# Nature Play for Fine & Gross Motor Skills
## Introduction

Outdoor nature play offers many opportunities for children to develop fine and gross motor skills through movement and exploration in varied and stimulating environments



## Setting the Foundation

Motor development is strengthened through repeated opportunities to move, explore, and manipulate objects. Outdoor environments naturally provide a wide range of experiences that support both fine and gross motor development.

Uneven ground, slopes, logs and open space invite children to run, climb, balance and jump; strengthening large muscle groups and improving coordination.
These experiences support gross motor development whilst also encouraging confidence and physical resilience. Fine motor development can be targeted by collecting leaves, threading sticks through holes, building with stones or digging in soil.

These activities strengthen the muscles needed for writing, drawing and tool use. Nature-rich spaces offer constant variation and challenge, so children adapt their movements and develop physical awareness through playful exploration.

*"Movement is the gateway to learning."*

*Angela Hanscom, Balanced and Barefoot.*

## The benefits

Outdoor environments offer unique opportunities for children to develop physical confidence and coordination through play. Unlike structured activities, nature-based play encourages children to move freely, explore challenges, and develop strength through real experiences.

The outdoor environment gives us the opportunity to have or make larger scale movements with our bodies and, in turn develop body awareness.

These experiences help children build the physical foundations needed for everyday tasks, learning, and independence. When children regularly engage with nature-rich environments they develop stronger bodies, improved coordination and greater confidence in their movements.

Settings can support motor development by designing outdoor environments that invite movement and exploration. Providing natural loose parts such as sticks, logs, stones, sand and water encourages children to carry, build, dig and manipulate materials. Creating varied terrain and opportunities for climbing, balancing and jumping also helps children develop strength and coordination. Staff can observe how children move within the space and make small adjustments to the environment which encourage new physical challenges and playful exploration.





Over time, settings can continue to develop outdoor environments by introducing new natural materials, creating varied landscapes and supporting increasingly complex movement challenges. These changes encourage children to strengthen their physical abilities while maintaining curiosity and enjoyment in outdoor play.

# Nature Play for Fine & Gross Motor Skills

## Setting the Foundations

Fine and gross motor skills in nature develop through active, hands-on play; where children build strength, coordination, confidence, and control through exploration, movement, and interaction with the outdoor environment.



## Benefits

Outdoor play provides rich opportunities for developing both fine and gross motor skills in early childhood. Gross motor skills are supported through activities such as running, climbing, balancing, and jumping, which help build strength, coordination, and spatial awareness. Natural environments often present uneven terrain and varied challenges that encourage children to adapt their movements on these undulating surfaces.

Fine motor skills are developed through handling natural materials like leaves, sticks, stones, and sand, which promote grasping, pinching, and manipulation. Outdoor play also enhances concentration, problem-solving, and independence, whilst supporting overall physical health and wellbeing in a stimulating and engaging environment. The benefits of this early input reaches far beyond the early years into adulthood.

**Challenges** can limit outdoor play and, in turn, impact the opportunities for the development of fine and gross motor skills. Limited access to suitable outdoor spaces can restrict opportunities for movement and exploration. Weather conditions may reduce the frequency or duration of outdoor play, particularly in settings without adequate shelter or resources. Concerns around safety and risk can sometimes lead to overly cautious supervision, limiting children's chances to climb, balance, or take physical risks. Time pressures within structured routines may also reduce opportunities for free play. Additionally, lack of resources or poorly planned environments can limit engagement; making it harder to fully support motor development.

## Fine Motor Skill

Fine motor skills development in early years can be supported through a range of areas that practitioners intentionally encourage through play. These include finger strength;  such as isolating individual finger movements, developing thumb strength, and practising grasping and pincer-grip. Hand strength is supported through activities involving radial palmar grasp, in-hand manipulation, and the use of hand arches. Hand-eye coordination develops through tasks like pouring, posting, aiming and mark-making, including forming lines and circles. Mark-making itself involves pressing, squeezing, pinching, and combining movements. Scissor skills require bilateral coordination, while wrist strength focuses on stability, flexibility, and extension. Practitioners can support these skills through natural, play-based, hands-on activities that encourage repetition and exploration.

## Gross motor skill

Gross motor skills development in early years involves several key areas that support children's overall physical competence. Postural control is essential for maintaining balance and stability; supported through vestibular processing activities such as balancing on stepping stones, logs or crates. Crossing the midline helps children coordinate movements across both sides of the body, while proprioception develops their awareness of body position and movement in space. Large muscle strength, upper body strength, and shoulder girdle stability are also crucial for activities like climbing, carrying, and pushing. Practitioners can support these skills by providing varied outdoor experiences, encouraging active play, and offering environments that promote movement, challenge, and exploration.

## Best practice

Best practice in supporting motor development outdoors is centred on a cycle of intent, implementation, and reflection. The intent focuses on planning experiences that follow children's interests, ensuring the outdoor environment is responsive, engaging, and rich in opportunities for both fine and gross motor development. During implementation, practitioners adopt an observing role, allowing children to lead their play while carefully noticing how they move, interact, and develop skills. Reflection then involves evaluating the impact of the environment and provision, identifying progress, and considering next steps. This ongoing process ensures practice remains purposeful, child-centred, and supportive of continuous physical development.

# Nature Play for Fine & Gross Motor Skills

## Reflecting on Experiences

Overview Physical literacy is the confidence, motivation, and ability to move. Developed through play, it supports motor skills and helps children become active, capable, and engaged learners for life.



## Keep On Moving

Physical literacy refers to the motivation, confidence, physical competence, knowledge and understanding that enable children to value and engage in physical activity throughout their lives. It is not just about being active, but about how children move, feel and think about movement. In early years settings physical literacy develops through play, exploration and movement experiences especially through outdoor play and engagement with nature.

Natural environments such as gardens and parks encourage children to run, climb, balance and explore. These experiences build fine and gross motor skills, confidence and curiosity. Children see themselves as capable movers, supporting lifelong health and wellbeing.

*"Play is the work of Childhood"*
Jean Piaget.

Physical literacy is vital in the early years as it lays the foundation for lifelong health, learning, and wellbeing. Through active outdoor play, children develop essential motor skills such as balance, coordination, and strength. These experiences also support brain development, improving concentration, memory, and emotional regulation. Early opportunities to move help children build confidence and a positive attitude towards physical activity. Establishing these habits at a young age reduces the risk of sedentary lifestyles later on. In nursery settings, prioritising physical literacy ensures children are supported holistically, enabling them to become active, independent learners with the skills needed for future development.

## Creating Environments

Outdoor environments play a vital role in developing physical literacy; offering children space, freedom, and varied opportunities for movement. Natural spaces are particularly effective as they provide uneven surfaces, open areas, and loose materials that encourage a wide range of physical skills. Research shows that diverse outdoor environments support physical activity, motor competence, and overall development in early childhood.

In practice, activities such as climbing over logs, balancing on uneven ground, digging, carrying, and building with natural materials promote both gross and fine motor development. These experiences also encourage problem-solving, creativity, and resilience.

Practitioners support this by creating enabling environments and allowing children the time and space to explore freely. Natural materials offer open-ended opportunities that adapt to children's interests and abilities. This helps children develop confidence in their movement; strengthening their physical literacy in a meaningful and engaging way.

## Understanding Why

Evidence suggests that children in the UK are spending less time outdoors and engaging in play due to a combination of societal and educational changes. Research shows that one in three children do not play outdoors after school, and one in five do not do so at weekends. Within schools opportunities for play have also declined over time; some studies indicate that breaktimes have reduced significantly. In some primary settings children lose an average of around 23 minutes of play per day compared to previous decades. Contributing factors include increased academic pressure, greater screen use, concerns around safety, and limited access to suitable outdoor spaces.

These changes highlight a growing need to prioritise play within early years and education settings to ensure children have regular opportunities for active outdoor experiences that support their development. Consistent access to outdoor play in natural environments is therefore essential as it enhances physical literacy, supports holistic development, and promotes children's physical, social and emotional wellbeing.

# Nature Play for Fine & Gross Motor Skills

## Further Thinking & Reading

By staying curious and reflective adults can create richer, deepening opportunities that strengthen children's confidence, coordination, and wellbeing through careful observation that benefit everyone.



## Keep On Moving

Facilitating play that enhances children's motor skills is a vital role of a practitioner. Angela Hanscom highlights in 'Balanced and Barefoot'how outdoor play and unrestricted movement support areas including coordination, balance, and sensory processing. Practitioners can support this by creating safe, stimulating outdoor environments and allowing children the freedom to explore, climb, and take appropriate risks.
Carla Hannaford also emphasises that movement is essential for brain development and cognitive function linking physical activity to memory, focus, and emotional regulation. This reinforces the practitioner's role in planning purposeful, active play experiences that encourage whole-body movement to promote not only gross motor skills but also fine motor skill development. The outdoor environment lends itself naturally to offer these learning moments with little preparation. However, the practitioner can provide a balance of simple structured and child-led activities such as obstacle courses, natural resources such as sticks and stones and plan for sensory play. Practitioners should adapt activities to meet individual needs, while encouraging confidence and independence for all. By actively facilitating movement-rich play, practitioners help children build strong motor skills; supporting both their physical development and their ability to engage in learning effectively.

***"Hands are the instruments of human intelligence. Through movement and touch, children explore and understand the world. What the hand does, the mind remembers."***

*Maria Montessori*

## Understanding the Environment

In nursery settings practitioners play a key role in shaping outdoor environments that support motor development. By observing which areas children are naturally drawn to, practitioners can identify where movement and exploration are most effectively taking place.Loose parts areas encourage both gross motor skill development and ensure access to fine motor skill development. Practitioners should also recognise when areas are underused and make simple adaptations; such as introducing new resources or refreshing layouts to increase engagement. This might be to add different resources such as sticks instead of stones. A well-considered environment ensures varied, meaningful opportunities for all children.

## Being a Curious Observer

Practitioners support motor development best by becoming attentive and curious observers of children's play. Rather than directing, Practitioners allow the children to explore the space and practice skills independently, at their pace and through play, while remaining present and responsive. Through observation, practitioners note repeated actions, pre-ferred activities, and differing levels of confidence in physical challenges.

Some children actively seek movement, while others benefit from co-exploring with the adult. Natural materials provide opportunities for refining fine motor skills through handling and ma-nipulation. These observations help practitioners understand each child's development and respond appropriately. This approach supports both fine and gross motor skills while maintaining the flow of child-led, meaningful outdoor play.

## Reflecting on Adult Practice

Reflecting on practice while its happening and afterwards (Schon 1983 ) allows practitioners to assess and adapt their interactions, support children's motor development. A balanced approach ensures that movement is encouraged without limiting children's natural exploration. Knowledge of the progression of fine and gross motor skills allows practition-ers to recognise what learning is happening within play and promote it. Ongoing reflection helps practitioners to remain intentional in their practice; ensuring their role enhances children's confidence, independence, and physical literacy.

## Planning Future Opportunities

Planning for motor development involves building on children's interests and current abilities. Practitioners use observations to identify next steps and create opportunities that are engaging and developmentally appropriate. Small changes, such as introduc-ing new natural materials or adapting outdoor spaces, can encourage different types of movement and exploration. A responsive approach ensures that activities remain mean-ingful and motivating for children. By following children's interests, practitioners support both fine and gross motor development in a natural way. Continuous reflection and adap-tation of the environment help maintain a dynamic outdoor space that promotes ongoing physical development and active learning.

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## Next Steps

Exploring challenges in outdoor motor development, using reflective practice to reframe barriers as opportunities to support children's movement, confidence, and engagement in nature.



## Embedding Reflection, Growing Change

Practitioners often encounter challenges when supporting fine and gross motor development outdoors, including limited space, varying confidence levels, and differing physical abilities. Rather than viewing these as barriers reflective practice encourages us to pause and consider what these challenges are telling us about children's experiences. For example, a child who avoids climbing may not lack ability, but confidence or previous opportunity.

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By observing closely and reflecting on patterns of engagement, practitioners can begin to understand individual needs more deeply. This shift in perspective allows challenges to become useful insights, guiding more responsive and thoughtful provision in outdoor environments.

*"Reflection involves the active, persistent and careful consideration.. "*
John Dewey

### Reflection Can Transform Activities into Deep, Learning Opportunities.

Settings can strengthen practice by:

- Documenting children's movements and discoveries during play.
- Sharing observations during team discussions.
- Identifying how environments support different motor skills.
- Noticing which materials invite repeated manipulation or movement.
- Connecting play experiences to wider learning and development.

## The benefits

Outdoor spaces do not need to be extensive or highly resourced to be effective. Reflection can help practitioners see existing environments differently, recognising the potential within natural and everyday materials.  A small area can still provide rich opportunities for movement, exploration, and skill development. For instance, uneven ground, loose parts or simple natural elements can encourage balance, coordination, and fine motor control. By reflecting on how children use the space, rather than what is missing, practitioners can make intentional adjustments that enhance engagement. This approach supports a mindset that values creativity and adaptability, ensuring all environments can promote meaningful physical development.

Children engage with outdoor play in different ways, and some may appear hesitant or less physically confident. Through reflection, practitioners can consider how their interactions, expectations, and environment influence participation. Small changes, such as offering encouragement, modelling movement or adjusting levels of challenge, can make a significant difference. It is also important to reflect on inclusion, ensuring that all children can access and benefit from outdoor experiences regardless of ability. By focusing on what children can do, and building from their strengths, practitioners create a supportive environment where confidence grows naturally over time through positive, repeated experiences.





Reflection is not a one-time process but an ongoing cycle that strengthens practice over time. By regularly considering what is working well and what could be adapted, practitioners can continuously improve opportunities for motor development in nature. This might involve reviewing observations, discussing practice with colleagues, or making small, meaningful changes to the environment. Importantly, reflection helps maintain a positive and proactive approach, even when challenges arise. It supports practitioners in remaining responsive to children's needs; ensuring that outdoor play continues to be engaging, inclusive and developmentally rich; ultimately fostering strong foundations for physical literacy and wellbeing.