

Toddlers Outdoors

Play, learning and development

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Introduction

“The child is wonderfully prepared for active learning from birth. Children approach the world with all senses open, all motors running – the world is an invitation to experience. Their job is to develop and test all their equipment, make sense of the confusing world of people and things and unseen mysterious forces and relationships, like gravity, number and love. Neither infants not preschoolers, toddlers are furiously becoming: increasingly mobile, autonomous, social, thoughtful creatures with language and insatiable urges to test and experiment. These restless, mobile characters have a drive to take apart the existing order and rearrange it, by force if necessary, to suit their own whimsically logical view of the universe.”

[Jim Greenman 1988]

Daily opportunity to spend time in rich outdoor environments is of crucial importance for all children, and this is especially true for children in their second year. The development of walking enables the child to explore under his or her own steam, and to have their hands available whilst doing so, opening up a vast range of possibilities. This child is intensely driven to explore and is hugely disadvantaged if this is restricted to a range of indoor environments, however varied. As adults entrusted with the care of very young children, we are duty-bound to provide the best possible circumstances for their well-being and healthy development. Playing outdoors has a huge range of benefits.

“Very young children have a very special way of relating to the outdoor world. It is of enormous interest to them – the easiest way to support an unsettled baby or toddler indoors is to take them to a window to look outside. They have an inborn affinity, curiosity and fascination with the natural world: sky, wind, rain and shadows; plants, trees and leaves; sticks, pebbles and rocks; water, puddles and mud; dogs, birds and beetles and people. Children use their whole body and whole self to engage with, explore, dismantle and think about the world – and this is very apparent when young children are in the real, outdoor world.”

[Jan White 2009]

The outdoors is a very special place for one year olds. As you watch this film, here are some of the things you might identify that the outdoors offers toddlers:

- freedom for movement, action and working out what bodies can do;
- natural light, sunshine and fresh air, providing oxygen-rich air and helping the body to operate and grow optimally;
- visual and physical space, with the full range of close-up to views of the distance, and upwards as well as side-ways. Movement in this space enables development of all the complexities of visual perception;
- a richly varying, highly sensorial environment where touch, smell, sound, taste, sight, movement and body-awareness sensory systems can develop and integrate together;
- a phenomenal range of interesting stimuli, the surprise of spontaneous events, and daily variations in the quality of the air, temperature and light as weather and seasons change;

- physical and emotional contact with the natural world: both the living world of plants, mini-beasts and other animals, and physical world of water, earth and stone;
- a myriad of different spaces (with different microclimates, sensations and viewpoints) and hundreds of things from the miniscule to the mighty to poke at and ponder;
- a place to watch people of different sizes and behaviours, to interact, to build relationships and learn about being human.

[Jan White 2009]

This film has been made to support parents and providers in early years settings to develop their understanding of, and commitment to, the role of the outdoors for children from 12 to 24 months. Watching the sequences repeatedly will enable adults to tune more deeply into just what it is that toddlers want to do and know about when they are outdoors. It will also give a great deal of food for thought and discussion towards the development of appropriate provision and practice that is fulfilling for children and adults alike.

We hope the film will:

- show how much toddlers get from being outside and why it is so important for them;
- make the special nature of being outside apparent and clear, so as to build the rationale for outdoor provision in all early years settings;
- show what the outdoors offers toddlers, how it meets their interests and supports well-being and development;
- help adults tune in and see more of what is really happening in toddlers' exploration;
- emphasise movement and exploration for this age group, showing how experience develops both brain and body;
- make parents expect and demand outdoor opportunities every day for their child.
- expand adults' thinking about what is appropriate provision - and that this is so much more than tarmac and toys;
- make adults WANT to take toddlers outside and be with them, to share in their pleasure, delight and discovery;
- show that toddlers must have outdoor experiences every day (several times in day) and all through the year;
- make parents expect and demand outdoor opportunities every day for their child.

The notes have been written primarily to help viewers to observe more closely some of the significant things that are taking place for the child in the sequence. The section entitled 'things to notice and understand' aims to focus attention on issues that are important to know about. The sequences show a great deal about child development in general, and can be used very



effectively in this way. The focus of the notes, however, is to bring attention to those elements that are particularly relevant to being outdoors. Understanding more about these issues will support practitioners to develop both provision and their practice outdoors. There are common themes across the six children, such as 'the role of movement', because these themes are of great importance during this year. Within these themes, development can be seen as we move from Liam at 13 months, to Daisy at 22 months.

The notes for each child also have a section called 'prompts for developing practice'. The aim here is to identify what makes outdoor provision effective and satisfying for both child and adult, and to give prompts for closer observation of the film sequences followed by focused discussion. Improvements in provision and practice are more likely when understanding of these issues is developed and positive thinking about barriers, objections and stumbling blocks is carried out.

Above all, every adult living with and supporting toddlers wants to give them certain messages, and hope that they will come to believe these things about themselves. Close examination and consideration of the film and accompanying notes should support adults to use the huge potential of the outdoors to make young children feel that:

- they are good to be with – it's great to be doing things together outdoors;
- they can feel good in their body – responding to children's drives for doing, moving and using their whole body, and helping them to take pleasure in how that makes them feel;
- they are capable and competent – offering the right level of intellectual, emotional and physical provocation and challenge, and using experiences to help children gradually learn how to look after themselves and others;
- they are trusted and responsible – setting things up so that children can play independently and support each other, and providing plenty of first-hand experiences and meaningful real tasks;
- they are curious and adventurous – offering an environment full of irresistible paces, materials and experiences;
- they are creative and inventive – having an open, flexible approach that encourages young children's great imaginations and values the unexpected.

[Jan White 2010a]

This quotation, written in 1956, seems as relevant now as it was then:

“If a child is to keep alive his inborn sense of wonder... he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in.”

[Rachel Carson 1998]

We hope that being able to closely observe and come to understand these six deeply curious and enthusiastic one year olds will help you to tune into their real natures and passions; and that you will want to share in their pleasure, delight and discovery, every single day, throughout the year.



Liam

13 months

Things to notice and understand

The role of movement

“Young children take in information about the external world by physically and bodily - interacting with it, and build understandings by moving thought it and manipulating it. They think by moving and express their thoughts through movement. They gain an understanding of their bodies, themselves and how their body relates to the world by experiencing the sense of movement.”

[Jan White, 2008]

Movement is the child's first 'language' and it remains their dominant sense throughout childhood. For adults, the movement information coming into our brain from our body and the external world is so deeply embedded that we are, for most of the time, completely unaware of it. This means that we can deal with life without having to take up thinking space for controlling our body and functioning well in space and gravity. When we watch toddlers, especially when they have the space, freedom and stimulus, we can look deeply into the fundamental role movement takes in their lives, and in their exploring, examining, thinking and development. It really is the most important thing for toddlers to be doing and it's what they want to do, all the time. Alarming though, opportunity for movement is increasingly being reduced in the lives of many very young children, as they are strapped into car seats, buggies and other restraints, offered TV and DVDs and have limited space to move energetically. Lack of movement makes a child lack-lustre and sleepy or frustrated and depressed, and it severely and deeply prevents healthy development.

Watching Liam at work in the familiar space of his garden, with the nearby emotional base of an attentive and important person who he knows is taking care of his safety, we can see much about how he uses his whole body and movement to find out about his world, see how things work in this world, and feel how he relates to it. He is also getting a great deal of work done on developing his balance, loco-motor skills, coordination, strength and control. And in doing this he is also developing an awareness of his own body and a sense of himself in space; gaining pleasure and mental stimulation from movement; feeling good in his body and building a sense of being 'me'. Use of the body develops the brain in many other ways, and research shows that perceptive and cognitive growth is highly dependent on use of the body and movement in space [Hannaford 1995]. For young children movement is thinking, and they do not think well without action and movement. All the children in this film show us aspects of the vital role that movement has for toddlers and that it is a very important part of life throughout this year.

Liam knows what this space offers him for using his body, and each day he can revisit and repeat these experiences. Through this daily access his abilities develop a little every day, so that he can use the same interesting and opportunity-filled environment slightly differently each time – and keep referring to his safe base both to check that he will be safe and to share his delight in what he can do.

Sensory development

“Armed with his senses Liam uses his movements and actions to explore the world.”

As well as feeling the world through movement, toddlers actively use all their other senses to stimulate the development of nerve connections in their very rapidly developing brain: research has shown how much a richly sensory environment impacts on the complexity of the brain in mammals. The outdoors is intensely multi-sensory, meeting these needs very well in a multitude of ways, and we can see Liam seeking out sensory information and stimulation all the time. As well as touch, sound, vision, taste and hearing, the human body has sensory systems to detect and analyse the body's position in gravity and acceleration, enabling us to have balance and coordination (the vestibular sense – or equilibrioception) and internal body awareness (the kinesthetic sense – or proprioception) (see the notes for Abolfazal). Toddlers are very actively working to develop all of these, wiring up the brain through experience so that it can both detect, and interpret what it has detected. These senses also need to wire up to each other to become smoothly integrated (sensory integration), so that the body can work in the highly effective way it is capable of [Stock Kranowitz 2005]. The integration of vision with movement, for instance, allows us to understand what is going on when we move through space – and it can only become wired up through moving through space while receiving complex visual signals at the same time. (Vision also needs movement to develop fully: we can see this taking place when Yasmine is moving around her group of animals to view them from different perspectives). Having well-developed and well-integrated sensory systems is incredibly important to life functioning and learning, so it's not surprising that toddlers are so driven to do this work on their bodies! It is our task to ensure that they are doing this (and we can't do it for them) – so we need to find a good balance between meeting these developmental imperatives and our tolerance for bumps and bruises.

The special nature of the outdoors

“The outdoors has a special way of supporting young children's well-being and supplies both the medium and the means for responding to their deep drives for exploration and their quest to make sense of their world for themselves. Outside, children can learn in the ways that suit them best, actively handling, moving and doing, using their whole bodies and all their senses, and with direct experience of real things that matter to them – the real world of adults and older children.”

[Jan White 2009]

Rather than attempting to 'take the indoors out', it is absolutely vital that outdoor experiences for young children capture the special nature of the outdoors. The outdoors is different to the indoors and this is why it matters for children [White 2010b]. If we don't harness this potential to offer children what the indoors cannot, we are missing the point – and missing the huge capacity of the outdoors to help

young children thrive and grow. Watching the incredibly rich experiences Liam has with his Mum in the garden, the park and the small lane behind their house, it is clear that the outdoors offers many things that add greatly to what the indoors can offer – it is a very different place for children to be in. It's a very worthwhile exercise to analyse the special nature of the outdoors. It is complex and multi-layered and it takes time to fully appreciate; but young children are very tuned into these differences. Several viewings of Liam and plenty of discussion will be necessary to fully appreciate everything he, and the other children in the film, are able to get from these environments. Paying close attention to the differences and complementary experiences available – what makes the outdoors special – will help teams to reach a shared understanding and belief in the importance of the outdoor half of the setting's environment. And these are the things that we should be seeking to provide through outdoor experiences for all children.

Liam's Mum has experienced the value of taking him outside every single day as part of their routine – he thrives on these experiences and his well-being is served also by his certainty that he will be able to go outside whatever the weather or time of year. She also gains by having time with Liam where he is fully engaged, enlivened and responsive to her, which is fulfilling for both of them and helping to deepen the relationship they have with each other. Every day is different and new, and all weather is good for toddler exploration, discovery, experience and development. During this year, children are developing at such a rapid rate that they cannot wait through the winter for 'good weather' – they need the richness of this environment every day of their lives.

Toddlers are driven with a strong biological need to find out about and make sense of the real physical world and the real world of humans; and the outdoors in all its richness and complexity has a huge role in this. Short walks into the locality and community, with very small groups of children, is so valuable that practitioners must work out how to tap this potential.

Although practitioners and parents have a very realistic and understandable concern about germs and hygiene when young children are exploring the outdoor world, this needs to be balanced with the value of exposure to the normal bacteria that live in every part of our environment. Medical opinion seems to be growing in support of the 'hygiene hypothesis', first proposed in the 1980's, which suggests that early childhood exposure to bacteria in the environment 'prime' the immune system to prevent allergies [Davies 2009]. The young child may need such exposure in order for their developing immune system to learn how to protect the body without over-reacting: some germs do appear to be good for us. Since humans evolved in the outdoor environment, it is likely that our bodies learned to live with many of the germs that co-exist with us, and that toddler exploration assists in building a well-functioning immune system. Along with many other health benefits, play outdoors may help to protect against allergies and other immune deficiencies [see also Engle 2005].



What matters to toddlers: schemas

Young children have some very important questions that they constantly seek to explore, and like the scientists that they so clearly are, they ask their questions at every possible opportunity, construct 'theories' based on the evidence they have gathered, and seek to test these theories many times and in lots of ways. Through this process, they are constantly constructing their abilities to perceive and their abilities to think, as well as their ideas and theories about how things are in the world. Toddlers, and Liam is a very good example, seem to be driven by such big questions as 'what is in the world?', 'how does it work?', 'what does it do to me?' and 'how do I fit in?', and they do this through a great deal of 'object play' and embodied exploration. Later in the film we can see slightly older children working on 'what can I do with these things?' (Yasmine) and 'what can they become?' (Jaleel). It is very important that adults supporting toddlers are tuned into the questions they need to explore. Not only does this help cognitive development in the best way; it also strongly supports their emotional well-being and reduces frustration and conflict.

A fascination with holes and gaps is very common in 1 year-olds, and they are intensely aware of miniscule things. This is a particularly enjoyable aspect of sharing explorations with children of this age: they notice things adults have long forgotten and ceased to look at. We must find the time to allow ourselves to be drawn in, to share in the detail and wonder of the tiny side of the world.

Liam's interest in holes may also be connected to his on-going passion for exploring the idea of 'in and out'. In and out is a pervasive element of the physical world and provides a foundation for mathematical and scientific ideas – as well as having relevance to the social and emotional world of human relationships. Watch the film with others to notice all the ways he finds to deepen his understanding of this concept, and how he gains embodied feelings for what it really means. (The notes for Abolfazal, Michael and Yasmine say more about schemas. Also see Arnold 2010).

The right stuff

The outdoor environments that Liam has daily access to contain just the right materials to best support his thinking and development. They are part of the real world, so they are of great interest to him. They are highly sensory, providing stimulation for several senses at once. They are open-ended, non-prescribed and abundant, so he can do what he wants with them. We provide materials like these indoors, such as sand and water, as they are very effective as learning tools, but toddlers are then severely constrained in the ways they can use them. In the outdoors they can be accessed in much richer ways: they can be picked, gathered, collected and piled up; they can be moved around from one place to another; they can be dipped and dropped, rolled and dumped; they can be mixed and stirred; they can be sat in and stood on; they can be felt and experienced with the whole body; they change with the weather and the season; they can be present in great quantities; and they are



there every day to come back to over and over again. Natural materials are the richest source of interest and possibility for young children outdoors, they are where they belong and where they have the most to offer by interacting with all the other things in this environment.

Adult support and interaction

At this time of his life, he relies on adults to keep him safe, but although popular opinion has it that children of this age have no sense of danger, it is apparent that Liam checks frequently with his safe base that what he is doing will not cause him harm - this is an inbuilt survival strategy that adults can make good use of! As well as providing a strong safe base for Liam's well-being and exploration, the adult in this sequence is providing just the right style and amount of support and interaction. She knows Liam very well and is very aware of what interests him, what he wants to do and how he needs to do it. She supports him from a distance that keeps him secure but that gives him lots of room to follow his own ideas. Most importantly for this age group, she very consciously goes at his pace, allowing him enough time to work through whatever it is that occupies him, and to return to these on a daily basis until he is ready to move on. This approach is nicely captured in the term 'slowness', and allowing toddlers to take their time is an important element of appropriate practice. The outdoor world is so full of interest and opportunity for toddlers, and they have so much that they need to be working on for themselves that they must not be hurried, time-limited or moved on in their learning too quickly.

"The more slowly trees grow at first, the sounder they are at the core, and I think the same is true of human beings."

[Thoreau]

Prompts for developing practice

Organisation

- Effective outdoor provision requires an ethos and vision, underpinned by a strong rationale, that toddlers must have access to outdoor environments for plenty of time each day, every day of the year. How can you work towards this in your setting? What issues would need to be addressed in a policy to help bring this vision about?

- As we can see with Liam, one of the very first steps in making good use of the outdoors is to have suitable clothing to keep both children and adults comfortable and safe in the different weather conditions we have through the year. Good clothing protects without getting in the way of what children want to do. This might be all-in-one suits or dungarees with jackets (better for warmer weather) – it makes a big difference to use those that make nappy changing easier! How can the setting ensure that appropriate clothing is always available and easy to use?

Environment

- View the film several times to consider the endless richness of simple things like grass, gravel, conkers and water in Liam's outdoor spaces. Analyse what Liam makes use of in each of his outdoor environments and what these features and materials offer him for well-being, thinking and development. Extend this discussion to consider what your outdoor space could provide to offer a developmentally appropriate outdoor environment for toddlers.
- Safety is of course of paramount importance, so your discussions should also consider how Liam's Mum has made sure that he is kept safe and is learning how to keep himself safe – and how this would happen in group provision.

Adults

- Adults need a deep understanding of the role of movement in the lives of toddlers. Watch the sequences of each child several times focusing on what they are doing with their body and what they seem to be getting from this. By sharing perspectives and discussion, build up a picture of the role of movement and action in the well-being, thinking and development of 1 year-olds.
- For toddlers to get the most from being outdoors, they need the close accompaniment of adults with a high commitment to the value of the outdoors who take great pleasure in being outdoors with them, and who see all weather as 'good' weather! Discuss the various ways that the adults in this film show these commitments and skills.

Parents

- Dirt and germs as a health concern is a difficult issue which has to be carefully discussed within the team and with parents, so that adults are all comfortable with the setting's practice. How do we enable toddlers to explore in a safe enough way? Is 'dirt' okay for toddlers and where is the line?
- Liam clearly benefits from being able to walk around outdoors in bare feet. He also falls over often, risking scrapes and cuts – but this is part of his learning and development. How do we balance our fear of bumps and bruises with the developmental value of toddler exploration outdoors?



Abolfazal

13 months

Things to notice and understand

The role of movement

Like Liam, Abolfazal engages in a huge amount of movement when he has the space, opportunity and challenge that being outdoors provides – it's not surprising that toddlers sleep so well when they have lots of outdoor play! We can see again that senses, movement and action are at the heart of toddler exploration and development.

The spinning movement that his key person, Lisa, knows he likes so much is a particularly important kind of movement for development. This is why children of all ages, from new-born babies to teenagers, actively seek experiences that involve rocking, swinging, rolling, turning, spinning, twisting, tilting, tipping, falling, bouncing, sliding and moving fast, wherever they can be found. Moving in these ways provide sensations that develop vestibular organs in the inner ear that tell us where we are in space in relation to the force of gravity. Children love these turning and tipping sensations because it's very important for life functioning that they develop this sensory system. The vestibular sensory system underpins the development of balance, body control and coordination, which themselves underpin so much else both physically and emotionally. Having a strong sense of movement and balance, and how to cope in the world, is a hugely important developmental process for toddlers, so they need very many such movements every day to develop this sense fully. The outdoor environments toddlers play in must offer features (such as slopes, steps, slides, low jumping off points, things to twist and turn around and a range of surfaces) and resources (such as rockers, swings, tyres, hammocks, spinning cups and strips of fabric to twirl with) that offer plenty of potential and invitation ('affordance') for children to use in their own way [White 2008b]. At this age especially, they also very much need adults who move them bodily, as Lisa is doing, and maximise their access to this type of movement.

Abolfazal also shows us how toddlers use movement to gain body awareness and control. Awareness of our body, a feeling of being in it, knowing where our limbs and 'edges' are, and where it is in space are things that we take for granted. We don't need to take up conscious thought for all the thousands of ways we position and use our bodies for day-to-day functioning, because as young children we worked very hard to develop our proprioceptive sensory system. Nerve-ending sensors (proprioceptors) in the muscles, joints and tendons become connected to the brain so that we gain the complex ability to sense and control body movement and position. It is this kinaesthetic sense that helps us to know about our own body from the inside and that gives us a feeling of being in our body [Sacks 1985] and the 'feeling of life itself' [Jabadao 2005]. Children with a well developed proprioceptive system have a firm sense of self and are able to feel confident in



the world. Since this is what we all want for children, it is our responsibility to ensure that the toddlers in our care have lots of access to the movements that develop body sense. Fortunately, like vestibular development, this is hard-wired into toddler drives and behaviour, and the outdoor environment provides lots of invitation and provocation. Running, jumping, rolling, rough and tumble play, being wrapped up, pushing, pulling, stretching, hanging, lifting, carrying and throwing all give the resistance and tension work that stimulates nerve and brain development for this sensory system [White 2008b]. This knowledge gives us deeper insight into what is really going on in toddler play: watch, for example, how Abolfazal uses the wheelbarrow to get these experiences and feelings.

Sensory development

The richness of the outdoors as a place for sensory exploration, development and integration is again apparent in these sequences. Like all one year-olds, Abolfazal is alert to everything. He seems to be particularly tuned-in to sounds, making them himself and noticing them in his environment. The outdoors is a wonderful place for the development of all the different elements of this very important and complex sensory system. The world is full of sounds, and young children have to learn to hear them separately (discrimination), understand what they relate to and what they mean (recognition), work out where they are coming from (direction) and how far away they are (distance). Like our eyes, having two ears working in harmony allows us to locate and move towards sounds. In addition, in order to understand the meaning of individual sounds, hearing needs to be integrated with vision in the brain. Indoors, sounds bounce back from walls and can get confusing and become overwhelming. Outdoors the range of sounds to learn about is endless and fascinating. Abolfazal's curiosity and pleasure in making sounds is also typical of toddlers, and he is inspired to make his own vocal sounds alongside. In this he is learning about cause and effect (when I do this, this happens), he is developing his own sense of agency (when I do this, I can make something happen), and he is developing listening and vocalisation for language development.

Use of the hands

Once toddlers are up on their feet, their hands can be used in new ways. As well as increasing abilities to handle and manipulate, they can carry, throw, pull and push, and experience the pleasure of being able to make things move. The human hand can do things that no other animal can, and allows us to do an incredible range of things with our environment. Its use probably influenced the way humans evolved, as freeing the hands while standing and walking had a major impact on what we could achieve. Frank Wilson, in the book 'The

hand: how its use shapes the brain, language and human culture' suggests that the human hand has played a key role in the evolution of our intelligence and creativity [Wilson 1998]. Abolfazal is able to work on his developing dexterity and strength in his fingers, wrists and arms, while exploring his interests in gravel, water, sounds, brooms and balls. Yasmine also shows us how the experiences possible outdoors are both supported by having hands free for transporting materials, and support development of the hand through carrying and squeezing. The hand is also, of course, wonderfully sensitive to touch, size, pressure and weight, adding immensely to the sensory input from this multi-sensory environment. By the beginning of this second year, sensitivity of the fingertips has developed, so that children mostly transfer from the use of the mouth for exploration to use of the hands. Abolfazal does briefly mouth a plastic ball, but fears of children putting objects in their mouths from a hygiene perspective are largely reduced. However, the possibility of small objects being a choking hazard must form part of any risk assessment, both indoors and outdoors.

Special nature of the outdoors

While Liam accesses huge variety through the different outdoor environments he visits each day, Abolfazal's nursery environment shows just how much variety is generated simply through daily changes in the weather and by having a variety of spaces and places to come back to every day. Places and objects feel and behave differently each day, the amount of cloud cover affects light and wind levels, being inside the willow tunnel can feel cool and dappled one day and dark and damp another. We are blessed in the UK with four different weather systems, bringing constantly different weather and (with appropriate clothing) unexpected delights. Add to this the gradual changes through the seasons, and every day really is new and exciting.

Change and contrast outdoors also comes from the variety of spaces that can be present. Most toddlers are drawn to small spaces, and like Liam exploring the spaces amongst the wheelie bins, Abolfazal clearly enjoys the enclosed space provided by the willow tunnel. It offers him many things, but an especially important role for 'nooks and crannies' has to do with the deep need of young children to feel nurtured, safe and hidden – that is, for 'refuge'. The best hidey-hole or den is a child-sized space, big enough for just a few children, which gives them the feeling of being out of sight. Importantly though, this space must have gaps to look out of and clear entrances to go in and out as they want – otherwise it can feel more like a trap. Small spaces, especially with a roof, seem to encourage social play and, for older children, imaginative play – this might be because the child feels secure and relaxed. By repeatedly going in and out of small spaces, the child can develop a sense of space, a sense of their body and a sense of how they fit into the world. Acknowledging the toddler's need to explore all the corners and spaces behind sheds and between buildings is important (so we need to make these places safe). It is easy to make lots of additional nooks and crannies in any outdoor space – a cardboard box and blanket is an excellent place to begin.

What matters to toddlers: schema

When children are enabled and encouraged to follow their own interests, they reveal some deep thinking and strong dispositions for learning. Abolfazal has a

similar on-going interest to Liam, in being particularly aware of the idea of 'in and out'. He is drawn to experiences that fit with his schematic interest and alert to new manifestations of it. He might also be extending his enquiries to how things can go 'through' and how things can disappear and reappear. Compare the many ways he finds to explore this theme in this outdoor environment to the various ways Liam discovers, and notice again just how whole-bodied and embodied these explorations are. Noticing where and how the two children find stimulation for exploring their schematic interest will give prompts for provision in all settings for one year-olds. The important components here are that: the child is in control (it is child initiated and led), the materials are open-ended (can be manipulated and moved around), there are a variety of spaces, and adults who are tuned-in and supportive.

The right stuff: materials and resources

While he is making sounds with the gravel and metal pots, Abolfazal is discovering the very important concept of causation - that one thing happening is dependent on something else - and also realising that he can be in control of this process. This is very significant cognitive work, and he behaves like a scientist to build up an understanding (a theory), testing it over and over again and becoming able to predict what will happen next time he does it. It is also very significant personal development as he feels the great pleasure of being in charge and being powerful. It seems that understanding causation is necessary for the development of the imagination and being able to think about what might be as well as what is [Gopnik 2009]. Having the freedom to do what he wants with these simple but wonderfully rich materials, in his own time and way and without constraints due to mess or space, is clearly a very fertile context for deep-level learning. Effective outdoor environments contain abundant quantities of loose and versatile materials and lots of potential for children to experience 'cause and effect'.

Personal and social development

There are many events in this film sequence that demonstrate how being outdoors contributes to the growth of an emotionally strong child. Abolfazal's sense of self is strongly related to his use of his body and his developing body awareness. His growing confidence is related to his clearly high level of well-being. This is rooted in the security he feels from being with attentive and tuned-in adults, especially the safe base of his key person. It also comes from the stimulation the outdoors provides that meets his need to discover and analyse the real world, and the freedom and support he has to follow his own drives and passions.

In this nursery setting, Abolfazal has the opportunity to mix with children of his own age/stage and also with older children. Whilst this might cause conflict indoors, the space and range of opportunity outdoors results in a calm, relaxed setting for such encounters. Children of this age are very aware of each other and often interact. They can be wonderfully inspired by each other: when they see a good idea, they want to do it for themselves! This is more than simply copying, as when the child imitates, he brings his own feelings and ideas to the situation. Imitating and moving together is a powerful means of bonding in young children: we can see this in the lovely way Michael and Abolfazal stamp together. Research on three year old boys suggests that running together and chasing is the way that relationships and friendship bonds are formed between them. Abolfazal also has

plenty of opportunity to be with the older children and to notice what they are like and what they do. Toddlers often spend time simply 'looking on' at the behaviour of other children – we'll see with Jaleel the benefits of this for the younger child.

Adult support and interaction

Like Liam with his Mum, the close relationship Abolfazal has with Lisa is vital for his well-being and his ability to make good use of being outdoors. Her role as a safe base is apparent; but take time to analyse how it is that she and Vicky have been able to support his 'being' and learning so well. The sense of self and the confidence he has both come from how well the adults in the setting are tuned in to him: they really do know what he is interested in and understand what he wants to do. This is not easily achieved in a group setting and there will be many 'behind the scene' actions that have led to this very comfortable situation.

Prompts for developing practice

Organisation

- Young children need to know that they will be able to go outdoors every single day, without fail, preferably several times a day. The most effective and satisfying outdoor play occurs when children have free and easy access to outdoor environment, or at the least, when adults take children outside whenever that child needs it. How can you work towards this in your setting? What issues would need to be addressed in organisation to help bring this vision about?
- Mixed age play can be highly beneficial for both younger and older children, and the outdoors often seems to support this interaction, perhaps because the needs of children are so well met in the outdoor environment. Having closely watched the film from this point of view, discuss the benefits and organisational issues for your provision.



Environment

- Sound vestibular development is crucial for children of this age. What experiences could you provide in your outdoor space (sliding, swinging, turning etc.), and how could these be accessed? Don't forget that adult bodies are often the best equipment for very young children – like the twirling that Lisa does with Abolfazal.
- Analyse what Abolfazal makes use of in the nursery outdoor environment and what these materials and resources offer him for well-being, thinking and development. Discuss what makes these materials so effective – e.g. they are open-ended and sensory, and lend themselves to handling, pushing and pulling – and use this to reflect on the materials in your outdoor provision.
- Small spaces are deeply significant places for young children. Share memories of the hidey holes and dens you played in as children, recall how this play made you feel and consider what a child might gain from such experiences – physically, emotionally, socially and cognitively. Outdoor environments in settings need to have lots of small nooks and crannies and materials that can be used to make them – what could be done in your outdoor environment?

Adults

- How have the adults in this nursery become able to support Abolfazal's well-being and learning so well? What organisational actions would help them to be so knowledgeable about what he is interested in and quick to understand what is important to him and what he wants to do?
- Use several viewings of the film to analyse and discuss adult interaction styles in the sequences. Notice that often the adult is following and copying rather than leading or directing and how the child benefits from simply having an adult presence (companion). Notice too how the adults show 'slowness' – that is, patience and understanding of just how important it is to a) go at the child's pace, b) realise the importance of repetition and return, and c) not to push the child forward to meet developmental goals and milestones.

Parents

- Effective outdoor provision requires an ethos and vision, underpinned by a strong rationale that is fully shared by parents, that toddlers must have access to outdoor environments for plenty of time each day, every day of the year. How can you engage parents in the value of daily outdoor provision for their child? What opportunities can you find in all stages of your communication with parents to help them understand your approach?
- Parents may be concerned about the risks of their child playing with small objects, such as gravel. How do we enable toddlers to have access to these materials in a safe way? How do we help parents understand the value of such rich learning materials?

Michael

15 months

Things to notice and understand

The role of movement


Michael tells us lots more about the fundamental role of movement in the lives of toddlers. He spends much of his time outdoors moving around, but he is especially fond of going up, over and down the little hill. As he does so, he is getting vestibular stimulation through the fast motion as he runs down, aided by gravity. He gets proprioceptive input through the impact of running and falling over. He is learning about gravity and speed, and how to control his body in order to start, stop and change direction. Gently sloping ground is of far greater value for this year group than flat, rubber surfaces outside. A small hill is a fantastic feature to have in a nursery garden – digging out some soil to pile up will create a gently undulating area (ensure that drainage is good in this area). This hill is clearly very popular as the grass is worn at the top and bottom. If it is to be accessible every day, all through the year, providers must acknowledge that it will need to be maintained. Rather than preventing or limiting its use in wet winter months, it is important to consider putting aside a maintenance budget so that it can be re-turfed as necessary.

Like other children of his age, Michael incorporates lots of walking into his explorations (see the notes for Yasmine for more about the development of locomotion). Movement of this kind, especially in the natural light and fresh air of the outdoors, is a very powerful mood-lifter. Movement itself stimulates the production of the neurotransmitter dopamine and activates a control centre in the brain that makes us feel alert and energised – giving that wonderful feeling of 'life in every limb' and leaving the mind in a ready-to-learn state [Stock Kranowitz 2005]. Natural light stimulates production of another neurotransmitter called serotonin which makes us feel happy, and the blue light in it helps us sleep well. The higher oxygen levels outside also contribute to feelings of well-being and alertness.

Notice how Vicky intuitively joins Michael when he falls over. This is a great response. Clearly he is not bothered by falling onto the soft grass, but he may well enjoy the sensations he gets from falling - and she shows that she values it rather than being concerned by it. It provides both vestibular and proprioceptive stimulation, adding to his body awareness, balance and control.

Gentle roly-poly play is an important form of play for children under three. Many older boys enjoy on-purpose falling over and it can be a popular element of rough & tumble play. Boisterous, physical interactions with others are





popular and essential ways for boys to play [Holland 2003]. A large amount of research has shown that young children, especially boys, learn behaviour control through this form of play [Brown 2009].

The special nature of the outdoors

The film of Michael shows clearly how the special nature of the outdoors adds to and complements the opportunities available indoors. It should be seen as one of the two halves of the whole learning environment; and we must make the most of its potential to provide children with experiences not possible indoors. Here, Michael is able to spend lots of time experiencing the effects of the unseen forces of wind and gravity for himself. The opportunity to run, go up and down, negotiate lumpy ground, feel the wind on his face, see the wind moving things, and interact with nature and natural materials are just a few of the huge range of experiences that the outdoors is so good at providing. Watch the film several times to realise just how much Michael notices in this outdoor environment. His interest in up and down (see below) may mean that he is more aware of things happening higher up: the wind moving things, leaves moving on the trees, pegs on the line and probably many other things in the sky.

Chance and serendipity are strengths of the natural environment. Interesting things happen all the time outdoors, and since toddlers are so interested in the real world they notice all sorts of things that adults might overlook, from tiny things on the ground to huge things beyond the fence. Look at the film again to see how Michael notices the dandelion clock on the ground as he is going to the hill and goes back to find it. Making the most of this is one of the pleasures of working with young children; but it needs attentive and alert practitioners and an open, flexible routine and planning system.

What matters to toddlers: schema

There is a pattern to the things Michael does in his outdoor play. He likes to move: walking from one place to another, running up and down the hill, kicking and rolling the ball, tapping the stick in an up-and-down motion. He is highly alert to things that move: blowing the dandelion seeds, the paper that moves when the wind blows it (which he recreates by throwing the brush and trying to make the paper move again), the leaf shadows dancing up and down on the fence, the towel flapping and making the pegs go up and down on the line. His attention is drawn to things that fit into his persistent line of enquiry - his schematic interest. He is interested in movement of a particular kind. Unlike Yasmine who is fascinated by moving itself, Michael focuses on how things move in a line (a trajectory schema) and particularly on the idea of 'up and down' (a 'dynamic vertical' schema). This schema involves gaining an understanding of along, to and fro, here and there, there and back again, up and down. Making straight and curved lines both horizontally and vertically gives us the ability to think about space and how movement can occur in it. We can see this focus of interest in many children

through actions such as throwing, climbing, jumping off, stepping up and down or lying flat, and also in constructions, collages and drawings. Just as Michael is doing, a child will use their own body to explore the ideas of moving in a particular direction, giving them a personally felt meaning of the movement. For example, as he taps with the stick, Michael seems to be sensing the motion and feeling the tap, as much as listening to the different sounds it makes. Working on schematic interests at a sensory-motor level is very typical of young children. Michael's use of movement and doing gives him a deep, embodied meaning – building what Ferre Lavers calls 'intuitive intelligence'. This will help him in all sorts of learning later on.

“Michael loves the wind and the effects it has on the objects around him”

As he explores his persistent interest, Michael (like Abolfazal) is also gaining experience of cause and effect - when this occurs, that happens. This is another aspect of schematic exploration which runs alongside the physical exploration [Bruce 2005]. Because Michael is able to pursue his fascinations over time, whenever they catch his attention, in lots of contexts that being outdoors provides, and supported by an adult who understands, he can notice similarities and differences and connect ideas. This means his understanding can develop and he can begin to generalise the 'big ideas' to new situations, having an expectation of what might happen.

The right stuff: materials & resources

The natural world provides a vast range of highly sensory and appropriate materials for toddler exploration and play. Michael learns more every time he goes outside, building up his knowledge and understanding of his world. His schematic interests are met through what Vicky has shown him about dandelions – and now he can compare this to what daisies are like, seeing how they are the same and how they are different. As well as his own striking ability to notice, Vicky and the other adults can introduce him to new possibilities every day – because they know him so well they are likely to be matched to his interests.

Watching Michael kicking and rolling the ball down the slope, we can see why balls are so popular with toddlers. This wonderfully versatile resource behaves in exciting ways, and each child can find a way to play with it so that they can pursue their own schematic preoccupations.

Personal and social development

Once again, we see high levels of well-being and involvement [Lavers 1994]. Michael looks very relaxed, and is confident to explore and open to learning. He concentrates for extended periods on those things that matter to him. He really likes to be with Vicky and he knows he will have times when she gives him her full attention. He particularly revels in the times that they run together. Research has shown that moving together creates subconscious bonding [Quilliam 1994] and that running together helps friendships to form, especially in boys. Notice how Michael watches Vicky's legs as they run up and down the hill, and how the action makes them both laugh. Incidentally, movement also stimulates children to use their voice; and we can hear Michael making noises as he gathers speed running down the hill.

Language development

Although Michael is only just beginning to vocalise words, his understanding of language is much further developed, and he uses gestures to think and express meaning. Notice in particular how he mimics the action of the paper blown by the wind. Vicky gives him the language for the context, to support his thinking, but it is not intrusive questioning or 'teaching'. Being outdoors together is a wonderful way of having natural conversations about things that are of shared interest, as they come up.

Adult support and interaction

One of the significant roles of the key person is how they demonstrate to the child that he or she is important to them. If toddlers are to make good use of the outdoor environment in a group setting, they have to feel safe and comfortable in going off to explore by themselves, without the direct presence and input of the adult. Vicky shows Michael that he matters by letting him know that she keeps him in mind when he is away from her – such as when she asks him where he's been on his return to her in the sandpit [Lindon 2005]. In this way the child can almost 'take' the safe base with them, holding him or her in their mind.

Assessment... [describes] the ways in which, in our everyday practice, we observe children's learning, strive to understand it, and then put our understanding to good use.

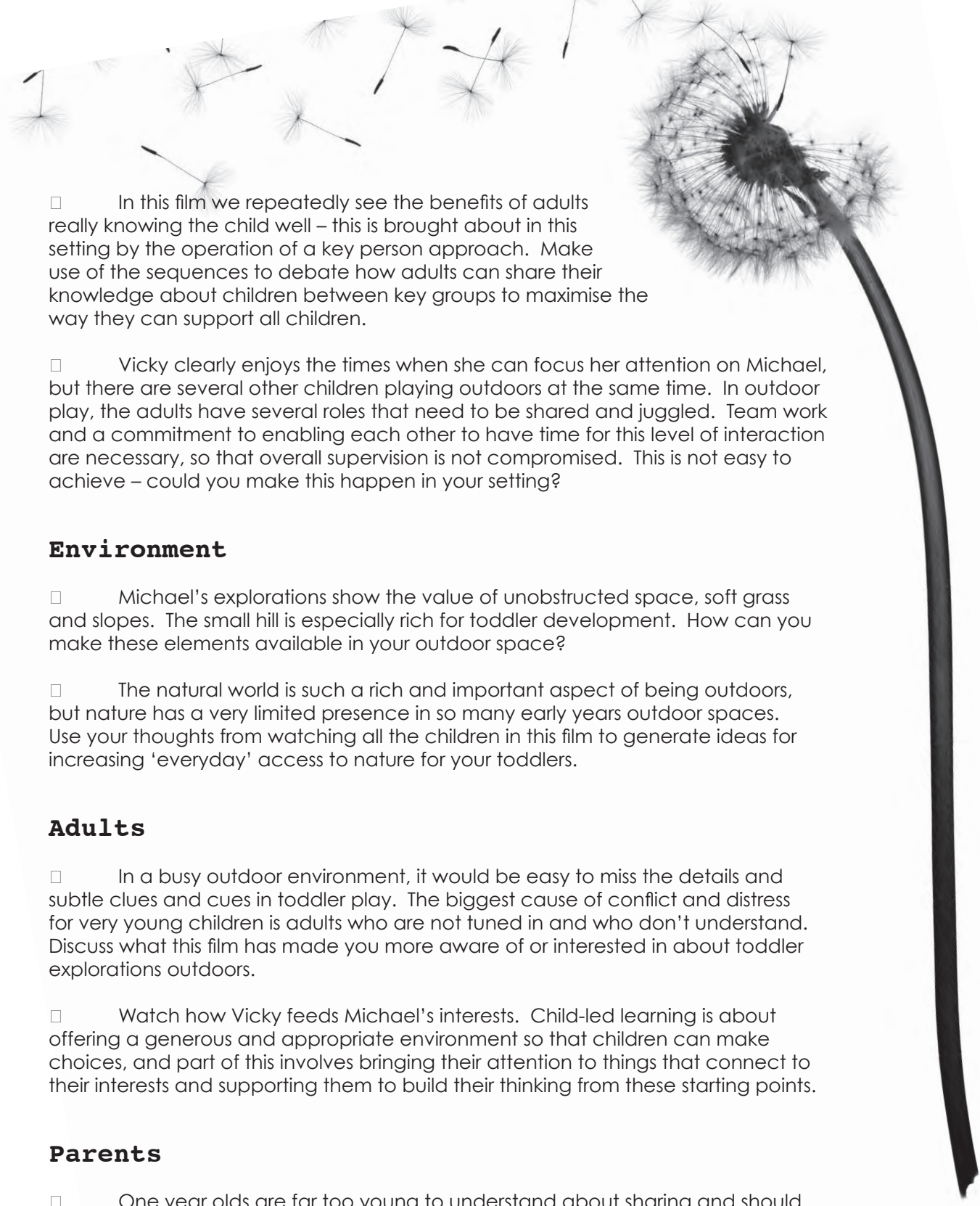
[Mary Jane Drummond 1993, p13]

Vicky and Michael are very in-tune with each other. Because she spends plenty of focused time with him or being attentive to his explorations, and frequently discusses her observations of him with the others in her team to gain more information and new perspectives, Vicky is able to pick up on subtle details and clues about this child and be very quick to really understand what is on his mind and his real intentions. This is the key to child-initiated learning. Effective child-led practice is driven by three things: being able to really see; being able to deeply understand what we see; and knowing what to do with this understanding. As these notes hope to show, deepening understanding helps us to actually see more of what is taking place – a very satisfying feedback loop! When Michael throws the paint brush, it would be easy to assume he is just throwing things – a behaviour we might want to reduce. But once we are in tune with his very sophisticated enquiries about movement and the wind, we can really enjoy his behaviour and support him, as Vicky does here.

Prompts for developing practice

Organisation

□ When toddlers have long periods of time outside, they can come back to things that have interested them, revisiting them to work things out in their own time. As you watch Michael, look at how he returns to things he knows about and connects experiences together to deepen his understandings about his world. What elements of your routine get in the way of children having extended and uninterrupted lengths of time outside?



In this film we repeatedly see the benefits of adults really knowing the child well – this is brought about in this setting by the operation of a key person approach. Make use of the sequences to debate how adults can share their knowledge about children between key groups to maximise the way they can support all children.

Vicky clearly enjoys the times when she can focus her attention on Michael, but there are several other children playing outdoors at the same time. In outdoor play, the adults have several roles that need to be shared and juggled. Team work and a commitment to enabling each other to have time for this level of interaction are necessary, so that overall supervision is not compromised. This is not easy to achieve – could you make this happen in your setting?

Environment

Michael's explorations show the value of unobstructed space, soft grass and slopes. The small hill is especially rich for toddler development. How can you make these elements available in your outdoor space?

The natural world is such a rich and important aspect of being outdoors, but nature has a very limited presence in so many early years outdoor spaces. Use your thoughts from watching all the children in this film to generate ideas for increasing 'everyday' access to nature for your toddlers.

Adults

In a busy outdoor environment, it would be easy to miss the details and subtle clues and cues in toddler play. The biggest cause of conflict and distress for very young children is adults who are not tuned in and who don't understand. Discuss what this film has made you more aware of or interested in about toddler explorations outdoors.

Watch how Vicky feeds Michael's interests. Child-led learning is about offering a generous and appropriate environment so that children can make choices, and part of this involves bringing their attention to things that connect to their interests and supporting them to build their thinking from these starting points.

Parents

One year olds are far too young to understand about sharing and should not be expected to share. This sequence of Michael with the stick is helpful in realising why toddlers need abundant supplies of simple materials (together with supportive adults) so that conflict over possession of resources is reduced.

Current culture in the UK has over-focused our attention on the vulnerability of children, to the extent that vital experiences are often being denied to them in case they get hurt. How can we help parents share a view of the young child as a competent learner in the context of their real vulnerability? Use the film sequences to help develop your opinions and ability to explain this to parents.

Yasmine

18 months

Things to notice and understand

The role of movement

Like all the children in this film, Yasmine clearly thrives on being outside. Her need for space and opportunity to move, and the freedom to move things around, may well mean that she finds being indoors difficult – and her relationship with adults might be a lot more comfortable outdoors. Watching the sequence several times illuminates just how much she moves, and how she uses movement and her whole self to get to know her own body and the fascinating world around her: this is a lovely example of the very embodied learning style of very young children. Through this movement Yasmine is doing an amazing amount of work on her body and her brain.

In a study on the development of walking in 9 to 17 month-old infants, researchers noted that,

“infant’s everyday experiences with locomotion occur in truly massive doses, reminiscent of the immense amounts of daily practice that promote expert performance in world-class musicians and athletes. For example, walking infants practice keeping balance in upright stance and locomotion for more than 6 accumulated hours per day. They average between 500 and 1,500 walking steps per hour so that by the end of each day, they may have taken 9,000 walking steps and travelled the length of 29 football fields.”

[Adolph et al. 2003]

This immense drive for movement cannot be comfortably met indoors, and the richness and variety of the outdoor landscape adds a great deal more to the developmental picture. The researchers propose that the variability of infant's walking experience may lie at the heart of developmental change. Thousands of daily walking steps, “each step slightly different from the last because of variations in the terrain and the continuously varying biomechanical constraints on the body”, facilitates mastery and flexibility in use of the body in new circumstances. All the uneven, sloping and bumpy ground surfaces that interest Yasmine so much are valuable for her development – notice how she is feeling the slope through her body as she moves up it, and how she pauses to examine the boundary between grass slope and tarmac with both her eyes and her feet. The contrast between different surfaces, such as grass, tarmac, sand, bark, gravel and so on, is helpful too. As she moves across this boundary, she can feel the changed texture underfoot and how it requires a different way of using her body to move on it – she covers the same ground again and again to explore these sensations. Clearly, a flat, rubber-covered outdoor area is a very poor environment for this age group!

“For muscle tone and bone density, gross-motor strength, fine manipulative strength and being able to judge the right strength for the task, children need endless opportunities to use their limbs, hands and feet, to lift and carry, push and pull, jump and land, grasp and hold, manipulate and manoeuvre, throw and catch. Since bone density is built up through impact, the general knocks and bumps that happen in energetic play need to be seen as part of healthy development too.”

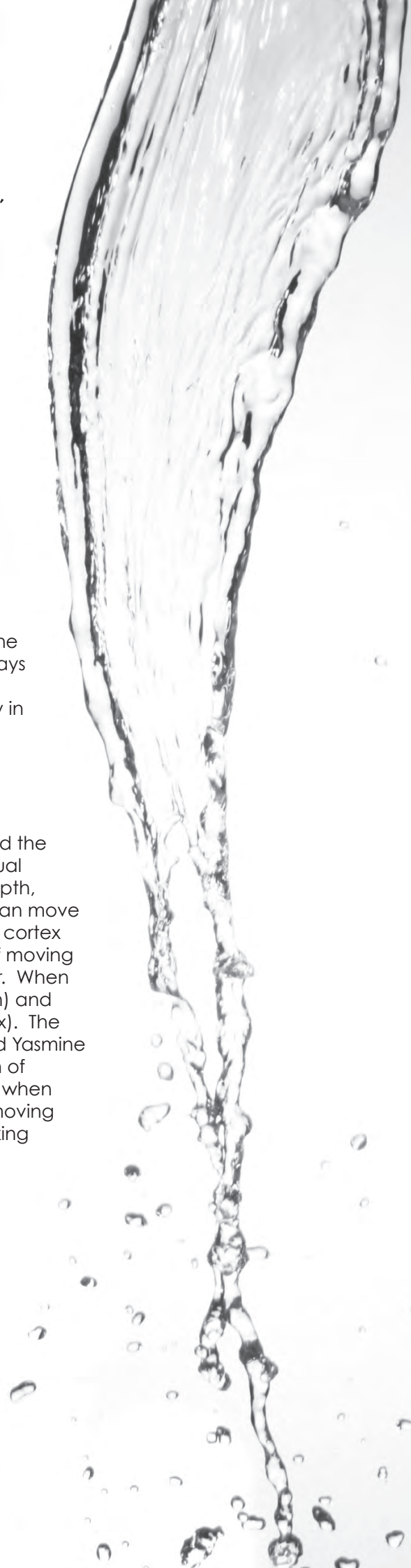
[Jan White 2008b]

In order to develop a sense of space so that they can move around with ease and control, and develop perceptions of distance (how far away something is) and direction, toddlers need lots of chances to fit their body into spaces and to manoeuvre around and amongst objects, including going up and down steps (judging where to place the feet). These experiences link up knowledge about the body (the balance and body awareness inner senses) with the visual sensory system, developing body-eye coordination [White 2008b]. Yasmine is very interested in moving between things, in different ways of moving around, and in exploring space itself. Through this she is getting a strong sense of space and of her body in space – and of course, a strong sense of herself.

Sensory development

As Yasmine devotes so much of her time to moving around the nursery garden, she is also really helping the aspect of visual development that gives objects and space a sense of depth, and allows us to make sense of what we see so that we can move through it and relate to it with ease. This part of the visual cortex in the brain is connected up through lots of experience of moving in an environment with objects that are both near and far. When we move, we see them slightly differently (binocular vision) and they appear to move with respect to each other (parallax). The outdoors is very good at providing these experiences, and Yasmine shows us this in action as she moves around her collection of animals taking time to look at them from different angles, when going back and forth between the two puddles, and in moving closer and further away from the wheelbarrow she is working with.

Water is a wonderfully sensory material, which is intensely fascinating for young children, and the outdoors is the perfect place to engage with it (for lots of ways to make the most of water in outdoor play see White 2008a). Yasmine's puddle explorations are again very movement oriented and her cognitive development is supported by the opportunity to make direct sensory comparisons. Finding water in its natural place holds much more variety and possibility than the water



tray indoors, and toddlers can do the full-bodied, multi-sensory, meaning-making that they find most satisfying. They can experience puddles, rain and running water, fill and move containers, spill and spread water onto surfaces and mix water with other materials such as sand, grass and soil.

As Yasmine carries out her passion for transporting and transferring, she is giving her hands, arms and body lots of sensory stimulation - handling, manipulating, lifting, carrying and placing. This is so characteristic of toddlers, and our task is to understand this need, see its value for all aspects of development and support this behaviour. The outdoors really comes into its own here. Use the film to consider what sensorial work is taking place as Yasmine explores, and how to maximise the potential of your outdoor provision for manipulating and moving resources.

The special nature of the outdoors

Yasmine revels in being outdoors. It gives her the space and freedom she needs to follow her deep drives for movement of herself and of other things. It also inspires her with all the right kind of irresistible provocations and invitations – she finds so much that is of interest and that matches her internal motivations. Every day is different and brings new stimuli, but she also has a familiar, stable environment where she can expect to return to previous enquiries and pleasures again and again – and she can also confidently expect to have lots of access to this laboratory, every single day. When the outdoor space is just an expanse of tarmac, practitioners must set out resources each day and can feel they should provide something new or different every day. This can be quite unsettling for young children – just think how it feels when you drive into a city you have never been to before, or what it is like when the supermarket has rearranged its shelves! When the richness of the environment comes mostly from the landscape, weather and natural world, as in this nursery, children find what they need from an environment that they can come to know well. This provides part of the safe base that allows their exploratory drive to flourish.

Yasmine's explorations in the sand area show how much better sand and water can be when they are offered outdoors. The beach is the best play environment for children, with so many elements interacting with each other, and so much open-ended potential for exploration, interaction and play – this is what to aim for in the nursery garden. A simple sand pit, as in this nursery, is easy to create (when not in use, cover it with plastic mesh to keep animals out). Children can get in it, be in it with others (see also the film sequence for Jaleel), dig deeply, move sand around in buckets and wheelbarrows and mix water into it (for ways to make the most of sand in outdoor play see White 2008a).

What matters to toddlers: schema

Yasmine loves to collect and group resources, in a way that emphasizes movement. She has some persistent fascinations with moving objects, as well as herself, from



one place to another. She seems to be interested in how things can be moved and in movement itself. She prefers to transport resources manually, rather than by filling up buckets and carts. Perhaps this is because it gives her a more sensory and embodied experience, so giving more 'felt meaning' to her investigations. Transferring and transporting are lines of investigation that we see many young children working on, especially outdoors, where they are physically experiencing movement and distance, length travelled and speed. They need lots of space and opportunity to do this in many ways, over and over again; suitable resources that can be moved, both big and small (big, heavy things can be very satisfying to carry); and plenty of containers and vehicles. When children do this indoors, it can be a nuisance and frustrating. Outside, adults can enjoy this behaviour - although it does have some management issues that need to be addressed.

Yasmine has linked this passion with an interest in grouping similar things together – perhaps repeatedly moving and regrouping her collections enables her to get a better idea of what this means. She also uses movement to explore something else she is very curious about: edges and boundaries. Many young children show a strong interest in boundaries and it may be linked with perceptual/psychological development – the world is full of edges and boundaries (both physical and social) that need to be recognised and understood. Yasmine appears to be mapping out the spaces of the nursery garden, getting to know them through her body. Transporting is a good way of becoming familiar with a space – pathways in an outdoor environment can really inspire children who want to move, journey and transport and those fascinated by lines (trajectory schema). (For more on schemas see Arnold 2010).

The right stuff: materials and resources

Toddlers are interested in exploring things to get to know what they are like, and, very importantly, they start asking 'what can I do with them?' and 'what can I make them do?' Being able to make objects do things gives the child a strong sense of control and power, developing feelings of competency. This sense of agency is incredibly important for emotional health and social success, and lays a foundation for later behaviour regulation, a desire to participate and dispositions for learning. In an environment where the resources are open-ended, they behave flexibly according to what the child wants to do with them – they have no fixed or required purpose and can respond to the child. Where resources are loose and mobile, they can be moved and relocated according to the child's desires and drives – especially when those drives are movement oriented. If they are abundant and can interact with each other, the possibilities are further expanded. Good outdoor environments for very young children are filled with such 'loose parts', and the adults understand the child's need to use resources in this way. This is a very powerful learning environment, both cognitively and emotionally. The child can be author and architect of the play possibilities rather than a passive reader of the provision, so creating their own play and play environment.

It is really interesting to watch Yasmine exploring the corner by the door. The paving stones here are actually simply to keep the entranceway from becoming muddy. Notice just how much she is getting out of working this space, first with her body and then with the wheelbarrow (perhaps to extend the movements and sensations). This sequence illustrates the very useful concept of 'affordance' [Heft 1988], which has been well developed in the field of Playwork [Brown 2003]. The child looks at a space, feature, material or object through the perspective of,

'what can I do here?' or 'what can I do with this?' For example, while an adult sees a chair as something to sit on, a child might see it as a place to climb up on, crawl underneath, hide behind or lie over on their tummy. The chair affords different things to adult and child – and often children see many more possibilities than the constrained ideas that adults have developed! As the child develops and grows, so they can do different things with this same resource or feature. This apparently uninspiring corner clearly has great affordance for Yasmine.

Personal and social development

Yasmine's great concentration and perseverance (she is just 18 months old) come from the high level of well-being she experiences in this place, with adults she knows are looking out for her and available whenever she needs them, and the long periods of undisturbed time she has to focus on what actually matters to her, when she wants to. Notice how the intrusion of the older girls washing the window does not distract her from her purpose. These levels of well-being and involvement are the indicators high quality experience that results in deep-level learning [Lavers 1994]. Use the film to analyse what characteristics of the outdoor environment, and the way the nursery team value outdoor provision, support Yasmine's well-being and involvement levels. All the other children in this film exhibit equally high levels of well-being and involvement: you might also consider how their outdoor experiences are supporting this.

Adult support and interaction

Once again, the adults supporting this child show great understanding of what matters to her and what drives her play. She does not need their direct interaction – indeed often it would be an intrusion - but she knows they are present and attuned to her, and that they will be available whenever she needs them. When she hears Lisa's name called, bringing this important person to mind, Yasmine goes in search of her and Lisa is ready and waiting.

For successful outdoor play, adults must observe individual children closely and habitually, working hard to understand what is really going on at a deep level for the child. They will protect the child's initiative and concentration and enable her to explore more of the same, without being in a hurry to find next steps until the child is ready. When we look this closely, we realise just how much is happening in everything the child is doing. And our belief and trust that the toddler is a driven and competent learner is forced to deepen.

Prompts for developing practice

Organisation

□ Fillable and transportable resources are clearly very valuable for toddlers. How can these be organised so that they are easily accessible for both children and adults, and how can they be managed to ensure they get well used, stay in good condition and do not cause problems for other children when they are moved around?

□ Sand and water are two of the most vital elements of outdoor provision for all ages. Notice what makes this sand area effective for toddlers: how simple the sand area is, how easy it is to move in and out of it, how free of clutter it is and that children are able to mix water and sand. A hose is the best way to supply water for toddler play. What issues arise for your setting regarding sand and water play – and how can these be resolved to enable satisfying play?

Environment

□ View the sequence of Yasmine in the corner by the door a few times, and share your perspectives on its affordance with others, to realise just how good this little space is for her. You might also discuss whether the uneven small step here is a hazard or valuable. A landscape with lots of affordance has less need for resources, as the space is doing the work: it's what the child sees in it that matters.

□ Yasmine's physical explorations show how important uneven ground, bumps, steps and contrasting surfaces are for toddler development. Often, providers feel they should remove all potential hazards, leaving just a 'safe' and flat surface. Use the film of Yasmine and Michael to discuss the surfaces that are developmentally appropriate for children of this age.

Adults

□ Observation is a key adult activity, allowing the adult to be attentive to the child's needs, tuned-in to see what they see and able to respond rapidly, when appropriate. What would make it easier to be observant like this in your outdoor environment?

□ Yasmine has lots of uninterrupted time for her independent exploration, without adult intervention or distraction. Is this non-intrusive, somewhat remote adult role appropriate for toddlers who should be learning to talk and interact with others?

Parents

□ Sharing thinking about schemas with parents is an excellent way to build real partnership between home and setting. Parents are a rich source of knowledge and understanding about their child and will relate to this idea very easily. How can you share what happens in outdoor play?

□ Yasmine is sometimes not dressed in the best way for the explorations she wants to make! Clothing needs to keep the child comfortable and not get in the way of full engagement – and be easily cleaned so that getting messy is not a barrier. How can parents be helped to understand this so that children arrive in suitable clothing?



Jaleel

18 months

Things to notice and understand

The role of movement

In the film of Jaleel we see another aspect of the significance of movement for toddlers. He responds to enjoyable experiences by singing and dancing; we see him do this several times during the sequence and he clearly expresses his feelings of well-being and enthusiasm with a whole-body response. Most likely this adds even more to his feelings of pleasure and satisfaction with life. Like every toddler, he thrives on the space, freedom, inspiration and possibilities to experience the world with his whole body and whole self – and just the sheer good feeling of being outdoors.

He also loves the boisterous and silly, or 'dizzy', play [Kalliala 2006] that Stephen obviously enjoys and likes to initiate. Larking about and being physical is such an important part of boys' lives (see the notes on Abolfazal and Michael to understand the developmental importance of this kind of play). Men have a different way of playing with young children, and this is just one of the many reasons it is so important to increase the number of men working in the early years. One aspect of this is that they intuitively understand the need for 'rough and tumble' types of play – something that many women have considerable trouble with. They also know that this is a good way of relating and of building feelings of affection and friendship with each other. It is important too for adults to have fun outdoors and to include each other in their playful interactions. A setting that values the outdoors and uses it for long periods every day is likely to attract more men into the workplace, as this is a preferred environment for many men. So it may be a useful strategy for attracting men into childcare. Research in Norway has shown this to be the case, where men form 19% of the workforce in the outdoor kindergardens compared to an average of 9% across the country (compared to less than 2% in England) [paper presented at EECERA conference, Norway 2008].



Rest and sleep

Toddlers are extremely active, but take their activity in short bursts [Adolf et al. 2003]. So, as well as lots of opportunity for movement and action, it is really important that they can find places for downtime, where they can stop, relax and recharge. We often see a toddler's gaze faze out and can see their mind is operating on a different level.

“The children stand watching, watching, with lax muscles, in that state of reverie which we note in them every day, and which is becoming to us a condition as well defined and deserving of respect as sleep. Perception takes time.”

[Margaret McMillan 1930]

We are coming to understand that this 'day dreaming' is an important state of mind that is likely to have an important psychological role [Claxton 1997]. Children of this age also simply need time to recover feelings of well-being through a short cuddle with a significant adult – as we witness several times throughout this film. Toddlers will use all sorts of small 'perches' for looking-on or time out, but the very best way to restore themselves is through physical contact with an adult who matters to them. Seating is vital in all early years settings, especially where there are very young children, so that adults can sit comfortably to observe and interact, be available at the right height, and can provide the all-important lap for a child to sit on. Seats should be placed in comfortable spots in several locations, maximising scope for observation and interaction, and making best use of sun, shade and wind protection through both the day and year.

Toddlers also need plenty of sleep through the day: the outdoors is the perfect place for daytime naps, providing cool, fresh air and a calm transfer to waking from such gentle stimulation as overlooking trees and the sound of birds. Many nurseries in the UK are returning to the tradition of letting babies and toddlers sleep outside. Large, flat-bed cots under a shady tree or canopy are ideal. Hammocks and swing seats also make excellent places for relaxation and togetherness.

Personal and social development

Like Abolfazal, Jaleel benefits from being outdoors with other children of a range of ages and is frequently inspired by them. We can see that he attends closely to the behaviour and language of the older children and is directly influenced by what they do. For example, he mimics the boy leaving from the sand area, and immediately gives his own version of the other boy explaining about the postman. Slightly older children make the best play 'tutors' for younger children, and the latter are frequently intensely interested in the former. Although in these examples Jaleel reacts immediately, this inspiration can sometimes last a surprisingly long time, reappearing later on. The impression on Jaleel of the older boys' music-making with the pans and spoons expresses itself later in the session. This impression-expression cycle is very important, as it helps the child to think through and process an experience – and this is one of the vital roles of 'play'. This indicates that Jaleel can recall experiences and suggests that he is beginning to have a sense of time, linking the past with the present (having a sense of time is linked to the development of memory [Draaisma 2004]).

We can see that Jaleel knows how to develop relationships. The relaxed, child-directed atmosphere of the outdoor environment can be an excellent place to focus on social skills. Jaleel and Willow are able to give and pick up quite subtle, non-verbal, play 'cues' from each other [Brown 2003]. As an example, he offers her the handful of grass twice during the film sequence. Giving gifts, especially of food, has long been an act of friendship in societies all over the world – it plays a very important role in building and keeping good relationships in an intensely social context. Other group-oriented mammals (such as primates and the dog family) do the same, and many other animals incorporate the giving of food in courtship and the joint care of young. So it is quite likely that this act of friendship is significant – perhaps this is why Willow is calmed so quickly, even though Jaleel does not actually give her the gift! Remember Abolfazal offering the plastic ball to Lisa. Babies and toddlers very often hand the objects they are handling or carrying to adults, also expecting to be given it straight back – as adults we intuitively know that it is important to engage with this exchange. This giving and receiving is a good way to help the bond grow between the two participants – adults can be alert to such opportunities outdoors as much as indoors.

In the sand area, Jaleel also demonstrates his growing social skills as he joins the game of pouring sand into the bucket. He understands the purpose and cooperates successfully rather than trying to take resources away from the other child or to redirect the play to his own ends. The sand area is a great place for children to interact, especially when it has a tuned-in adult in it (note that the clothes Gwen is wearing enable her to sit comfortably in the sand so that she can remain here for long periods). Because the edges are at the same level as the surroundings, children can come and go easily and the open-ended resources can meet a wide variety of play ideas. This sandpit is simply made but is a very successful feature of this nursery garden.

Language development

Gwen models a lot of language for Jaleel. Watch for examples of how she takes the lead from the child and acknowledges his language by using the words he uses. In this way, she values his emerging use of language and gives him lots of space to contribute to their exchanges. His time listening to older children using language is likely to be having a major impact on his desire to talk. We have a lovely example of his emerging use of verbal language when he offers Willow the grass-food and says "uh-huh? - No"

Since Jaleel shows that he likes to sing, perhaps he would really enjoy being included in the very many songs and rhymes that can be used outdoors (for lists of rhymes to incorporate in outdoor play see White 2008a).

The right stuff: emerging pretend play

Liam (13 months) was interested in knowing what is in the world and what it is like. Abolfazal and Michael (15 months) appeared to be finding out what things do and how one thing can cause another. Yasmine (18 months) seemed to be asking 'what can I do with these things; what can I make them do?' Now we can see further progression in toddler object play. Jaleel seems to be moving in two linked directions. Firstly, he is very interested in what he can do with the dry sand. By experimenting with actions he can develop his understanding of causation by

beginning to ask 'what happens if...?' As previously mentioned (see the notes for Abolfazal) an understanding of causation underpins the ability to imagine. Repetition is vital and the child wants to carry out the action again and again. As this experimentation continues day after day, Jaleel will be able to make predictions that are based on the accumulated experience which has allowed him to have an understanding (a theory) about how events are linked. He will be able to imagine the future in this particular context. Lots of very concrete, bodily-felt experiences will allow him to begin to think in an abstract way.

The second, and related, movement is towards being able to imagine an object as something else. In several parts of the film sequence, Jaleel looks as if he is using the handful of dry grass as food. He probably knows all along that it is grass – like the grass he has been able to explore since he was a baby. But now this is more than exploration: he is using it in a way where it seems to have the role of being food. His play is connected to the real life he knows lots about and is further prompted about by the arrival of the dinner trolley, but this is more than imitation. Very significantly, he seems to be seeing the object in two simultaneous ways – as grass and as food. In the latter case, he is using the grass to stand-in for food – he is using it symbolically to represent food. This 'dual representation' [Medina 2008] is a really exciting stage! Dual representation describes our very human ability to attribute characteristics and meanings to things that don't actually possess them: we can make things up that are not there. More than 'what is this object?', Jaleel is beginning to ask 'what can this object become?' His use of the grass in food play is the beginning of pretend play, where he can imagine things that are not actually present. As we can see, Jaleel can link the pretend play to real-life events that are relevant to him, and this may help him think further about them.

This symbolic ability develops a great deal more during the third year of life, and it parallels the huge development in using words to represent objects and ideas. Words are the ultimate symbols as they give us the remarkable ability to manipulate ideas in our heads and to communicate ideas without the object or event being present. We use lots of other symbols to think and to communicate (numbers, letters, supermarket signs, money, maps, to name just a few), so this really is the beginning of something amazing. And just look at how simple the material is that allows Jaleel to do this! It is very important to remember that this foundation of abstract thinking comes from lots and lots of experiential, embodied play. It also comes from exposure to simple, open-ended, real-world materials that the child is motivated to explore, understand and use in whatever way they need to – just as all the children in this film have found to be so abundant and interesting in the outdoor world. An environment that has plenty of loose parts with lots of developmentally appropriate affordance (see the notes for Yasmine), with the companionship of



attentive adults who understand what is going on and allow the child to follow their own motivations whilst keeping them secure and safe, is the perfect place for toddlers to develop the foundations for all later learning [White & Woolley 2010].

Adult support and interaction

“Children learn best when they learn from each other and when their educators are learning with them.”

[Ken Robinson 2009]

Jaleel is interested in interacting with adults and other children. The best learning happens when the educators consider themselves as co-researchers with the children, helping them to explore more of what interests them. Gwen helps Jaleel to do what he almost can, but is not quite able to do by himself. When he joins in with the sand play, he collaborates in the experiments with her help. He is almost ready to do this and has the motivation to do it, and her gentle support together with the language she supplies makes it work for him. This ‘scaffolding’ enables him to work at the edges of his emerging abilities (Vygotsky called this the ‘zone of proximal development’ [Mooney 2000]). His success with her help will give him the confidence and further motivation to try it again until he can succeed by himself. Being right in the sand area, sitting so that her face is at his height, puts Gwen in the best position for them to read each other’s faces so that they can really communicate with each other, and Gwen can scaffold his learning most effectively.

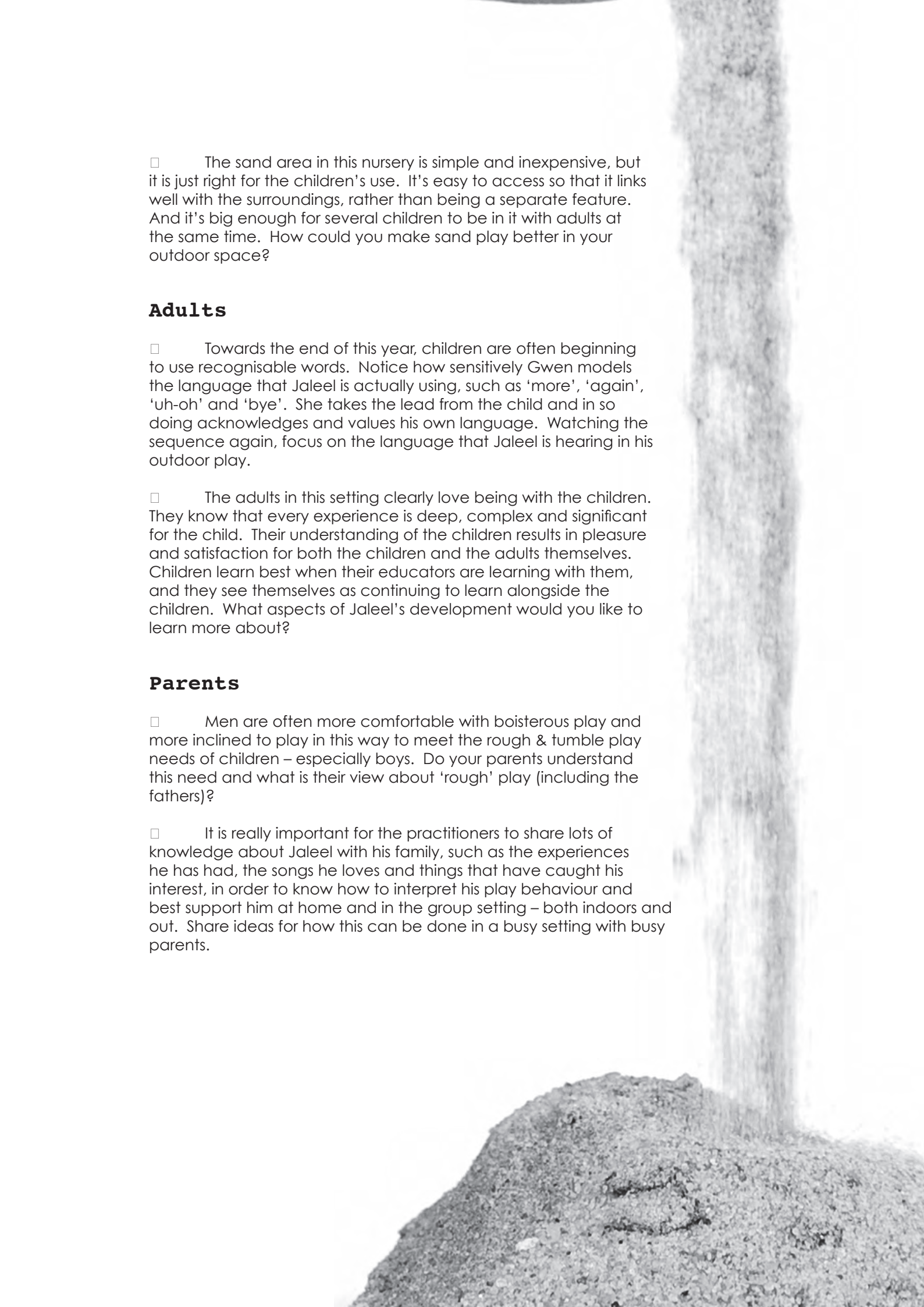
Prompts for developing practice

Organisation

- Toddlers and two year-olds are really keen to be involved with the things that they see adults doing (see also Abolfazal sweeping with the broom). They benefit greatly from joining in with real tasks that are part of the adult world – and there is always something to take care of in the outdoor environment. Rather than these being done when they are not present, could children help adults to look after your outdoor environment?
- Consider what opportunities for sleep, rest and relaxation children have in your outdoor environment. Do adults have comfortable places where they can sit and spend relaxed time with children? Are there enough and could there be more?

Environment

- While watching the film of Jaleel, focus on the materials he uses and consider what makes them good resources for play outdoors. Having access to plenty of simple stuff minimises the need to share – sharing and turn-taking is not appropriate before children turn 4! Most importantly, resources are good when children can do what they need with them, and they are open to emerging symbolic (pretend) play.



□ The sand area in this nursery is simple and inexpensive, but it is just right for the children's use. It's easy to access so that it links well with the surroundings, rather than being a separate feature. And it's big enough for several children to be in it with adults at the same time. How could you make sand play better in your outdoor space?

Adults

□ Towards the end of this year, children are often beginning to use recognisable words. Notice how sensitively Gwen models the language that Jaleel is actually using, such as 'more', 'again', 'uh-oh' and 'bye'. She takes the lead from the child and in so doing acknowledges and values his own language. Watching the sequence again, focus on the language that Jaleel is hearing in his outdoor play.

□ The adults in this setting clearly love being with the children. They know that every experience is deep, complex and significant for the child. Their understanding of the children results in pleasure and satisfaction for both the children and the adults themselves. Children learn best when their educators are learning with them, and they see themselves as continuing to learn alongside the children. What aspects of Jaleel's development would you like to learn more about?

Parents

□ Men are often more comfortable with boisterous play and more inclined to play in this way to meet the rough & tumble play needs of children – especially boys. Do your parents understand this need and what is their view about 'rough' play (including the fathers)?

□ It is really important for the practitioners to share lots of knowledge about Jaleel with his family, such as the experiences he has had, the songs he loves and things that have caught his interest, in order to know how to interpret his play behaviour and best support him at home and in the group setting – both indoors and out. Share ideas for how this can be done in a busy setting with busy parents.



Daisy

22 months

Things to notice and understand

The special nature of the outdoors; what matters to toddlers

Like Liam and his Mum, Daisy and her childminder love going out for short walks in the area surrounding Sue's home. It's an incredibly rich environment for a toddler to share with a supportive adult. Sue knows how much it has to offer Daisy for her happiness and development, so she has developed a commitment to getting out and about with Daisy every day. Daisy and Liam prefer to visit the same place frequently so that they can get to know these places well, and can return to things that interest them and give them pleasure; they do not need to go somewhere new all the time. Taking young children out beyond the gates of the nursery seems to have become more difficult over recent years, and what used to be common practice has shrunk to infrequent trips out in many settings. Some early years providers have come to believe that constraints due to ratios, risk and risk assessments outweigh the advantages of going out with children. However, it is clear from watching Liam and Daisy that small, daily forays into the local area and community are well worth the effort of finding solutions to these barriers.

Effective walks can take place anywhere, and you certainly do not need a lovely landscape like Daisy is exploring. In cities, towns and villages, the streets outside the nursery boundaries are just full of curiosity and fascination for toddlers – and it is really not necessary to go any further than this. Every street, lane or path has so much to offer children of this age. Small children are intensely interested in, and need to know about, the real lives of the humans around them, and these are the very places they most want to experience. They are fascinated by big things, such as a digger, a bus or a horse. They notice the tiny side of life, drawing adults to watch ants, notice rain water running into the drain and marvel at the iridescent colours in a puddle with them. The potential for sharing attention and interest is enormous. As usual, toddlers want to experience these places and things with all their senses and all of their body – so make sure they have clothing that enables them to do this, at any time of the year.

Daisy does lots of 'poking and pondering' [White 2009]. In doing so, she can think on a number of levels. Poking holes in the sand, she feels both temperature and texture. She adds to her knowledge about the behaviour of materials. She might share Liam's fascination with holes. The experience of her foot disappearing and reappearing could help her deal with her current concerns about separation (see next page) – especially as she is in control of the situation. The film sequence

makes it clear how much she needs the patience and sensitive support of an adult who knows her well, and the 'slowness' of a gentle stroll which is geared to her interests. The walk is successful and satisfying for them both because it is taken in the child's own time, at her own pace.

Personal and social development

Daisy obviously loves being out with Sue, but her anxieties are also apparent. By the end of the second year, the toddler has discovered that she is a separate person who can influence her environment and the people in it [Martin & Berke 2007]. In this process of moving away from the safe haven of infancy, children can respond in different ways to the feeling of being separate from the parent and other attachment figures. Along with this can come feelings of vulnerability, and an emerging awareness of danger and things to be alarmed by. It can give rise to insecurities (so that the child becomes clingy) or fears (such as of dirt or touching things), and the child might actually seem to 'go backwards' emotionally and socially. They might need lots of reassurance that the adult with them will keep them safe. Their behaviour might seem inappropriate and unnecessary to adults, and can be quite frustrating. The only way forward however is for adults to acknowledge these feelings, positively and sensitively supporting the child through this process. As we can see, although Daisy is worried by some aspects of being outdoors, Sue knows how much it offers her and gives the support she needs without making demands on her, so that she continues to have rich experiences that match her interests every day.

Adult support & interaction; language development

This film sequence is a wonderful example of the outdoors at work as a place for being together and having relaxed conversations. Everywhere and everything outdoors holds stimulus and provocation for using language to communicate and to think. Daisy uses gesture and body language, mimics the sounds she hears, names and categorises animals, makes connections between words and ideas, makes comments, shares surprise and pleasure, asks questions, imitates intonation, makes links to home life and combines words together. She hears Sue name objects, actions, attributes ('is it cold?') and quantity ('lots' and 'more'), use adult speech as well as more 'infant-directed' language, use long sentences, distinguish between types of bird, make suggestions, respond to her choices and make links to her past experiences. (For more on language through the second year of life, see Buckley 2003). There is just so much to talk about, so many reasons to communicate and so many ways to use language in the outdoor world.

Sue has lots of opportunity to share genuine interest in a sustained way with Daisy during their walks together. 'Sustained shared thinking' has been recognised as a particularly effective way of 'teaching' young children [Siraj-Blatchford et al. 2002]. This seems to occur more often and in a natural way when adults share time with children outdoors. There is a nice balance between Sue bringing Daisy's attention to things and Sue noticing what Daisy is interested in. Their interchanges are highly personal and interactive, at times with Daisy looking intently at Sue's face. Because Sue knows so much about Daisy's life and they have so many shared experiences, it is possible for Sue to understand what Daisy is saying, when others probably would not.



For the older toddler, the adult is still the most valuable resource and is the intermediary with the physical world. From the security of close contact, Daisy can explore. She thrives from having a committed adult, who understands the value and importance of the outdoors, and is able to make it fully available to her.

Prompts for developing practice

Environment and organisation

- Going for very small walks in the locality just beyond the home or setting are clearly of great value and importance for toddlers. What enables or limits these in your provision? How could organisation be changed to increase the amount that the locality and community are part of your outdoor provision?
- In a nursery garden, what goes on outside the fence can be of great interest to toddlers. Having some boundaries that children can look through and see the world beyond can add another dimension to outdoor provision. However, a totally open space can feel insecure, overwhelming and lacking in the nurture of an enclosed area. What does your outdoor space feel like for the toddlers?
- Close attention and physical touch are vital components of Daisy's firm attachment to Sue [Lindon 2005]. Toddlers must have plenty of close, caring physical contact from their carers, outdoors as well as indoors. When caring for someone else's child, policies around touch must be carefully thought through with the child's needs at the core of decisions [Carlson 2006]. Use the prompt of this sequence to debate your approach and policy.

Adults and parents

- If short walks into the locality and community are to be part of regular practice in a setting, the practitioners must know these places well, feel totally comfortable about taking children there and able to give the children enough freedom when they are there. Discuss what makes this level of comfort possible.
- The use of verbal language is often exploding towards the end of the second year and their motivation to communicate can be very high when they are outdoors, but it can be hard to understand what the child is saying. Sue understands Daisy's words because they often relate to things they both know about. How can you get this level of knowledge about the toddlers in your setting, so that you have a good chance of understanding the child's real intentions with the use of words?
- Daisy is quite unsure and insecure at this point in her development. Watch for examples of how the adult provides reassurance and gently takes the lead to help her feel safe and able to explore, without directing or taking over. Contrast this with the unobtrusive role in supporting Yasmine and the playful companionship with Michael to consider the very individual responses of toddlers to the outdoors and the wide range of roles that adults need to take. Play & Learning Outdoors

Film commentary

Toddlers thrive outdoors. They've just learned to walk and the outdoors for them is filled with new things to discover every day. Their curiosity about the world around them is endless. From the tiniest stone or the smallest hole to the excitement of a hill or the force of the wind, toddlers need the variety and stimulation that's found outdoors. Outdoors they're enthusiastic learners, constantly investigating and experimenting with their world.

So let's find out what toddlers really want to do and what things interest them? What's going on for them physically emotionally, socially and cognitively? To help us understand, we've filmed six children at different ages throughout their second year. To discover how and why they do things, we have to enter their world.

Liam

Liam's 13 months old and his mum takes him outside to explore every day. Nature is why the outdoors is so different from inside, - it's alive and always changing. It's full of shapes and sizes, colour and texture, smells and taste, movement, forces and sound - all encouraging Liam to act.

He often looks to Mum to check her reaction to what he's doing. Mum's always close enough to keep him from danger.

Armed with his senses Liam uses his movements and actions to explore the world. Being able to walk has really opened up possibilities for Liam. He's constantly moving around and investigating. Now, his hands are free to explore and carry things where he wants.

The outdoors gives children the space, challenge and stimulation they need to use their bodies to the full. Through playful movement and physical activity Liam can explore who he is, how the world works and how he fits into it. He's getting a real sense of his body and constantly mastering new abilities, both cognitively and physically. He's working out how to operate in a world full of gravity and objects.

Now that he can walk, he can keep himself close to Mum, his safe base. He returns to her occasionally to tell her what he's been doing. It's from this close relationship with Mum that he has the confidence to go off and explore, knowing that she's always there for him when he needs her.

A lot of Liam's understanding of the world comes from movement and he gets sensory feedback from his actions, so at this age he often needs to experience concepts with his whole body. Mum takes off his clothes to give him more freedom.

Climbing in barefoot he feels the water with his feet. Experiences felt with the whole body gives fuller meaning and lasting memories. When he lets go of the sides he has to use his arms to balance himself. Now that he has bare feet - he can

feel the different textures and surfaces of the ground. The outdoors is the perfect place for him to learn about his body and enjoy what it can do. He has to tell mum about it.

Development of the brain and body are completely inseparable. It's through their actions that toddlers build up their patterns of thought. Liam likes filling containers with gravel and emptying them out again. He does it over and over again. He's beginning to understand that containers are fillable. They have openings at the top where you can put things in. It's a concept he's noticed and he's testing it out in different contexts. (He could put big stones and his whole body in the washing up bowl). He's interested in the little holes where he can fit his fingers in. Through these repetitive actions – putting objects or himself, in and out, he's testing how the world works. Is it the same if I do it over here? Is it the same if I put my whole body in? These patterns of thought are often referred to as schemas. At this age these schemas are embedded in their movements and actions. Liam's movements are vital for developing his intellectual skills, and this is how his thinking develops. Mum's smile lets Liam know that she's interested in him and what he's doing. They communicate well through gestures and facial expressions.

Today it's wet, but dressed in the right gear, that doesn't stop them going out. Outdoors everyday is different. Spontaneous events ensure there's always something fascinating going on. There's so much variety that he can always find specific things that he's interested in, from the miniscule to the mighty. Adults might look at this pot holed back lane and want to cover it with a new layer of smooth tarmac, cut back the bushes, neaten and organise everything, make it safe. But for Liam this unstructured, diverse space is full of potential discoveries to be made. Like most toddlers he seems to have an inbuilt drive to want to find out everything he can about what things are like and what they can do. He needs to continue with his current interest and straight away spots a drain that's just right for posting stones through the holes. It's often little things that adults don't notice anymore that interest toddlers the most. Just like in the front garden he repeats the same actions over and over again. He prefers to explore things that can be moved and transformed – things he can have an effect on. Mum encourages his exploration, helping him choose some stones that'll fit down the holes. He's discovered his own shape sorter! He's learning so much about sizes, shapes, materials and gravity. He's slowly creating a feeling for some of the laws about the world. Objects fall to the ground, stones are hard - they can't be squeezed into a space which is smaller than they are. This is big and that's smaller. He's got a real purpose – for Liam this is important work.

Moving down the street he spots another hole! Look at this mum. He's curious and observant, keen to notice the similarities between certain things.

Moving on again he spots a good puddle and puts himself in the water again. He watches the effect his body has on the movement of the water and sees the reflections it makes. He feels the sensations of the water on his skin.

The bins at the side create small enclosures which toddlers love. Liam squeezes himself in and behind them, feeling the size of his body in relation to the small space.

During his time outside, Mum is Liam's constant support. She's his base to which he's firmly attached and from where he can leave and explore, secure in the knowledge she's always there for him if he needs her, both emotionally and

physically. She watches what he's doing, noting what his interests are, and sometimes furthers his play by offering or showing him things. When he looks at her he knows she's interested in what he's doing. This reaffirms that it IS interesting. Most importantly, she's committed to taking him out everyday for extended periods, and is enthusiastic about what the outdoors offers him.

Abolfazal

Abolfazal is 15 months old and goes to this nursery for a few days a week. Just like Liam's mum the staff are committed to the outdoors and what it offers children. Abolfazal's free to go where he likes in the nursery garden, and he needs this freedom because toddlers have to walk an enormous amount to perfect the skill of locomotion and balance. They typically spend about 6 hours each day practicing these skills. That's what we'd expect from a world-class athlete!

Like Liam, Abolfazal needs a safe base to explore from, and his key person, Lisa, provides this. They have a close relationship and know each other well. And also like Liam, Abolfazal learns about himself and the world through his senses, movements and actions.

Children seek out certain types of movements such as spinning, swinging, turning, tipping, rolling and sliding. These movements stimulate the child's developing sense of balance, co-ordination and spatial awareness. They need plenty of time to repeat these types of movements, so that the brain can link what they see with how their body feels while it's moving. This lets Abolfazal know where his body is in relation to the space around him, allowing his body to become balanced and co-ordinated. For young children this sense needs plenty of stimulation to develop properly. The brain needs time to connect the physical sensations with the visual messages it receives. Out in the garden Abolfazal has lots of time, space and challenges to develop this hugely important sensory system. The outdoors provides stimulation for both the brain and the body at the same time.

Again just like Liam, he loves exploring natural materials. As well as interactions, adult help is often in the form of supplying relevant materials. The practitioners know what he's interested in doing. He uses the pan to make various types of noises and babbles to himself as he plays tipping in and out. He's experimenting with sounds – shouting, banging, scraping and splashing as he plays with the water.

He can hear his own voice and the noises he's making with the different materials. It's the fact that we have two ears that enables us to locate where sounds are coming from. It's only gradually that the brain learns to locate sounds, by detecting the small time difference it takes for them to reach each ear. Outside there's plenty of opportunity to listen to sounds from near and far. Abolfazal stops what he's doing as a new noise takes his interest. He turns to locate it. He's matching what he hears with what he can see. He watches Vicki and wants to help with the sweeping. He's learning, through observation and imitation, about the jobs people do. His increasing physical abilities give him a sense of wellbeing and a feeling of confidence about the things he's good at. His physical skills are advancing rapidly.

He loves playing with the ball. Lisa joins in with his throwing game, encouraging what she knows he's good at, helping to develop his feelings of competence and his sense of self. She's aware of his talents and boosts his confidence. He's keen to keep Lisa involved in the game. Toddlers often give things as a social act – it usually means 'play with me'.

The ball goes through his legs accidentally and he's immediately interested in what's happened. He noticed that the ball went 'in and out' of his legs and has spotted the concept that currently interests him the most. He pushes the ball through his legs again – and again.

As well as putting things in and out of containers like Liam, Abolfazal's schema is developing further. He's now repeating 'in and out' and 'through' actions. He's drawn to anything that fits into this idea and repeats the in, out and through actions, wherever and whenever he can. He throws his ball 'through' the bars. By applying a range of schemas to objects, toddlers come to generalisations about the world. Schemas develop, and are usually the foundations of further learning developments as children come to learn more and more.

The willow tunnel is just right for going in, through and out, and Abolfazal is certainly very attracted to it. It's as if he's seeking out experiences that fit with the schema he's interested in.

As he goes in, through and out of the tunnel, he's learning about the space, travelling from one point to another, giving him an understanding of movement through spaces. He moves from the enclosed dappled shade of the tunnel, to the light open space of the garden.

Dens and enclosures hold a special place for children outdoors. They become increasingly more important as they get older, but even at this age toddlers love enclosed spaces outside. They can create a feeling of shelter and safety. He's hidden but can still see out.

On a rainy day the willow tunnel changes, and he enjoys splashing in the puddles with Vicky. She tunes in to his interest of 'in and out' and plays a game of peek-a-boo with him. As well as encouraging his social development through turn taking, this game fascinates Abolfazal because he's still working out about the appearance and disappearance of both objects and people. This is a concept all young children seem to gravitate towards and revisiting activities he finds satisfying means he can gradually discover patterns in the way things are and how things happen.

After his game he returns to Lisa, his safe base. She helps him get a wheelbarrow. Toddlers love having things to push, pull, lift and carry. These types of movements put their bodies under tension. It helps them to develop a sense of their own body. He also explores socially. He prefers to interact with the adults but he does watch and is becoming increasingly interested in the other children. Here he's communicating with Michael by imitating his actions and they both stamp their feet.

Enclosures and canopies give a bit of intimacy, and seem to encourage social interactions. Although learning about himself and investigating objects takes up most of his time, for Abolfazal, the outdoors is a place to watch people of different sizes and behaviours, to interact with them, to build relationships and learn about being human.

Michael

Michael's the same age as Abolfazal and goes to the same nursery. Toddlers discover about the world like scientists and intrepid explorers and Michael is no exception. He examines the flowers he finds in the garden in great detail. He's watched the older children blowing dandelion clocks and he wants to have a go. Vicky, his key person, helps him.

For Michael everything in the garden is a new discovery. He loves this little hill, to him it's seems big, a challenge. He runs up and down with Vicky. As he goes up and down he has to judge where and when to change speed, stop, start and change direction. As he runs down the hill he's pulled down faster, feeling the effects of gravity. He brings his ball and watches it carefully as it rolls up and down, watching the effect of gravity on the ball and feeling it on himself. Movement makes the brain feel energised and awake. It makes him feel happy by releasing feel good chemicals into the brain. Having physical fun together strengthens the bond between them. On the soft grass he's free to fall and tumble, vital for developing his sense of balance.

He suddenly sees what looks like a dandelion clock and Vicky knows exactly what he wants to do. She's tuned in to his interests. Even though he can't talk they communicate well. He understands a lot more than he can say. He could never do this inside.

Michael's found a stick that has really taken his interest and is confident enough to set off and explore with it. He's using it as a tool to see what effect it has as he taps it on different surfaces. What does it feel like? What does it sound like?

He returns to Vicky every so often. Vicky asks where he's been, so he knows that she's been thinking about him while he's been away. He takes the stick to his favourite hill and goes up and down. He understands something of how objects and events can influence each other. He knows that his actions can have an effect on the world, and the more he uses his stick as an investigative tool the more he finds out about the nature of the materials around him from the different sensations he receives as he taps the ground. This is cause and effect, - Michael causes something to happen and feels what the effect is.

He tries to blow a daisy. He's categorising, and so far the daisy and the dandelion have a lot of similarities 'so you should be able to blow this one too?'

Vicky recognizes Michael's need for the stick, She knows at this age he'll find it hard to share and also knows that he's in the middle of using his stick and is still working with it. Play can't be divided into little time slots. Extended periods outdoors every day gives them time to revisit, become absorbed, and work things out in their own time.

Michael takes a brush over to the water tray. He watches carefully as the wind blows his paper. "What's happening?' What's the cause?' He tries to recreate the effects of the wind and throws his brush and then his paper. Vicky puts words to what he's trying to do. "Ooh Michael, it's the wind"

He notices how the force of the wind blows the dandelion. Again Vicky puts a name to the force.

The sound of the wind chime catches his attention and he goes to investigate. He

can have the same effect as the wind here as well and makes the noise himself. He looks up at the wind blowing the leaves on the tree. He's certainly interested in the forces that move things. He's constantly interested in things moving and how they can be moved through the air. He moves himself and objects up and down, throws papers and brushes, loves the wind and the effect it has on the objects around him. Michael focuses on how things move in a line (a trajectory schema) and particularly on the idea of 'up and down' (a 'dynamic vertical' schema). He can't reach the pegs so he pulls the towel, using one object to see what effect it has on another. The effect that the wind has on objects seems to be inspiring him to find ways of moving objects even when they're out of reach.

He's making connections between similarities he finds in the world around him, as his schemas become implicit memories. What he's learning here can only be learned outdoors. He has to experience the effects of wind and gravity for himself. He needs to feel the great variety of sensations that the outdoors offers him as he experiments and makes his mark on the world. To experience these things fully he needs plenty of time to follow his own interests. Vicky knows this and allows him the space and time he needs to investigate. Like Liam's mum she follows his interests. Those who don't know him so well might well miss the subtle details of the things that interest Michael so much in the outdoors.

She doesn't and can't respond to him all the time, but when she does, she gives him her whole attention and they are very in tune with each other.

Yasmine

Yasmine's 18 months old and is very inquisitive. She also comes to the nursery for a few days each week. Her home language is Russian. She revels in the outdoors and the freedom and inspiration it gives her. Every day is different. She's fascinated by this puddle that has appeared in the nursery garden. She looks at her reflection and studies the effects of moving water around, picking out the sloppy leaves. She moves between the two puddles seeing how the water behaves in the two different places. What's the same? What's different? She pushes the water to the floor, watching carefully to see where it goes.

Then a wooden animal takes her interest – she examines it carefully, from all angles. – There's another one. She decides they all belong together. Categorising things is one of the preoccupations of toddlers. It's another way they begin to work out about the nature of things and what they are. They're not identical but she's seen that they have similarities. She stands back to admire her work.

At the other side of the garden she finds a pile of bricks and some containers. She busies herself moving all the bricks and filling up the container. As well as classifying objects Yasmine is fascinated by collecting them together and transferring them from one place to another. She fills containers and builds up piles. She's acting on the objects to work out what they are, 'what's the same? What's different? Is the same if I move it over here?' Through her repeated patterns of behaviour, Yasmine is connecting individual instances to build a mental structure in her brain of a particular concept.

We've seen individual children following different interests as they learn about the world. But on the whole their development will all follow a similar path as they gradually learn through their schemas, and their cognitive skills and brains develop. There doesn't seem to be a strict order in which schemas emerge but

children do always build on their own earlier learning.

Today it's sunny and she starts the morning by moving the pots and pans around. She starts filling them with sand. The addition of water makes the sand feel different, it's gloopy and sloppy. The water and sand are just like the beach. Open-ended materials are very versatile allowing Yasmine to transform the space and materials as she likes, encouraging her creativity and imagination. The loose parts that are provided mean she can collect and transport them from other areas of the garden and combine them however she wants, transforming her environment. With the pans, sand and water she makes a sloppy mixture - she tries it on her face, feeling the texture and temperature on her skin. She transports the sand and mixes it in her containers. This self-motivated deep level learning is invaluable for children of this age and the outdoors environment supports it perfectly.

Yasmine also spends a lot of time mapping out the garden. She walks around the boundaries made by the nursery building and is very interested in the edges where two surfaces meet and textures underfoot change. At the moment she's taken a particular interest in this corner of the garden.

Toddlers often develop a fascination with a particular bit of their environment and Yasmine keeps on visiting this little area by the back door. We as adults might wonder why she chooses to return here. She finds endless things about it to investigate. The edge of the building, the edge of the paving slabs and going round corners, together with the challenge of the slight slope, make this seemingly boring corner, a place of great interest. Although she stumbles and falls she's determined, and persists with what she's doing, developing an "I can do it attitude". Without adult intervention she is free to take risks and think through her own decisions. Yasmine finds a lot of potential in an area adults might find irrelevant or merely functional. For her it's a rich place to explore, think and learn. She's getting to know the world that she lives in through her bodily movements, moving towards and away, stopping in front, approaching from different directions, seeing from many angles, as she has done with all of the materials and objects she's been investigating, literally getting to know her world and the things in it. Is it still there if I can't see it?

Although Yasmine plays happily alone and is very self motivated, she knows her key person Lisa is always there for her when she needs her. Lisa's been watching her and knows how busy she's been.

Jaleel

Jaleel is 20 months old and his home language is French. Like the other children we've seen he loves being outside. He's getting to the stage where as well as playing alone, with adults or in parallel with other children, he's getting more interested in other's games. He's becoming more influenced by the play of the older children and watches their activities. He's becoming more able physically making it easier for him to join in with their games. Washing the nursery windows with the other children he's using his whole body, forming friendships and helping with jobs around the nursery.

He joins in with the water fight. Messing around and boisterous play is particularly enjoyed by boys and outdoors is the perfect place for this type of play, which is good for fostering friendships with others.

When Stephen tries to encourage him to put the letter in the post box, Jaleel isn't

interested. When he sees another older child doing it he's keen to join in, trying out the posting box in his own way. Hmm that doesn't fit!

Earlier in the day he saw the older children, making music with the pots and pans. Now, with his young friend Willow, who's 17 months, Jaleel's trying to use the pots and pans to make rhythm himself. He starts to sing too. Outside you can make as much noise as you want.

Jaleel's got to the stage where as well as exploring the properties of objects he can use them in a more playful way. He's realizing that he can pretend. The grass in his pan stands for food. He's confident enough about what the object really is that he can pretend it's something it's not. He takes his pretend food to sit by his friend Willow. Karmel encourages their friendship. Communication between them is all non-verbal. He offers Willow some of his food, trying to draw her into his game. While Jaleel is using grass as food in the pan he sees the dinner trolley being wheeled passed. Karmel joins in with the pretence as he puts the lid on top of his pan, extending his pretend game. This pretend symbolic play is still in its early stages and is often brief. Social play is often disrupted by the inability to share at this age.

When he hears Willow getting upset he immediately tries to help by offering her some of his pretend food.

Jaleel's use of grass as food shows his ability to symbolise. He can use his imagination to make one thing to stand for another. Outside there's a great variety of substances and things he can find to pretend with. The more open ended the props he uses the more he can use his imagination. He's able to use his memories of cooking as well as the input from his senses to expand his world. He's linking objects with his ideas.

Being able to choose a relaxing place to sit, on your own or with others, is one of the things Jaleel likes to do outside.

The low down sand area gives plenty of space for children to play together and making a mess is never a problem. Jaleel's still discovering what sand is like but is now also very interested in what he can do with it. He's also becoming able to co-operate with others as he concentrates and tries to direct the sand. They are working as a team. With Gwen's support Jaleel's managing much more than he can alone. What he manages to do today with help, he may be able to do alone tomorrow. He's learning as he's watching what happens to substances and finding out "what happens if", building up ideas of how materials behave and experimenting with them. He takes pleasure in his body and shows he is happy dancing around. The fine dry sand pours easily through the sieve, he wants to see this again and again. As the other children come and go Jaleel is inspired by their behaviour. He's keen to chatter away with Gwenn. He's learning a lot from the people around him.

Even though other children and friendships are becoming increasingly important to him he still needs a close adult to help him feel secure and give him the confidence to go and explore.

Daisy

There's such a lot to be learned in the nursery garden but as we saw with Liam, getting out and about and going for walks provides an infinite amount to stimulate and interest toddlers. Here they can really experience nature.

Daisy's 22 months old and her aunty Sue looks after her for a few days a week. They love going out for walks. Daisy's really acquiring words and language at a rapid rate now and there's so much to interest her. Down by the river she watches as Sue throws in sticks and stones. She's recently developed a fear of getting her hands dirty. This sort of fear's not uncommon at this age. She's coming into contact with more and more situations that are new to her and it's probably a sort of self-preservation.

Daisy's learning lots more about objects – what sinks and what floats, the difference between throwing big and little stones and the effect of currents. They're beginning to be able to have proper conversations, making it clearer for Sue to know what Daisy's thinking. She can express some of what she's been learning.

What they see happening leads to shared, sustained thinking as Sue expands on Daisy's thoughts.

As they poke and ponder in the sand, even though Daisy's unsure about having a go herself, she's learning through Sue's actions. There's such a lot to be learned about disappearance and reappearance and so many opportunities when you're out and about.

We've seen how much enjoyment our toddlers get from being outdoors. They're blossoming physically, cognitively and socially. The feeling of wellbeing is obvious as they go about their work outside.

The toddlers' most valuable resource is the adults who understand why the outdoors is essential to them and are committed and able to make it's potential available to them.

Throughout this year we've seen holistic development as the toddlers have claimed the outdoor spaces, making the most of many of the things that we adults fail to notice any more.



References

- Adolph, K., Vereijken, B. & Shrout, P. (2003) *What changes in infant walking and why*, *Child Development* 74 (2) p475-497
- Arnold, C. et al. (2010) *Understanding schemas and emotion in early childhood*, Sage
- Brown, F. (2003) *Playwork: theory and practice*, Open University Press
- Brown, S. (2009) *Play: how it shapes the brain, opens the imagination and invigorates the soul*, Penguin Group
- Bruce, T. (2005) *Early Childhood Education* (3rd Edition), Hodder Arnold (p74)
- Buckley, B. (2003) *Children's communication skills from birth to five years*, Routledge
- Carlson, F.M. (2006) *Essential touch: meeting the needs of young children*, National Association for the Education of Young Children www.naeyc.org
- Claxton, G. (1997) *Hare brain, tortoise mind: why intelligence increases when you think less*, Fourth Estate Limited
- Davies, C. (2009) *Scientists give grubby children a clean bill of health*, *The Guardian* 24.11.09
- Draaisma, D. (2004) *Why life speeds up as you get older*, Cambridge University Press
- Drummond, M.J. (1993) *Assessing children's learning*, David Fulton
- Engle, L. (2005) *Dig and delve*, Nursery World 7.4.05
- Goddard Blythe, S. (2004) *The well balanced child*, Hawthorne Press
- Gopnik, A. (2009) *The philosophical baby*, The Bodley Head
- Greenman, J. (1988) *Caring Spaces, Learning Places: children's environments that work*, 1st Edition, Exchange Press
- Hannaford, C. (1995) *Smart moves: why learning is not all in your head*, Great Ocean Publishers
- Heft, H. (1988) *Affordances of children's environments: a functional approach to environmental description* *Children's Environments Quarterly* 5 (3) pp29-37
- Holland, p. (2003) *We don't play with guns here: war, weapon and superhero play in the early years*, Open University Press
- Jabadao (2005) *Developmental Movement Play: 6 year action research report*, Jabadao National Centre for Movement, Learning and Health www.jabadao.org

- Kalliiala, M. (2006) *Play culture in a changing world*, Open University Press
- Lavers, F. (1994) (Ed.) *Defining and assessing quality in early childhood education*, Leuven University Press
- Lindon, J. (2005) *Understanding child development: linking theory and practice*, Hodder Arnold
- McMillan, M. (1930) *The nursery school*, Dent
- Martin, S. & Berke, J. (2007) *See how they grow: infants and toddlers*, Thomson Delmar Learning
- Medina, J. (2008) *Brain rules: 12 principles for surviving and thriving at work, home and school*, Pear Press
- Mooney, c.G. (2000) *Theories of childhood: an introduction to Dewey, Montessori, Erikson, Piaget & Vygotsky*, Redleaf Press
- Quilliam, S. (1994) *Child watching: a parent's guide to children's body language*, Ward Lock
- Sacks, O. (1985) *The man who mistook his wife for a hat (Chapter 3 The disembodied lady)*, Picador
- Siraj-Blatchford, I., Sylva, K., Muttock, S., Gilden, R. & Bell, D. (2002) *Researching effective pedagogy in the early years*, DfES Research Report 356
- Stock Kranowitz, C. (2005) *The out-of-sync child: recognising and coping with sensory processing disorder*, Skylight Press
- White, J. (2008a) *Playing and learning outdoors: making provision for high quality experiences in the outdoor environment* (Routledge 2008)
- White, J. (2008b) *Eager and able to learn*, Early Years, Northern Ireland www.early-years.org
- White, J. (2009) *Outdoor provision for very young children*, Early Years Update 66 March 2009 p8-10
- White, J. (2010a) *Gardens of delight*, Early Years Educator, January 2010
- White, J. (2010b) (Ed) *Outdoor provision in the early years*, Sage (in press)
- White, J & Woolley, H. (2010c) *European Early Childhood Research Association Journal* (in press summer 2010)
- Wilson, F.R. (1998) *The hand: how its use shapes the brain, language and human culture*, Vintage Books

Further Reading

Carson, R. *The Sense of Wonder* (Harper Collins 1998)

Bresler, L. (Ed.) *Knowing bodies, moving minds: towards embodied teaching and learning* (Kluwer Academic Publishers 2004)

Goddard Blyth, S. *What babies and children really need* (Hawthorne Press 2008)

Greenman, J. *Caring Spaces, Learning Places: children's environments that work* (2nd Edition, Exchange Press 2007)

Gustavus-Jones, S. *Understanding your 1 year-old* (The Tavistock Clinic Understanding your child series) (Jessica Kinsley Publishers 2004)

Hope, S. *A Nurturing Environment for Children up to Three* (London Borough of Islington 2007)

Louis, S. Beswick, C. Magraw, L. & Hayes, L. (Featherstone, S. Ed.) *Again! Again! understanding schemas in young children* (A&C Black Publishers 2008)

Lindon, J. *What does it mean to be one?* (Step by Step Publishing 2010)

Nutbrown, C. *Threads of thinking* (3rd Edition, Paul Chapman Publishing 2006)

Warden, C. *Nurture through Nature* (Mindstretchers 2007)

White, J. *Playing and Learning Outdoors: making provision for high quality experiences in the outdoor environment* (Routledge 2008)

