindfolded child, quickly goes back to his/her place, and with his/her friends in the group, they turn around and applaud.
- The child in the other team opens his/her eyes and tries to guess who squeezed his/her nose.
- If guessed correctly, the child is transferred to the other team.
- Children who change groups are given a new name for their new group, and the play continues this way.



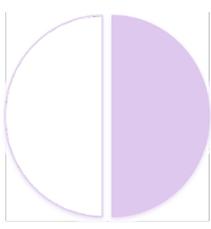
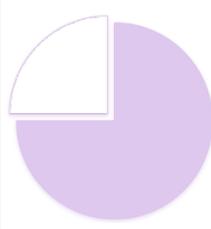
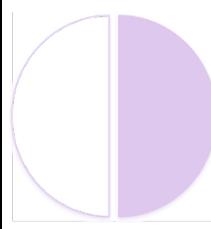
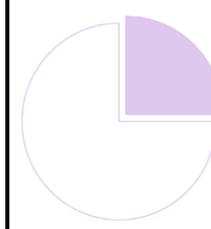
**MATERIALS**



Chalk or small stick to draw a circle on the ground

**Number of Children:** 10 - 24

**Skills:** Attention, memory, locomotor skills, postural control skills, relationship skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

**QUESTIONS**



**Descriptive:** Which nicknames were used in this play? When you hear your nickname, what do you have to do?

**Cognitive:** How did you guess who touched your nose?

**Emotional:** How did you feel when you were called by another name? How did you feel when you failed to guess? Could you feel something in your body? What can we do to stop feeling that way?

**Connective:** Which pumpkin meals do you know?

**Adaptations for Children with Disabilities**



Cards with nicknames can be prepared for a child with hearing loss. Children with visual impairment can use a human guide (e.g., the leader).

## GRABBING HANDKERCHIEF



### TURKEY

#### DESCRIPTION

- Grass or soil flat area is chosen where children can move freely. An adult draws 2 lines 6 meters apart.
- The group is divided into two equal groups except for the child holding the handkerchief. He/she is going to be the referee. The place where the referee stands is determined between two lines.
- The number to be reached at the end of the play is determined.
- The adult gives every child a number. It is important that each number is assigned to one child in each group.
- The referee says a number while holding the handkerchief.
- The children of the said number quickly run towards the handkerchief, try to grab the handkerchief, and run back to their place.
- The child who returns to his place with the handkerchief gets the point.
- If the handkerchief is lost, or the child of other team touches the child who grabbed the handkerchief, the group who has the handkerchief gets the points.
- When one group reaches the target number that was determined at the beginning of the play, they win the play.



**MATERIALS**

Small stick, chalk, handkerchief

**Number of Children:** 11 - 25

**Skills:** Attention, information processing speed, inhibitory control, locomotor skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

## QUESTIONS



**Descriptive:** Which friends do you have in your group? What did you have to do when you heard your number?

**Cognitive:** What is the shape of the handkerchief? Which other objects of the same shape can you think of? What is the handkerchief made of? Which other objects of the same material can you think of?

**Emotional:** How did you feel when you got the handkerchief? Why?

**Connective:** Which daily life objects have the shape of a handkerchief?

## Adaptations for Children with Disabilities



When playing with a group with a child with hearing loss, instead of saying the numbers, cards with numbers can be used. When playing with a group with a child in a manual wheelchair, instead of running the other children should hop or jump in one leg towards the handkerchief. When playing with children with visual impairments, a human guide can be included, and all the other children should play also in pairs.

## HIDE AND SEEK | OLLY OLLY OXEN FREE!



### TURKEY

#### DESCRIPTION

- A large environment where all children can hide is chosen.
- One child is designated for counting, as the “catcher”.
- The catcher, closes his/her eyes against a tree or wall and counts up to 10, allowing his/her friends to hide within the previously set area.
- The catcher announces the end of the counting by saying “Ollly olly oxen free!” (or “here I go”)
- The catcher tries to find his/her friends’ hiding spots.
- When the catcher sees one of his/her friends, he/she runs back to the spot where he/she was counting
- The aim for the catcher is to reach the tag spot before the spotted friends reach there. While the child is trying to find the hidden friends, the hidden ones try to reach the tag spots before.
- The play continues until no hidden children is left.
- The last child to reach the tag spot before the child who was counting wins and starts counting for a new game.



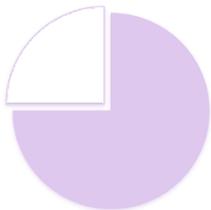
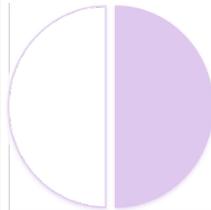
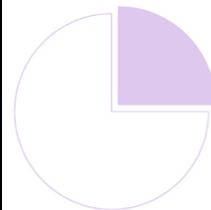
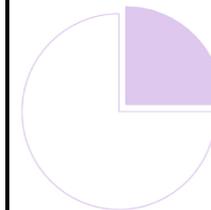
**MATERIALS**

None

**Number of Children:** 6 +

**Skills:** Locomotor skills, attention, information processing speed.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

**QUESTIONS**



**Descriptive:** What you had to do while your friend was counting?

**Cognitive:** What do you think it would change if the counting was until 5? And until 20?

**Emotional:** How did you feel when you were counting and closed your eyes? How did you feel when your friend was getting close to you?

**Connective:** Which other places are good to play hide and seek with your family?

### **Adaptations for Children with Disabilities**



For children with hearing loss, when he/she is hiding, a human guide should help him/her to understand when the catcher has stop counting and to provide feedback if the catcher is approaching. When the child with hearing loss is seeking, and if the child cannot talk, the adult should shout the other children (“here he/she goes”). For children with visual impairments, a human guide can be used both in the roles of seek and hide.

## BLINDMAN'S BUFF



### TURKEY

#### DESCRIPTION

- A wide and flat area is chosen where there are no obstacles which would lead children to trip and fall.
- A child is chosen, and then his/her eyes are blindfolded with a handkerchief. Meanwhile, the other children walk around him/her, singing “the “name” cannot catch me”.
- The blindfolded child tries to track down the children who make misleading noises.
- The blindfolded tries to catch a friend and identify him/her by recognizing the voice or the face.
- If child guesses the friend correctly, he/she will open his/her eyes, and the caught child will be the new “it”.



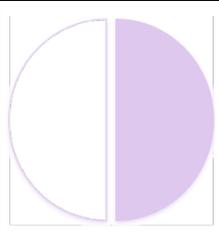
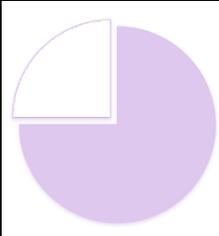
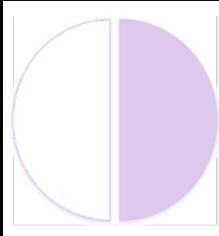
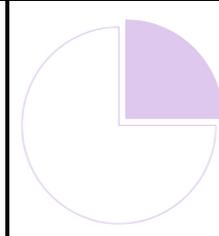
**MATERIALS**

Handkerchief



**Number of Children:** 6 +

**Skills:** Body schema, attention, information processing speed, relationship skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

**QUESTIONS**



**Descriptive:** When you were blindfolded, what did you have to do?

**Cognitive:** How did you recognize your friend when you were blindfolded?

**Emotional:** How did you feel when your friend touched your face? How did you feel the others' touch?

**Connective:** Do you use your hands to greet other people? How? Who?

**Adaptations for Children with Disabilities**



For children with visual impairments, when running away from the blindfolded child, they should use a human guide. If there is a child in a wheelchair, his/her colleagues should move in a slower pace (e.g., walking, hopping, sliding).

## SOMEBODY ON THE GROUND



### TURKEY

#### DESCRIPTION

- A wide environment is chosen where children can climb on high places like a tree, wall, sidewalk, stairs, etc.
- A child is chosen, and the other children step on high places on the playground and shout “There is someone on the ground”.
- They move to other higher places without giving the other child the opportunity to catch them.
- The aim is to constantly swap places without giving the child who is catching the chance to catch up.
- If the child tags a friend when he/she descends from a high place, that friend becomes the new child who will catch the others.



**MATERIALS**

None



**Number of Children:** 6 +

**Skills:** Locomotor skills, attention, planning, information processing speed, relationship skills.

DEVELOPMENTAL DOMAINS			
Motor (3/4)	Cognitive (2/4)	Social- Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** Which material do we need to play this game? How did you rest when you felt tired?

**Cognitive:** Could we play this without material? How?

**Emotional:** How did you feel your body while playing? Did you hear your heart beating? How was your breathing? In which other situations do you feel your body like that?

**Connective:** Can we play this on a street with traffic? Why?

### **Adaptations for Children with Disabilities**



For children with visual impairments, a human guide should be used, in both roles. Specifically, for children with low vision, colored stimuli can be placed in the areas where the child can take a position higher than the ground. If there is a child in a wheelchair, his/her colleagues should move in a slower pace (e.g., walking, hopping, sliding). Also, instead of using higher places, different colored/sketched places should be used at the same level.

## LONDON BRIDGE IS FALLING DOWN!



### TURKEY

#### DESCRIPTION

- A wide and flat area where children can easily run is chosen.
- Two children are chosen among the group to create a bridge.
- Before starting the song, the children forming the bridge give pseudonyms to themselves without letting the others know which name belongs to whom.
- The children forming the bridge face each other, join both hands together, and lift their arms up. The other children are lined up so they can walk under the bridge, while 'London Bridge' (Bezirganbaşı in Turkish) is sung. While singing the song, the group passes under this bridge one by one, and the children holding hands catch one of them.
- They quietly inform the caught child of the two pseudonyms and she/he chooses one of them.
- After choosing one pseudonym, the caught child stands behind the owner of that name and waits till the end of the song.
- The whole group crosses the bridge and stands behind the child of their choice. By the end of the song, two groups will have been formed.
- A line is drawn on the ground. Two groups will try to pull the other group to their side.
- If all players cross the line, the other group wins.

Lyrics of the Song in the Play:

Aç kapıyı bezirgânbaşı, bezirgânbaşı.

Kapı hakkı ne verirsin, ne verirsin?

Arkamdaki yadigâr olsun, yadigâr olsun.

Equivalence in English

London Bridge is falling down

Falling down, falling down

London Bridge is falling down

My fair lady



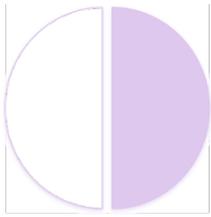
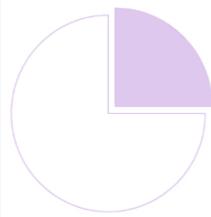
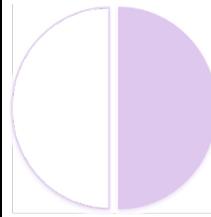
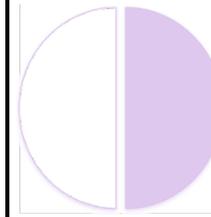
**MATERIALS**

None

**Number of Children:** 10 +

**Skills:** Relationship skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

## QUESTIONS



**Descriptive:** What happens when someone is caught in the bridge? Was it hard for you to learn the play?

**Cognitive:** How did you decide on which nickname to choose? Why nicknames are important in this game?

**Emotional:** Did you feel different emotions when you were playing? Which ones?

**Connective:** How many bridges do you know? Why are bridges important?

## Adaptations for Children with Disabilities



For children with hearing loss, the pseudonyms should be presented written in a card. A clapping rhythm should be used while the song is sung.

## FREEZE



### TURKEY

#### DESCRIPTION

- A wide grassy environment is chosen where children can run freely. A square is drawn on the ground.
- The children sing a nursery rhyme by pointing each other one by one. Whoever is pointed the last becomes the “it”, in this play, the “snow”. The nursery rhyme is sung again, and this time the last child pointed is the “sun”.
- All children are running inside the square.
- The aim of the snow is to freeze all the children one by one while the sun is trying to save them by keeping them warm.
- When the snow catches a child, he says ‘freeze’, and the frozen child waits for the sun to come and get him warmed up.
- The sun needs to unfreeze the other child before the snow catches the sun too. If the snow catches the sun, another child will become the new sun.
- The play continues till the snow catches and freezes everyone. At the end of the play, if the last unfrozen child is next to the sun, he doesn’t lose; however, if he is not next to the sun and if he gets caught by the snow, he loses.



**MATERIALS**

Crowns shaped as sun and snow.



**Number of Children:** 5 - 6

**Skills:** Locomotor skills, relationship skills, attention, inhibitory control, information processing speed.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** How did we choose the snow and the sun before starting the play?

**Cognitive:** Apart from the sun, what else can melt snow?

**Emotional:** How did you feel when you stood without moving?

**Connective:** Why is sun important in our daily lives?

### **Adaptations for Children with Disabilities**



For children with visual impairments, a human guide should be used, in all roles. If there is a child in a wheelchair, his/her colleagues should move in a slower pace (e.g., walking, hopping, sliding). For children with intellectual disability, the activity instructions should be explained simply and clearly. Constructive feedback should be provided frequently. For children with hearing loss, both the “snow” and the “sun” should carry a handkerchief (with different colors) in their hands, in order to be easily identified.

## JUMPING ROPE



### TURKEY

#### DESCRIPTION

- A flat soil or a concrete area is chosen.
- Two children are chosen to shake the rope among the children who will play.
- Then, the chosen children will hold an end of the long rope and start to shake the rope at a certain speed.
- The other children will jump over the rope one-by-one.
- The aim is to jump without getting tangled up.
- The child who is tangled leaves the play.
- The child who does not get tangled till the end wins the play.
- The child who jumps most wins the play.
- With older children, different rules can be created to make the play more challenging.



**MATERIALS**



Rope.

**Number of Children:** 6 +

**Skills:** Locomotor skills, planning, information processing speed, relationship skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** What should be done to jump the rope without tripping over the rope?

**Cognitive:** What differences does the length of the rope create?

**Emotional:** How does it feel to jump a rope? In which other situations do you feel that way?

**Connective:** For what purposes do you use a rope at home?



### **Adaptations for Children with Disabilities**

For children with physical disabilities, by moving the rope slowly, children with physical disability can be supported while attempting to jump the rope. Children in wheelchairs can be responsible for manipulating the rope. Children with intellectual or hearing loss can watch the play first and then take part in it. If there is a child with Autism Spectrum Disorder, the instructions should be simple, short, and clear and supported with gestures and body language to make them more attractive for the child.

In order to make sure that the child is not afraid of the rope at first, the play can be started in slow motion, and based on the child's reaction its speed can be altered. For children with visual impairment, children should be asked to touch the rope to know it. Moreover, depending on the level of visual impairment, the rope can be in a vivid color, or the rope can be covered with a material to make noise when it touches the ground. In both cases, the child can also take part in the play with the support of an adult.

# HOPSCOTCH



TURKEY

## DESCRIPTION I

- A flat soil or a concrete area is chosen.
- This play takes place on a hopscotch design drawn on the ground.
- The figure consists of 45 cm or 50 cm squares.
- The child who starts the play throws a flat stone or a similar object to land on square one.
- The child hops through the squares skipping the one with the stone.
- On his way back, the child picks up the stone and hops off that square.



**DESCRIPTION II**

- The play continues with the 2nd, 3rd, and so on. If the child cannot throw the stone to the right square, or if he steps on the lines while hopping through the squares, it becomes the other child's turn.



**MATERIALS**

Chalk.

**Number of Children:** 2 +

**Skills:** Locomotor skills, manipulative skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication



## QUESTIONS

**Descriptive:** What were the rules of this play? Did you have difficulty in hopping? How did you rest when you felt tired? Would you like to play it again?

**Cognitive:** What geometric shapes are draw on the floor? How else could you play this play?

**Emotional:** How did you feel while playing it? How did you feel when you stepped on a line?

**Connective:** Did anyone in your family use to play hopscotch when they were kids? Who are they?



## Adaptations for Children with Disabilities

For children with intellectual disability or hearing loss, the child can be asked to watch his/her friends first and then take part in the play. Children in wheelchairs can throw the stone to the squares. Instead of hopping, he/she can roll the wheelchair through the squares and circumvent the square where the stone is placed. When he/she comes back, they catch the stone, or if that is not possible, another person can catch it for them. Furthermore, squares can be drawn bigger according to the level of the physical disability.

Children with visual impairment should throw the stone for a box placed in the correspondent square (while another child or the adult is clapping his/her hands over the box). Use a human guide for helping the child with visual impairment hopping through the squares. The child can jump the square where the stone is, which means that the box should be removed.

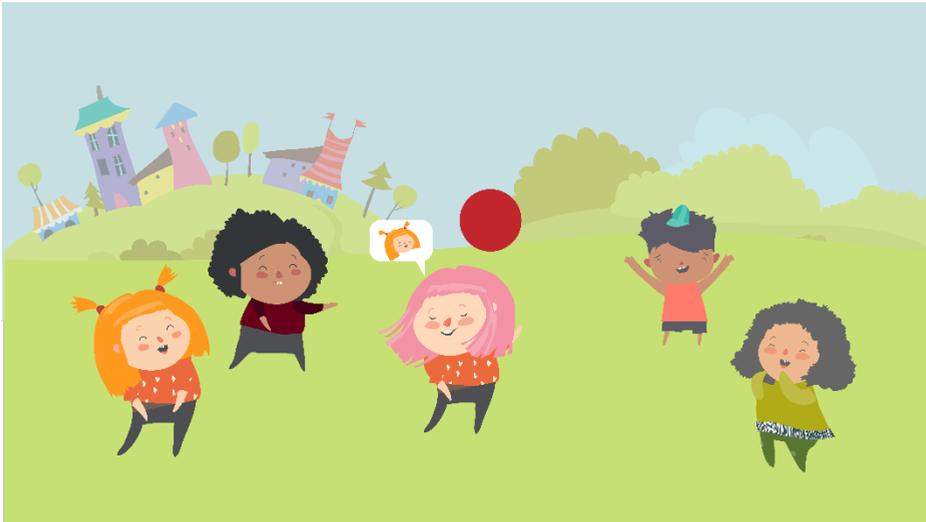
# STOP



## TURKEY

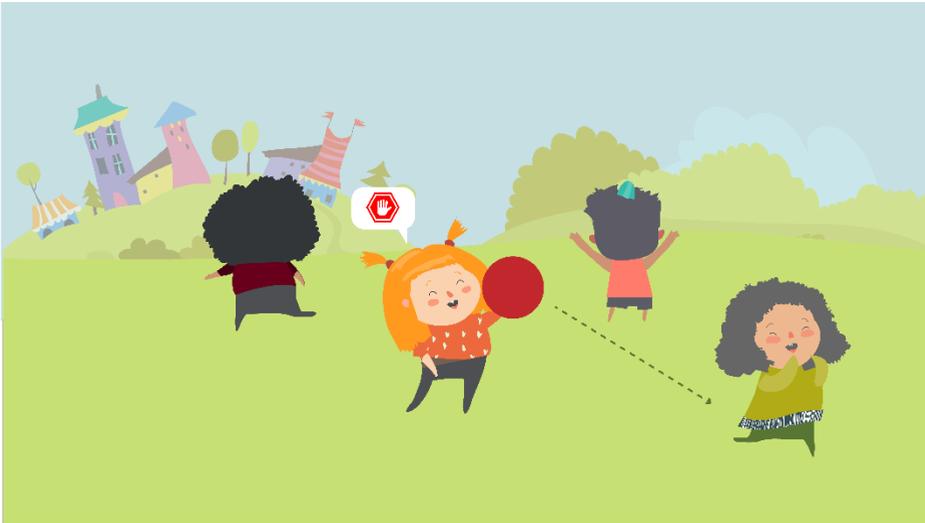
### DESCRIPTION I

- A flat area of soil or grass is chosen where children can move freely.
- A child is chosen to start the play. The child throws the ball into the air and yells the name of one of his friends.
- While the child whose name is yelled is trying to hold the ball, the other children escape.
- When the child holds the ball, he says stop, and the other children stop where they are.
- The child catches the ball and tries to hit one of the other children with the ball (younger children can roll the ball across the floor; the others cannot move).



## DESCRIPTION II

- Older children try not to get hit or hold the ball before the ball falls to the ground.
- The child holding the ball continues the play by saying the name of one of his/her friends.
- If the ball cannot be held and doesn't touch any child, that child will be out of play.
- If no one holds the ball or no one is hit with the ball, the play continues as the child with the ball says the name of another child.
- With older children, the number of players can be increased.



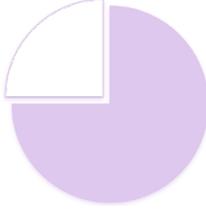
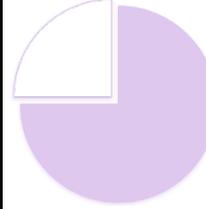
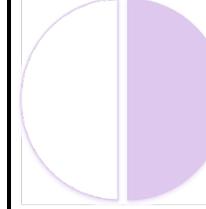
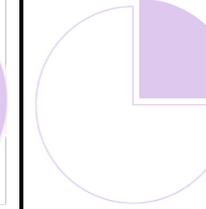
## MATERIALS

Ball.

**Number of Children:** 4 - 10

**Skills:** Manipulative skills, locomotor skills, attention, planning, inhibitory control, social relationships.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			



### QUESTIONS

**Descriptive:** What can you do to catch the ball thrown at you?

**Cognitive:** If you were the child with the ball, how would it be easier to hit your friend with the ball? If you were closer or more distant? What if you were the other child and you had to catch the ball? How would it be easier? If you were closer or more distant to your friend?

**Emotional:** How would you feel if your name was never called in the play? Why?

**Connective:** Which objects are important to be distant of? Why?



### **Adaptations for Children with Disabilities**

For children with physical disabilities (including those in a wheelchair), extra time can be given to the child to run away from one side to another. Children with autism can be assigned as the “it” during the play since (s)he could react negatively when the ball touches him/her. For children with intellectual disabilities, the instructions should be simple, short, and clear and supported with gestures and body language to make them more attractive for the child.

The child that throws the ball into the air should perform a specific gesture (e.g., joining hands or pointing at the child after the ball is thrown into the air) after calling a colleague with hearing loss. The child with hearing loss can also be asked to watch the play before participating to understand how it is played.

For children with visual impairment, the ball can be in a vivid color (for those with low vision). If the child with the ball wants to call a colleague that is blind, he/she shakes a bell ball before dropping it into the ground. After the children that is blind catches the ball and says stop, he/she calls one colleague that should clap hands to mark her/his position. When the children with visual impairment runs from the “it”, a human guide should help whenever necessary.

## CATCH ME!



### TURKEY

#### DESCRIPTION

- A large flat area of soil is chosen, and a circle is drawn on the ground.
- A child is designated among the other children and enters the circle.
- The other children hop around saying, “Catch me, put me in the circle!”.
- The child who is inside the circle also hops and tries to catch one of the children outside the circle and brings him/her inside.
- The child entering the circle becomes the new inner circle child.



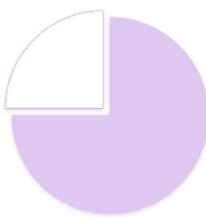
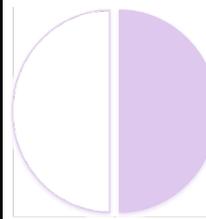
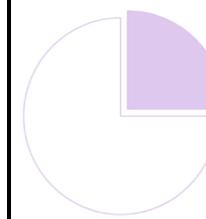
**MATERIALS**



Material for drawing circles.

**Number of Children:** 5 - 10

**Skills:** Locomotor skills, planning, information processing speed.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

**QUESTIONS**



**Descriptive:** What should you pay attention so that you are not caught by the inner circle child? What should you pay attention so that your friends are not hurt?

**Cognitive:** Does size of the circle matter in being caught by “it”?

**Emotional:** How did you feel when you were caught?

**Connective:** Which objects are round at your home?



### **Adaptations for Children with Disabilities**

For children with physical disabilities (including those in wheelchairs) the other children should use a type of locomotion (e.g., hopping, walking) that slows their pace. For children with intellectual disabilities, the instructions should be simple, short, and clear; encouraging feedback should be provided frequently. The same for children with autism spectrum disorder.

Children with hearing loss can watch their colleagues playing before engaging in the activity. Children with visually impairment could perform this activity with the help of a human guide. Additionally, the child that is catching could use a small bell attached to his/her ankle or another element that make noise (to signal where (s)he is).

## CATCH YOUR OWN SHADOW



LITHUANIA



TURKEY

### DESCRIPTION I

Children play in a sun-lighted place on the asphalt, pavement, or any other solid surface where the sun creates shadow.

- Children try to catch their own shadow. The adult can ask: Will they be able to step on their head? What if they change their body position, for example, to lean forward to bring the shadow's head closer to the feet?
- Children are asked to explore different body statures and different movements.
- Children are asked to make their shadow jump, lift its feet, wave its hands, a fabric strip or headscarf.
- Children are asked to enlarge their shadow, and to make it smaller.
- Children are asked to let their shadow follow themselves or lead their way, and to let the shadow move on their right or on their left.
- In pairs, a child contours the shadow of the other with chalk on the asphalt.
- Pouring the water from the bottle on the asphalt or pavement, children are asked to draw the contour of their friend's shadow and observe what will happen.
- Finally, children are asked to find different ways to make their shadow disappear.



### DESCRIPTION II

- A child is designated to catch the shadow of their running friend, by stepping on their shadow's head. The other children should be constantly moving so that the other child cannot step on their shadows.
- The child, whose shadow is stepped on, should freeze, and wait until the play ends.
- The last child whose shadow cannot be stepped, starts chasing the others and the play continues.



**MATERIALS**

Fabric strip, headscarf, drawing chalks, bottle of water.



**Number of Children:** 2 +

**Skills:** Locomotor skills, manipulative skills, attention, planning, information processing speed, relationship skills, plastic expression and communication, dramatic expression, and communication.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

## QUESTIONS



**Descriptive:** What should you do when your shadow is stepped on? What was most difficult to do? Where was your shadow when you faced the sun? Where was your shadow when you were back to the sun? Where is your shadow when the sun is on your right? What happened to the water you drew the contour of your friend on the asphalt with? Why does your shadow disappear under the tree or inside the building?

**Cognitive:** Whose shadow is the biggest in your family? Why? Can this play be played at night? Why?

**Emotional:** How did you feel when you were playing?

**Connective:** In which daily life situations do we look for a shadow? Why? Why is it important to pay attention while playing under the sun?

## Adaptations for Children with Disabilities



If there are children with mobility limitations (e.g., spastic child, children in wheelchairs), this activity is played by slowing motion, for instance, constraining the locomotion skills used by players (e.g., stepping, sliding, walking, moving backwards). Children with visual impairments should play with a human guide. Children with hearing loss should receive information by sign language and/or by cardboards representing each sub-activity.

## FISH AND FISHING NET



### TRADITIONAL LITHUANIAN

#### DESCRIPTION

- A play area is defined and is called the pond.
- All the children count-out and chose the player, i.e. “fishing net”, who starts the game. All the other children are “fish”.
- “Fish” run in the pond and the “fishing net” tries to catch them. The caught child has to hold hands with the “fishing net”. In this way, the “fishing net” increases gradually.
- While playing, it is not allowed to catch fish using hands and fish cannot leave the pond. The “fishing net” catches the “fish” in the following way: the children at the ends of the net try to form a circle, inside of which the caught “fish” remains.
- If the net gets “holes”, it has to be mended first and only then “fish” can be caught further.
- The game is played until all the “fish” children are caught.
- If the “fishing net” is too big, it can be divided into two parts. Then players are caught faster.





**MATERIALS**

None.

**Number of Children:** 10 +

**Skills:** Locomotor skills, attention planning, information processing speed, relationship skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

## QUESTIONS



**Descriptive:** What do you need to do when the fishing net catches you? What do you need to do when the fishing net breaks? What was your strategy to get away from the net?

**Cognitive:** What happened to the net when your friends were caught? What was the difference in the net when the play started and when finished?

**Emotional:** How did you feel when you caught a fish?

**Connective:** In which daily situations do you need to be very quick and agile?

## Adaptations for Children with Disabilities



If a child in a wheelchair is one of the “fish”, the children in the “net” can only walk to catch her/him. Children with visual impairment should have the help of a human guide (colleague or teacher).

## THE WOLF IN THE DITCH<sup>1</sup>



### TRADITIONAL LITHUANIAN

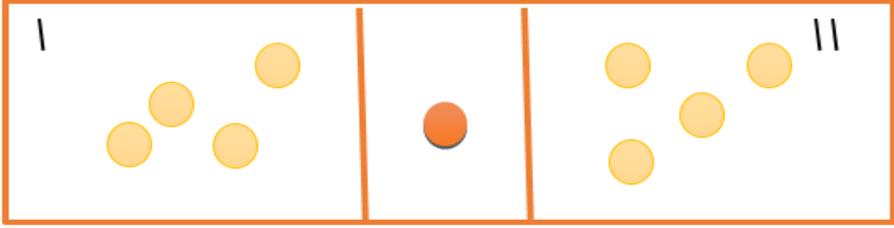
#### DESCRIPTION

- A rectangular is drawn in a field of average size.
- “Kitchen gardens” are marked at the ends of the rectangular and in the centre “a ditch” is marked, which is wide enough for a child to jump over.
- The leader of the game and “a wolf” are counted-out. Other children are “goats”.
- The wolf stands in the ditch and the goats start moving to the kitchen garden for cabbage.
- After the leader of the game shouts “Run!”, all the goats start running from kitchen garden I to kitchen garden II. To do that, they have to jump over the ditch.
- The wolf tries to catch them jumping over the ditch.
- The goat touched by the wolf becomes the wolf or leaves the game (depending on the agreement among the children).
- The wolf cannot get out of the ditch, and the goat, which steps on the ditch line, leaves the game and waits for two wolves to change.
- The goat which is never turned into the wolf wins the game.
- The ditch is widened for the goats if it takes too long to catch them.

For older children:

- To jump over the ditch on both feet, on one foot.
- To widen the ditch and to jump over it.

<sup>1</sup> adapted from Grinevičienė, N. & Jarovaitienė R. (1997). *Tradiciniai žaidimai*. Kaunas.



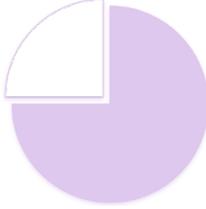
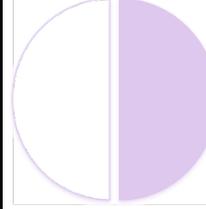
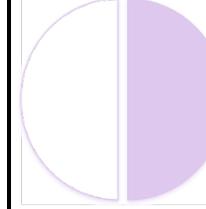
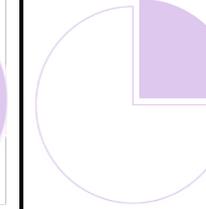
**MATERIALS**

None.

**Number of Children:** 10 - 15

**Skills:** Locomotor skills, attention, planning, information speed reaction, relationship skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

### QUESTIONS



**Descriptive:** How many goats could be caught by the wolf?

**Cognitive:** What is the difference between a goat and a wolf? What do they have in common?

**Emotional:** How did you feel when you got caught? Did you feel any difference in your body when you were caught?

**Connective:** In which daily situations do you need to be very fast? Why?

### Adaptations for Children with Disabilities



Children in wheelchair participate as goats. They are considered to be “caught” only if they are touched by the goat in two consecutive attempts. Children with visual impairment should have the help of human guide (colleague or teacher).

## HUNTER AND ANIMALS<sup>2</sup>

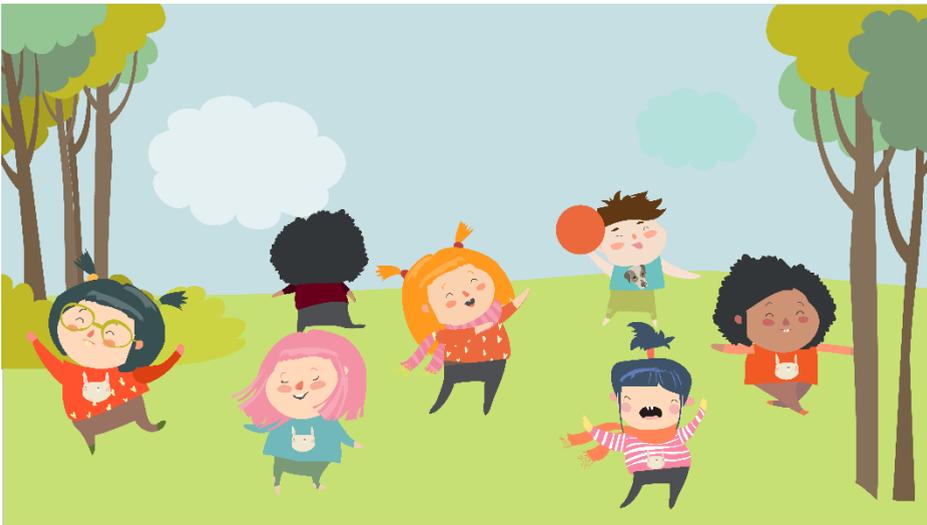


### TRADITIONAL LITHUANIAN

#### DESCRIPTION

- One of the children is the hunter. The others are animals.
- The hunter stands in the center of the ground and throws the ball upwards three times and catches it.
- The animals can spread out on the field.
- Having caught the ball for the third time, the hunter points at the animal with the ball from this position and throws it. If she or he fails, the hunter runs for the ball, and the animals run to the other side of the field.
- Having taken the ball, the hunter points at the animals again.
- She or he keeps doing this until she/he gets any animal. This animal turns into a dog.
- The dog helps the hunter, ie., if the hunter misses the animal, the dog catches the ball and throws it back to the hunter.
- Also, if the dog can also get the ball from the hunter, and he/she can point at the animals from his/her position.
- The game is over when all the children become dogs.
- The last animal standing becomes the hunter.
- For older children, animals can be replaced by numbers, letters, colours, and other signs.

<sup>2</sup> adapted from Dineika, K. (2000). *Žaidimai*. Vilnius



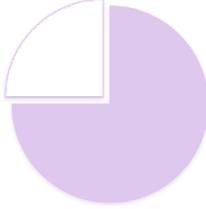
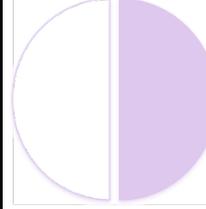
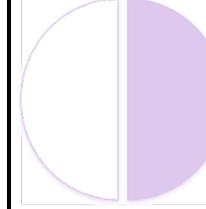
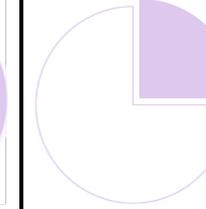
### **MATERIALS**

Ball.

**Number of Children:** 7 - 10

**Skills:** Motor competence, cognitive competence, social-emotional competence.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			

### QUESTIONS



**Descriptive:** What were the rules of this play?

**Cognitive:** How would this play become faster?

**Emotional:** How did you feel when you were touched?

**Connective:** Which animals can help us? How?

### Adaptations for Children with Disabilities



For children with physical disabilities (including those in a wheelchair), extra time can be given to the child to run away from the hunter. Children with autism can be assigned as the hunter during the play, since he/she could react negatively when the ball touches him/her. If the hunter is a child that is blind, the other colleagues should clap hands to mark their position. If the children with visual impairment is running from the hunter, a human guide could be helpful.

## SKY-SKY-EARTH<sup>3</sup>



### TRADITIONAL LITHUANIAN

#### DESCRIPTION

- In a circle, children stand further from each other facing the center.
- An adult (if there is not a child capable of managing the rope) stands in the center of the circle with a rope in her/his hands.
- She or he raises the hand and twists the rope overhead shouting: “Sky, sky!”
- After some time, she/he does the same only lower. This time she or he shouts: “Earth!”
- The other children have to manage to jump over the rope.
- The child who fails to do this (hits the rope) has to leave the game or takes over the rope.
- The rope is twisted fast higher and lower, and the words “Sky-sky-earth!” are repeated again and again.
- The game is over when all the children leave the game.
- Older children can form pairs and jump simultaneously, side by side or in front of each other.



<sup>3</sup> adapted from Grinevičienė, N. & Jarovaitienė, R. (1997). *Tradiciniai žaidimai*. Kaunas.

**MATERIALS**

A thick and long rope.

**Number of Children:** 5+

**Skills:** Locomotor skills, attention, planning, relationship skills.



DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** What did you have to do when you were in the center? What did you have to do when you were in the circle?

**Cognitive:** What can we do to reach higher?

**Emotional:** How do you feel when you play this game? Were your emotions the same when you had to jump and when you had to twist the rope?

**Connective:** Which everyday objects and things are high? And low?

**Adaptations for Children with Disabilities**



Children with visual impairments should play with a human guide forming pairs and jump simultaneously, side by side or in front of each other.

## PHOTOGRAPHIC MEMORY<sup>4</sup>



### LITHUANIA



#### DESCRIPTION

- In a natural space, without letting the children see, the adult collects five to ten usual natural objects from the area around such as a stick, a rock, a pinecone, a blade of grass, a nutshell, and so on. (Nothing poisonous or rare).
- The adult arranges the collected objects on one of the clothes, covers them with another cloth and asks children to pretend that they are a camera.
- When the adult removes the cloth, the children must keep their eyes focused on the objects that are on the cloth for 30 seconds. Then they are asked to shut their eyes tight and to take a mental picture of all the objects they have just seen.
- In small groups, children are asked to identify the objects they remember and to choose one of them.
- Referring to their mental picture, each group is asked to draw the chosen object.
- Keeping in their heads the mental picture, the children head off to find an example of each of the objects they 'photographed', placing them in the bag if they have one.
- After 10-20 minutes of searching, children are called back with the things they have found so they can lay them out in front of the covered objects.
- Then the adult takes out one object at a time from under the cloth, holds it up, and asks if anyone has found something similar.

<sup>4</sup> adapted from Houghton, P., Worroll, J., & Žaiskime, M. (2018). *Play the Forest School Way*. Vilnius.



**MATERIALS**



5-10 natural objects, 2 cloths, big enough to display/cover 5-10 objects, 1 small bag per player/team (or objects can just be carried), painting material.

**Number of Children:** 5+

**Skills:** Memory, attention, plastic expression and communication, relationship skills, manipulative skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

## QUESTIONS



**Descriptive:** What did you have to do after removing the cloth?

**Cognitive:** What strategies did you use to remember the objects hidden?

**Emotional:** How did your group reach an agreement about the object to draw?

**Connective:** How this play could be used in daily life? Which situation of daily life do you need to be attentive to memorize?

## Adaptations for Children with Disabilities



For children in wheelchairs, the adult (or another child) can go together with the child and help to gather natural objects. Children with visual impairments, can touch the hidden objects, during the “taking picture” period. Children with visual impairments should also have more time to touch the objects. Then, they can go searching objects with the help of a human guide, validating the similarities of the found objects by touch.

## JOURNEY STICK<sup>5</sup>



### LITHUANIA

#### DESCRIPTION

- In a natural space (e.g., green space / public park), the adult tells the children that they are about to set on a journey.
- In pairs, children should find or choose their own stick.
- Pairs are asked to wind rubber bands or lengths of string/wool round the stick.
- Children are told that on their journey they will be collecting natural things and objects that they like and which will become part of their sticks.
- Each pair has to put the first thing they find at the top end of the stick to indicate the beginning of their journey and to fix the last collected object near the middle or bottom of their stick.
- At the end children take time to admire all the journey sticks describing how colourful, interesting, beautiful, and unique they have become. Children are encouraged to tell the others about their journey.

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<sup>5</sup> adapted from Houghton, P., Worroll, J., & Žaiskime, M. (2018). *Play the Forest School Way*. Vilnius.



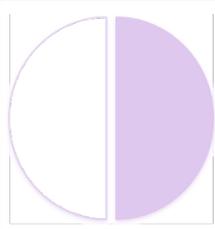
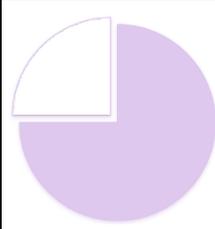
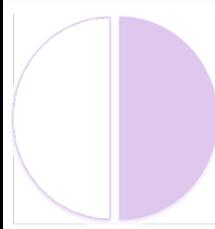
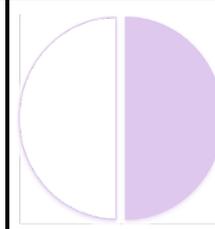
**MATERIALS**



Sticks (if fallen ones are not available on the ground), lengths of string/wool in different colours, rubber bands in different colours.

**Number of Children:** 2+

**Skills:** Attention, creativity, planning, manipulative skills, plastic expression and communication, relationship skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication
			



## QUESTIONS

**Descriptive:** Why did you choose these elements? Where did you find them? Which one did you like more? Why?

**Cognitive:** What are the differences and the likeness of the natural elements collected?

**Emotional:** How did you feel while playing with your pair? Did you always agree about the elements and the order? What did you feel when you started the journey? Have your feelings changed throughout the journey?

**Connective:** What do the plants or animals use them for? What can we do to ensure these plants and animals are still around in the future?



## Adaptations for Children with Disabilities

Children with visual impairments should touch to decide which object should be part of the journey stick. A human guide could also be helpful. Children with hearing loss should use sign language (and/or cardboards) to represent each step of the activity and to participate in the story telling in the final part of the activity. For children in wheelchairs, the adult (or another child) can go together with the child and help to gather natural objects. Some children may have trouble tying string, so it can be helpful to wind rubber bands round the stick to tuck things into.

## BAT AND MOTH<sup>6</sup>



### LITHUANIA

#### DESCRIPTION

- In an open space, two children are chosen to be the bat and the moth. All the other children will act as the trees. Holding their hands, all the trees spread out to make a circle around the bat and the moth.
- The adult blindfolds the bat's eyes with a scarf.
- Running and clapping hands, the bat has to catch the moth.
- The moth claps back so the bat knows the location of the moth and can catch and then eat the prey.
- The moth must escape the bat's capture to survive.
- If the bat grasps one of the trees while trying to detect the moth, the tree shouts out "TREE!", and then the hunt goes on.
- When the bat catches a moth, the moth is considered to be eaten.
- The activity goes on until all the children perform all the roles (the tree, the bat, and the moth).



<sup>6</sup> adapted from Houghton, P., Worroll, J., & Žaiskime, M. (2018). *Play the Forest School Way*. Vilnius.

**MATERIALS**

A cotton scarf or other blindfold.



**Number of Children:** 6+

**Skills:** Attention, planning, information processing speed, locomotor skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

**QUESTIONS**



**Descriptive:** When you were the bat, what did you have to do? And when you were the moth? Tree? Which traits, such as moving fast, listening well, being confident, are best for catching moths?

**Cognitive:** What does a moth and a bat have in common? And which differences do they have?

**Emotional:** How did you feel your body when you were blindfolded? Which emotion were you feeling when you were the moth and were about to be caught? How did you feel when you were playing as a tree?

**Connective:** Have you ever seen a bat? Which skills, such as moving quietly, staying low to the ground and being quick, helped the moths to survive?

### **Adaptations for Children with Disabilities**



Children with visual impairment should have the assistance of a human guide, in the role of the moth. Children with hearing loss can play as a moth but should not play as a bat. With children with mobility limitations (e.g., spastic child, children in wheelchairs) this activity is played by slowing motion, for instance, constraining the locomotion skills used by players (e.g., stepping, sliding, walking, moving backwards). It is also suggested that the moth is caught when the child in a wheelchair is at less than 2 meters distance.

## MUD FACES<sup>7</sup>



### LITHUANIA



#### DESCRIPTION

- In a natural area with soil and trees, children are encouraged to express their ideas: Are they going to create a mud face for an insect, an animal, or a tree? Or can it be the face of someone they know, or the face of a magical creature they have created in their imagination or a character from their favourite story? Will the face have small eyes or one big eye?
- After all the children have presented their plan for their mud art, the adult takes the children to collect the materials.
- After all the children have collected all they need and want, they can use a small stick or a trowel to make a hole past the topsoil, down to the mulch-free soil.
- Every child digs out the amount of soil enough to quarter-fill their buckets, then slowly pours water until they get sticky mud. Its consistency should be similar to that of workable clay. A tree trunk can be used to test its stickiness – if the mud sticks to it, it is just all right.
- Children will have to find a tree for their work of art to live on and to shape a good handful of mud taken from their bucket into a ball. Children will be asked to splat the ball of mud firmly of mud on the tree trunk pressing out down the edges of the mud, what will help the ball to hold firmly onto the tree.
- After the ball is stuck to the tree, the magic of creation begins, and all the children are encouraged to freely work on their face or creature as they wish.

<sup>7</sup> adapted from Houghton, P., Worroll, J., & Žaiskime, M. (2018). *Play the Forest School Way*. Vilnius.



**MATERIALS**

Waterproof and/or clothing for messy play, suitable footwear, a trowel or small spade per player, a small bucket or other watertight container per player; water (for mixing mud), soap and clean water or lots of wet wipes.

**Number of Children:** 2+

**Skills:** Plastic expression and communication, creativity, planning, manipulative skills.

DEVELOPMENTAL DOMAINS			
Motor	Cognitive	Social-Emotional	Expression and Communication

## QUESTIONS



**Descriptive:** Can you describe the muds you built?

**Cognitive:** Which different parts can you identify in your face?

**Emotional:** How did you feel while playing? Which emotions were you feeling?

**Connective:** Which everyday objects are made of mud?

## Adaptations for Children with Disabilities



Children with visual impairment should perform this activity with a colleague. The same for children in wheelchairs. Additionally, children in wheelchairs should play with the mud on a table (or use a longer stick).

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