

Forestry Commission

**Baseline Study of Play at Merrylee
Primary School, Glasgow
2008**

For Natural Play Study

Dr Leslie Groves with Hugh McNish



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1. Background

1.1 The Project

Forestry Commission Scotland has been working with Merrylee primary school on developing a natural play space on the premises of the new school site. The space will incorporate topography such as hills and hollows, surfaces like sand and gravel along with shrubs and trees. It will also include features like dead wood, boulders and water. The initiative will link in with Forestry Commission Scotland's Woods for Health strategy and the Glasgow and Clyde Valley Green Network Partnership health improvement theme. The project is the first of its kind in the United Kingdom and will inform future natural play developments in school grounds.

1.2 Natural Play

Over the last 30 years there has been increasing evidence that play in 'natural environments' has a multitude of benefits. These include the development of social skills, language and comprehension, physical activity, improved mental health, social and environmental learning. Limiting children's outdoor play experience is likely to damage their physical, mental and emotional development, leaving them less well prepared for the adult world and also less interested in the environment. The earlier that children are introduced to the natural environment and woodlands, the more likely they are to return and access this space in later life [*insert references and detail into the final study in 2009*].

1.3 The Research

In view of the pioneering nature of this initiative, it is essential to capture learning and develop an evidence base to demonstrate impact. A critical step in the learning process is to establish a baseline with which to compare any consequences of children having access to the natural play space.

This short report presents the findings of the baseline study conducted with children, teachers, parents and playground support staff. Any quotes used are non-attributable to individual children. Permission was obtained from parents to take photographs of the children.

The site of the baseline study is the current play area available to the children. This play area consists of a small concrete playground for the P1s and P2s and a larger play area for other children. The larger play area consists of: a relatively large concrete playground, which is lined at one end by trees, and includes a 'friendship area' with benches; a grass play area (often waterlogged and un-useable) and; a football pitch.

Research Methods:

- Participant observation was conducted in the play areas at morning break and at lunchtime over three days. Children's play was explored and informal discussions were held with children. Photographs were also taken to capture the rapid changes in activity.
- Children:
 - One hour focus group discussions with 30 children from P2, P3, P5 and P6 (an average of eight per group). Participatory methods such as drawing, ranking and ice breakers were used. In order to ensure random selection of participants, children were asked by teachers to volunteer their names if they wanted to be included in the research. Names were then drawn out of a hat.
 - Physical activity measurement: Each of the focus group participants were given pedometers (New Lifestyles NL-1000) to measure their physical activity levels. The pedometers measured not only the number of steps taken but also the minutes of physical activity above 2.9METs (Metabolic equivalent, METs, is the unit commonly used to gauge the intensity level of physical activity. For example 1 MET is equivalent to sitting quietly at rest while 8 METs is jogging). They were fitted with these at the beginning of each play time and returned them at the end. Each pupil was given the same pedometer over the 3 days.
 - Participatory photography: children in the focus group discussions were given disposable cameras and asked to take pictures of what they liked and did not like about their current play space.
- Teachers: A focus group discussion was held with nine teachers
- Playground support staff: Focus group discussion with four playground support staff
- Parents: seven parents of children selected to participate in the baseline research participated in a focus group discussion.

In addition, teachers have been given weekly reporting forms to monitor indicators such as concentration levels, attainment levels, quality of interaction with each other and staff, use of outdoor space and incidents of difficult behaviour. Playground staff have been given daily reporting forms to monitor accidents, injuries, bullying and other incidents as well as children's mood at play time. These will provide triangulation and quantitative data to substantiate the qualitative data obtained by the focus group discussions.

Research questions centred on the following:

- Current play space:
 - Activities children currently engage in
 - Benefits and Challenges of current play space: Children's physical activity levels, self confidence and self esteem, resilience and ability to risk assess
 - Interaction of different children and different abilities/approaches to using the space
 - Accidents, injuries, bullying and other incidents that may occur at playtime.
 - Impact of playtime on formal classroom time
- Children's engagement with the outdoors out of school time
 - Frequency and type

Annex 1 provides the detail of the focus group discussion questions.

2. Baseline Findings

2.1 Focus group Discussions

Activities children currently engage in

Children described a wide array of play activities that they currently engage in. When asked to describe their *favourite* games 20 different games were given. This illustrates that the children are able to use their current play space for diverse purposes. Activities ranged from complex team games to simply playing by oneself or walking and talking. Many other activities were observed during the participant observation and referred to during discussions.

Favourite Games	
Tig	Den Tig
Football	Secret spies
Build Ups	Hide and seek
Cartoon Tag	Worm games
Animal petshop	Fruitball
Talking and walking around play ground	Clock tower
Mole hill game on grass (banned now due to fighting)	Karate
Horse and animal game	Harry Potter game
Play by self, making up own stories	Scarey sleepover
Spinning on the pole with 3 of you	Roley poley and cartwheels

Interaction with nature

Natural landscape formed a large part of children's discourses when referring to the types of activity that they engage in, as the quotes below show:

'I like that it [the play space] is split into different parts- mud, grass, concrete. The wood is cool. It has trees and is fun. We can jump up on the trees and slide down. It is a change from the concrete.'

The relationship with 'dirt' and 'danger' was critical to all discussions about the natural play spaces and opinions were often conflicting between children or shifting within one person's discourse. The below conversation shows the difference in opinion around mud:

'I don't like the mucky bit, you can trip or slip up' (one child)

'But I like slipping in the mud. You just need to be careful' (other child)

'They love the mud, looking for worms and making wee dens.' (staff member)



I like the clay hole. We take clay and I made a pot for my sister... This is 'clay on a stick'

The grassy space was of real interest to the children but unfortunately is often waterlogged and muddy and therefore considered to be un-useable.



'They love to be on the grass but there isn't much chance because of the weather and they love it.'

'It is quite boring as there is not much to do in winter as you can't use the grass which is the best bit (child)

Children's attempts to engage with nature were often thwarted by the potential dangers that might accompany their play:

'They love to go to the wooded part behind the football pitch but they are no allowed there as the fence is ragged and there are broken bottles from when young people come in at weekends' (staff member)

The wildlife garden was one area considered to be of great interest by the children but is inaccessible to them unless they are accompanied by an adult:



'It [playtime] is boring. There is not much to see and we never use the wildlife garden as we can only go in with an adult.'

'We have to keep telling them not to do things that come naturally to them because of the concrete and there is no mesh over the pond in the wildlife garden.'

Climbing was another activity that children repeatedly felt frustration at not being allowed to engage in due to the perceived and actual danger that climbing may represent



'They love climbing up the pole in the shed, or the railing behind the tree but there is not much to climb on. They are not allowed because of the concrete which is hard and dangerous if they fall.'



Trees and leaves were also a great attraction to the children but their attempts to engage with nature led to disapproval from some neighbours:

'They gather round the one tree in the wee playground. They are always attracted to that. They like to play with leaves but the neighbours started to complain as the leaves would blow into their garden' (staff member)

Risk assessment

Despite early hypotheses, it became clear that children did have a certain capacity to risk assess. They were clearly able to choose to stop playing games that they themselves felt to be dangerous:

'When I was in P4 we were playing a game of closing your eyes and walking on the wall, I fell and fainted so we stopped playing that.'

'I go to school at weekends to play tig as we can do what we want but we still wont go to the wildlife garden as someone could trip'.

Children's creativity

The extent of children's creativity and ability to use the play space was also contested. Some staff felt that 'They don't have enough space for imagining' or that 'They need a bit more direction'. Other staff felt that the 'children make the most of the space that they have and use it creatively'. One parent felt that 'If they are imaginative, they will be whatever the play space'.

Observation and discussions with the children revealed that they appeared to be very creative at creating their own games and activities on the limited space and with the limited resources available. Even in the P2 playground, which to the untrained eye consists of a small area of concrete, is actually bursting with:

'Wee secret dens in bushes with holes and wee trees and logs we can climb on. There is a wee tunnel that leads to the secret den and bear hole. There is a mousehole in the second to last tree. We get to run about and do cartwheels and there is a fence around the playground and car park that we can swing on and pretend it is a jail.'

The pictures below show some of the games that the children have created:

Making a den under the picnic table...



Catching baddies with leaves...



'We are making a trap to catch the baddies for security. When baddies come through we through leaves on them. Girls are not allowed in the baddy team. They are the baddies'

Skating on salt laid down to stop slipping on ice...



Playing with 'The' Puddle



'They love trees, puddles, mud. They migrate to the puddles. There is not much for them to do but they seem quite happy.'

Skating on 30cms of ice



Digging for worms



'We are taking the worms to a new home'

Balancing on wall at the 'forest'



Feelings at playtime.

When asked about how they felt at playtime, around half of the children said that they felt 'happy' as they could play with their friends, mix with children from others classes, play games, have freedom from work, fresh air, eat snacks and run around. As one child stated:

'You get to go hyper out there, you get to let out all you want to and go wild so you are not so hyper.'

Others felt:

'Frustrated as there is not enough to do' or
'Annoyed as it is always the same games and people fall out when choosing games which is frustrating'

Some qualified their feelings as depending on the specific activities at the time:

'When you are having fun game of football you don't want it to end, if it isn't a good game then you don't mind.'

'I can feel bored if I don't know what to play but then I imagine new games'

In terms of what was lacking in their play space, the most common expressed desire was for a climbing frame or a swing and places to hide. One boy stated that what he wanted was an obstacle course that wasn't just about running around but showing how good you are at dodging obstacles.

Feelings after playtime.

Feelings after playtime tended to focus on frustrations with the cloakroom area which is too small and sadness at having to do more work. However, many children felt that this depended on the subject that they were going in to and whether they enjoyed it. Again, mixed feelings were also expressed:

'I feel sad and kind of good as I have had fresh air and I like playing outside and sad as don't want it to go too quickly. Sometimes the bell is too quick'

Interaction of different children and different abilities/approaches to using the space

Different children expressed different needs from their play space. The picture shows some of the different needs that the play space currently meets: running, hopscotch, sitting and chatting, running around the benches...



Quiet and other areas are also important as not all children were able to engage in play along with the others:

'Some children don't like to do anything. They stay on their own or complain. They have a lack of confidence and are nervous of other children. They don't like to be crowded, particularly children with special needs'. (staff member)

'Some kids are too shy to go over and ask to play with the others. We need to get the kids to ask the others to join in.'

Some children were also more keen to play indoors:

'Some would rather stay in. They get cold and bored. Normally those who are less active, who are just chatting.'

Active avoidance strategies were also noted with some children frequently expressing a desire to be cloakroom monitor.

There appeared to be very good interaction between different age groups. This was expressed by all participants:

'Wee ones like to be with the bigger ones and big ones like to make a fuss of the little ones.'

'We like playing with children from other classes. It is more of a challenge'.

There appeared to be a distinct separation of girls and boys on the big playground. While the P1s and P2s were seen to be playing together, the older children broke clearly into groups divided by gender:

'The P1s and P2s girls and boys mix well together. The bigger ones are more separate. Few girls hang around with the boys but most girls like to chat together'.

The photos below are illustrative:



There was a mixing of girls and boys in some activities, particularly in football:



Accidents, injuries, bullying and other incidents that may occur at playtime

Interestingly, in view of the discourse cited above in relation to the dangers of play that engaged nature, the vast majority of accidents and injuries are actually caused by the concrete playground. As staff members replied to the question of what most accidents were caused by:

'Bumping into each other when running and getting bounced back by the big ones. It's really dangerous. They hit their heads. Whack'

'Just running and playing, not looking and bang into each other. Usually it is the one that isn't running that gets hurt but the one that gets in the way'.

'The concrete is uneven and chipped, their feet catch and they fall. Children pick the chips and throw them.'

It was felt by staff that bullying was not common. Children did report a few incidents but these had all appeared to have been resolved.

Children's complaints appear to be triggered principally by boredom, particularly if the weather is bad.

'At the moment they are in for any wee scratch and bump. The office is like triage. They have nothing else to do. If they are enjoying themselves it might be different.' (staff member)

However, it is worth highlighting that when children are engaged in illicit activities (such as running on ice) they did not report their injuries but just got up and carried on playing. This again shows children's ability to risk assess as well as their need for stimulation.

Impact of playtime on formal classroom time

It is interesting to note that concentration levels and attainment levels after playtime are lower than before playtime. Children stated that the often feel bored being in class after playtime and that there are arguments that carry on going in class time. Staff revealed that there are lots of squabbles from play time that need sorting out. Wet play appears to be particularly difficult and means that listening and communication skills are lower than after outdoor play. Weather also has an impact on mood with windy weather and snow exciting children most.

Use of the outdoor space for teaching is mainly limited to nice weather. It will be useful to follow whether there are any changes as a result of the natural play space development.

Children's engagement with the outdoors out of school time

Children's experience of the outdoors out of school time differed significantly for different children. As expressed by the parents:

'Mine are desperate to get out. Trees, woods, muck. Don't even need slides, swings. Just splashing in puddles, climbing trees. Limited where we are though due to needles'.

'Sometimes we have to force them out and then they enjoy it'.

'My two like being in'.

During winter the most significant time outdoors outwith school time was the walk to school. The majority of children were not allowed to engage in unsupervised play outdoors. Older children were sometimes allowed out without adults, but usually this involved a number of rules, such as being in a big group, with mobile phones, with a set time for return. Unsupervised outdoor time consisted mainly of being in the garden, going to the park or to the shops.

2.2 Pedometers

Pedometers offered the simplest method of collecting information about the amount of activity carried out by the pupils during play times. There was a novelty aspect of wearing the pedometer that seemed to affect some pupils, leading them to potentially be more active than they normally would. The pedometers were helpful in reducing this effect because the display showing the number of steps was not visible and a clasp had to be opened in order to see the screen. This proved too difficult for the pupils therefore they were unable to compare each others 'score' and bias the results. Despite this, one child was observed jumping up and down on the spot when first given the pedometer, which a playground staff member said was to affect the pedometer results. This was not observed again, however.

Key findings were as follows:

- Over the 3 days, 25 full sets of data were collected, 10 boys and 15 girls, and from this the mean number of steps during morning break was 1269.87 (standard deviation 513.22) and in the afternoon the mean was 2566.65 (standard deviation 879.07). It has been recommended that girls should accumulate 12,000 steps per day and the boys should accumulate 15,000 steps (Tudor-Locke et al 2004). Therefore playtime can considerably contribute to the accumulation of this total. The findings from this baseline study showed that play time during the study period contributed around one third to one quarter of the recommended amounts of daily steps that children should be taking.
- It has been recommended that children accumulate 60 minutes of moderate level physical activity a day in order to gain a health benefit (Biddle et al 1998). It has been reported that play time can contribute between 5-40% (Ridgers et al 2006) of this. Taking 2.9Mets as moderate level activity, the children in this study accumulated between 25-40% of their recommended daily amount of physical activity during playtime (the mean amount accumulated over both play times is 20.33 minutes with a standard deviation of 5.58. This supports the finding related to number of steps highlighted in the above bullet point. It also reiterates previous research about the importance of play time in contributing to the 60 minute target.
- Boys were significantly more active than girls when comparing both number of steps and minutes of activity above 2.9Mets. When this data is statistically analysed the difference in both steps and minutes was found to be significant at the $p < 0.05$. This pattern is consistent with previous studies from both Britain (Stratton, 2000; Ridgers et al 2005) and the United States (Sarkin et al., 1997) that have shown that boys are more active than girls during playtimes. This is also confirmed by the observations made at play time which revealed that boys took part in the more vigorous activities such as running, while groups standing about chatting were more likely to be girls. The green space available was used by both boys and girls and the activity in this area was of a lower activity level and involved more imagination.
- The only other significant difference recorded was between P3 children and the children in P5 and P6. The P3 children were significantly more active than the P5 and P6 children both in the number of steps taken and minutes of activity above 2.9METs. The reason for this difference is not obvious and no similar differences have been reported in other studies. This will be monitored in the follow up study in 2009.
- Over the 3 days that the pedometers were worn each of the play times was outside. However on the final day, there was a heavy frost and ice which dramatically decreased the amount of activity. Day one morning play time mean 1701.92 (SD495.14) steps, day 3 morning playtime mean 973.56 (SD336.52) steps. It will be interesting to see whether freezing weather will have the same impact in the natural play site.

Annex 2 provides more detailed data in tabulated form.

2.3 Participatory Photography

The participatory photography exercise worked well. Children from the focus groups were asked to take six photos each and to then pass the camera on to someone else in their group and to repeat this until everyone in the group and had a chance to take photographs. This worked with all age groups and in fact was a far smoother process than had been expected. The exercise took place during the lunch break in Day 2 of the research.

The photographs taken by the children confirmed the findings from the focus group discussions with the children. They did highlight additional information, however:

- The gender segregation that can be seen at playtime in the playground for older children was very clearly demonstrated in the photos taken by the children.
 - Photographs of groups of girls showed them using the painted games in the playground with more frequency than would be indicated by the discussions that had taken place. These games included using the painted hopscotch and

chess board. Clapping games were also seen in a number of photographs despite not having been mentioned in the discussions.



- Boys were clearly seen as 'hanging out' together in boys only groups. Girls were not included in these photographs. It is interesting to note that there were quite a few pictures of the boys just standing around/sitting around chatting. Again, this did not come out in the focus group discussions, which gave the impression that this was just a girls' activity.



- Football was the one activity where both boys and girls played together.
- In the playground for the smaller children, boys and girls were seen to be playing together. This confirms the findings from the participant observation and focus group discussions with playground staff and teachers.



- Running was another activity that came through strongly in the photographs taken by the children, possibly as part of the popular 'Tig' game.



- Trees features heavily in the photographs taken by the children: the roots, the trunk, climbing up the trees.



The use of participatory photography was thus a useful form of triangulation, that complemented the focus group discussions and participant observation well. It will be interesting to see how the photographs taken by the children compare in the natural play space. Will the gender segregation be as strong? What will replace the use of the tarmac based games, such as hopscotch? Or will the tarmac space around the natural play space still hold an attraction for these types of games?

3. Reflections and Things to look for in 2009

- What appears to stand out in this baseline study is the extent to which children already engage in 'natural play'. This type of play is however deemed to be too dangerous or too dirty, principally by adults but also by some children. It will be interesting to reflect on how this changes when the natural play space available to children in the new site has in fact been sanitised and danger proofed by adults. Will it still be as exciting? Will adults accept the potential 'dangers' in practice or will parts become locked off as with the existing the wildlife garden?
- It is interesting to note that despite 'natural play' being seen as most dangerous and mostly discouraged, the real accidents are caused principally through falls on the concrete playground. It can therefore be expected that accident rates will decline in the natural play space. However, there may be new forms of accidents and injuries and these will need to be monitored.
- Despite initial hypotheses, children demonstrated an ability to risk assess and actively select which games to drop when they appear to be too dangerous. They can also assess which games that adults assess to be too dangerous but which they feel that they can carry on playing. Adults appear to under estimate children's capacities to risk assess. Developments in this ability to risk assess will also need to be monitored in 2009.
- Children's complaints and reporting of injuries appear to be triggered principally by boredom, particularly if the weather is bad. It will be important to see if complaints decrease as a result of the stimulation that is expected to be provided by that natural play site.
- Reflections on 'getting dirty' will need to be monitored over time. There appears to be a double discourse, with children saying that they don't want to do what is dirty but then veering to the spaces where they are more likely to get dirty e.g. puddles, mud, the 'forest'. Will their relationship to dirt change further to their experiences in the natural play space?
- There appears to be good age group mixing already. It will be interesting to see if there will be a greater mixing by gender in the new space and also whether some children will still be as keen to avoid playtime.
- Children's performance and attainment levels appear to go down after the breaks. Again, it will be interesting to see if this is similar once the natural play space is operational and additional play time stimulation is provided.
- The new site will have a full size football pitch. This will provide an important alternative to the natural play space and it will therefore be necessary to look at how the children interact with both these play spaces.
- Currently teachers do not use the outdoor space for teaching except when the weather is good. It will therefore be important to monitor teachers' weekly records to see if the natural play space encourages them to use outdoors more for teaching.
- Will children miss the types of play afforded by tarmac play, such as hopscotch, and highlighted in the participatory photography exercise?
- Pedometers offered the easiest way of capturing data about how active the pupils were during play times. The main issue was ensuring that the pupils remembered to collect their pedometer before each break time and return it immediately afterwards. The play space at the moment is large and affords plenty of space for running about the natural play area being developed however will be smaller. It will be interesting to see if the new natural play space will lead to a change in physical activity levels and or the type of

activity that the pupils engage in. It will also be interesting to see if physical activity levels increase for girls as they did in recent Forest Schools research, which saw girls increasing their physical activity levels until they were on a par with boys (pers. comm.).

Annex 1: Focus Group Discussion Guides for Natural Play Baseline Study, November 2008

Each focus group should have around 8 participants. Please use the questions below as a guide and try and keep questions as open as possible.

For all participants, explain the purpose of the research clearly and allow some time for any questions.

Draft script:

'As you may be aware the Forestry Commission has been working with Merrylee primary school on developing a natural play space in the new school site. As this is an innovative and pioneering initiative we would like to develop some evidence around the potential impact of having such a natural play space within the primary school. Before we can do this, however, we need to establish a 'baseline' or get a status report on the current situation. This should allow us to do a 'before' and 'after' study. It is really important to get the views of the different people who use the school. We are therefore spending three days talking to children, parents, teachers, and playground staff. This is not an evaluation of you or of the school but an opportunity to understand children's play habits and the impact of play on their schooling, physical activity levels and other factors so please do feel free to answer honestly.

This discussion should take around an hour. We really appreciate your taking the time to come and talk to us as we know how busy you all are. Your thoughts will really help us with our study. Thank you. Does anyone have any questions before we start?'

[Please turn to relevant focus group guide]

Note: Questions may change as we get data in from self completion forms and start doing the research.

Discussion guide for Playground Staff

Thank you for filling out the daily incident/bullying/accident form. We really appreciate your taking the time to do this. It has given us some really good data to work with. [Please use the forms to inform the questions asked, when we get them]

1. Could you please tell us a little bit about what play time currently looks like?	
To consider:	
What kind of activities do the children engage in? [keep open but if doesn't come up press on questions of actual physical activity, groups of children chatting etc.]	
List any games and how they are organised. Get understanding of what the games involve e.g. physical activity, motor skills etc.	
What are most popular play areas, describe them and are they easily in line of sight?	
What do you think that the children get out of playtime at the moment?	
What is the interaction between different groups of children like at play time? E.g. girls, boys, different ages, different social groups?	
Are there any differences in the types of play that different groups of children engage in at the moment? E.g. girls, boys, different ages, different social groups?	

[ideally would like to consider whether e.g. natural play encourages girls to engage in physical activity)	
What do you think about the current play space available to the children? Pros ... Cons...	
How do you think that the play space that you have affects the children's play time?	
Do you feel that any children are unable to use the play space effectively and can you tell us a bit more about why? [refers to Liz's point about imaginative children not having much use for the current space]	
Do you see any differences between play at lunch time and morning break? [type of play, level of activity...]	

2. Could you please tell us a bit more about the kind of accidents or other incidents that are most common at playtime?

To consider:	
Types of accidents that occur most regularly? [Falls, minor cuts and bruises, more serious incidents?]	
How do these occur? [Is it due to inability to risk assess, running into each other, tripping up due to surface etc. ?]	
Types of other incidents e.g. bullying, upset, boredom etc.?	
General mood at playtime?	
What other factors can impact on mood/ incidents? (keep it open but if stuck mention weather leading to break cancellation earlier in the day for example)	
Do you have any other comments to make on the topic of discussion?	

Thank you very much for your time. We really appreciate it. Now, do you have any questions for me?

Discussion guide for Teachers

[This will also need to raise issues from the Weekly reports, when we get them]

Thank you for filling out the daily incident/bullying/accident form. We really appreciate your taking the time to do this. It has given us some really good data to work with.

1. Current play space and children's development	
How do you think that the outdoor play space that you have contributes to....	
Children's physical activity levels?	
Children's Self confidence and Self Esteem?	
Children's resilience and ability to risk assess?	
What do you see as the benefits of the current play space, particularly on how they impact on children's physical activity levels, resilience, risk assessment and wellbeing?	
What do you see as the challenges of the current play space, particularly on how they impact on children's physical activity levels, resilience, risk assessment and wellbeing?	
What opportunities are there for the children to take part in 'risky' activity, eg climbing trees, swinging from branches, rolling down slopes etc	
What do you think that children learn through play?	
Other comments?	

2. Impact of playtime on formal classroom time	
How do you think that playtime impacts on more formal classroom time? Do different playtime activities have a different impact on children's concentration levels and behaviour when they come back to class?	
Do you think that playtime affects different children differently? Tell me more..... [children who are shy, have ADHD diagnosis etc.]	
Do you use outdoor play space for teaching? [refer to weekly reports which should answer a lot of this and identify questions to press	

further e.g. If so, how and how regularly? If not, why not?	
Any other comments on this topic?	

Thank you very much for your time. We really appreciate it. Now, do you have any questions for me?

Discussion guide for Parents

1. Playtime and your child's day	
Could you please tell me a little bit about what your children tell you about how they use the current outdoor play space at school?	
If the children don't talk about play at school what is it they generally talk about when asked "how was school today?"	
What are your thoughts about the current play space available? Pros Cons	
How do you think that your child's play at school affects their school performance?	
Do you feel that the current play space encourages your child's ability or desire to play?	
What do you think that children learn through play?	
Outside of school where does you child/children mainly play? [prompt if needed: indoors, garden, swing park, more adventurous...?]	
Does your child ask to play outside out of school time? How much does your child play outside in an average week?	
Are your children allowed to play unsupervised outwith school? And where eg bedroom, front garden, local park etc	
Any other comments on this	

topic?	
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Thank you very much for your time. We really appreciate it. Now, do you have any questions for me?

Discussion guide for Children

Transect Walk with discussion

Ranking of activities

Focus group discussion ongoing throughout time outside

A couple of children in the focus group discussion [older children] can go and take some photos/video of what they like and don't like about the playground.

Could you please walk me around your play space and tell me about how you use the different spaces?	
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Notes...	
[Prompts: physical activity, imagination activities, socialising activities etc.]	
Ranking exercise of most preferred play options..... [coloured cards and pens to draw/write options]	
<p>What do you think about the current play space that you have?</p> <p>Can you tell me some of the things that you like about it?</p> <p>Is there anything that you don't like about it? Anything that you worry about?</p> <p>[this could be done on cards on the floor depending on group dynamics/ age group]</p>	
How do you feel at playtime?	
How do you feel after playtime?	
<p>Is it difficult to go back to class after play time?</p> <p>If yes, why? [Prompts if necessary include: Concentration? Boredom? Not enough play etc.]</p>	
What do you think you get out of outdoor play time?	
What else would you like to see in your play space?	
Do you think that there are any children that find outdoor play time difficult?	

<p>What do you think that they would need to enjoy it more?</p>	
<p>Do you like to play outside after school or at weekends? If so, what do you do? If not, what would you rather do?</p>	
<p>Are you allowed to play unsupervised outside of school and where?</p>	
<p>Have you ever had an accident while playing? What happened? Did this put you off doing the same thing again, or just make more cautious?</p>	
<p>Is there anything else that you would like to tell me about what we have been talking about?</p>	

Thank you very much for your time. We really appreciate it. Now, do you have any questions for me?

Annex 2: Pedometer findings

Below are 3 tables that summarise the data gathered from the pedometers. Table 1 is the mean data gathered over the 3 days, table 2 is a break down of the data for male and female and table 3 is a break down of the data for each class group.

Table 1

	summary of the 3 days	
	Mean (Stdev)	steps per minute (Stdev)
mean steps morning break	1269.87 (513.22)	84.66 (34.21)
mean steps afternoon break	2566.65 (879.07)	57.03 (19.53)
TOTAL	3836.517(968.421)	
Mean time (minutes), morning	6.39 (3.26)	
Mean time (minutes), afternoon	13.53 (5.31)	
TOTAL	20.33 (5.58)	

Table 2

	Female		Male	
	Mean (Stdev)	steps per minute (Stdev)	Mean (Stdev)	steps per minute (Stdev)
mean steps morning break	1162.73 (468.96)	77.51 (31.26)	1430.57 (542.12)	95.37 (36.14)
mean steps afternoon break	2262.75 (867.16)	50.28 (19.27)	3022.5 (687.52)	67.16 (15.28)
TOTAL	3425.484 (886.793)		4453.067 (1010.494)	
Mean time (minutes), morning	5.53 (3)		7.48 (3.46)	
Mean time (minutes), afternoon	12.08 (5.22)		16.30 (4.42)	
TOTAL	18.02 (5.20)		24.19 (6.05)	

Table 3

	P2		P3		P5		P6	
	Mean (Stdev)	steps per minute (Stdev)	Mean (Stdev)	steps per minute (Stdev)	Mean (Stdev)	steps per minute (Stdev)	Mean (Stdev)	steps per minute (Stdev)
mean steps morning break	1295.07 (550.69)	86.34 (36.71)	1345.48 (632.79)	89.70 (42.19)	1286 (400.55)	85.75 (26.70)	1120.83 (513.64)	74.72(34.24)
mean steps afternoon break	2794.33 (766.78)	62.10 (17.04)	2869.76 (758.00)	63.77 (16.84)	2211 (846.35)	49.14(18.81)	2301.62 (914.57)	51.15(20.32)
Total	40489 (1005.768)		4215.238 (1034.715)		3497.333 (802.816)		3422.45 (945.728)	
Mean time (minutes), morning	6.33 (3.32)		7.27 (4.16)		6.12 (3.08)		5.56 (3.18)	
Mean time (minutes), afternoon	15.05 (6.02)		15.40 (4.51)		11.43 (4.59)		12.24 (5.20)	
Total	21.38 (6.31)		23.08 (6.08)		17.46 (4.57)		18.21 (5.28)	