

ASSIGNMENT DETAILS AND FEEDBACK

SOUTH WEST WALES CENTRE FOR TEACHER EDUCATION

*Sections marked with * should be completed by module lead*

Student name:	Katie Eynon	Student P number:	1050789
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Module Lead:*	Catherine Morgan		
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Start date:*	09/01/18	Submission deadline:*	16/04/18
Return date of provisional marks & written feedback:*			

Referencing:	In the main body of your submission you must give credit to authors on whose research your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have read or quoted in order to complete this assignment (e.g. for books: surname of author and initials, year of publication, <u>title of book</u> , edition, publisher: place of publication).		
Submission:	All assignments must be submitted to Turnitin unless otherwise instructed by the Lecturer. Note: the Turnitin version is the primary submission and acts as a receipt for the student. Late submission of the electronic version of the assignment will result in a late penalty. Penalties for late submission: Up to one week late, maximum grade D. Over one week late, Refer. Only the Extenuating Circumstances Panel may grant an extension.	Date:	16/04/18
Module lead to tick to indicate if a hard copy version of the assignment must be submitted.*			YES
			NO ✓

Learning Outcomes tested (from module syllabus)	Assessment Criteria: To achieve each outcome a student must demonstrate the ability to:
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MARKING CRITERIA AND STUDENT FEEDBACK

This section details the assessment criteria. The *extent* to which these are demonstrated by you determines your mark. The marks available for each criterion are shown. Lecturers will use the space provided to comment on the achievement of the task(s), including those areas in which you have performed well and areas that would benefit from development/improvement.

Common Assessment Criteria Applied	Grade awarded
1. Subject Knowledge and Understanding (which includes using research-informed literature and knowledge and understanding of the subject) Extent of research and/or own reading, selection of credible sources, application of appropriate referencing conventions. Extent of knowledge and understanding of concepts and underlying principles associated with the discipline.	
2. Intellectual Skills (Analysis) Analysis, evaluation and synthesis; logic, argument and judgement; analytical reflection; organisation of ideas and evidence	
3. Pedagogic and Professional Applications (Practical Application and Deployment) Deployment of pedagogic methods, materials, tools and techniques; application of concepts; formulation of innovative and creative solutions to solve problems. Attributes in professional practice: individual and collaborative working	
4. Key Transferable Skills Deployment of appropriate media; presentation and organisation.	

Student Self Evaluation Form

Common Assessment Criteria Applied	REFER		D	C	B	A
	OUTRIGHT FAIL	UNSATISFACTORY	SATISFACTORY	GOOD	VERY GOOD	EXCELLENT
1. Subject Knowledge and Understanding (which includes using research-informed literature and knowledge and understanding of the subject)	☐	☐	☐	☐	X	☐
2. Intellectual Skills (Analysis)	☐	☐	☐	☐	X	☐
3. Pedagogic and Professional Applications (Practical Application and Deployment)	☐	☐	☐	☐	X	☐
4. Key Transferable Skills	☐	☐	☐	☐	X	☐

PLEASE COMMENT ON AREAS IN WHICH YOU FEEL THAT YOU HAVE PERFORMED WELL	PLEASE COMMENT ON AREAS YOU FEEL THAT YOU NEED TO DEVELOP
- Researching and collecting data. - Sourcing relevant data. - Arguing fore and against. - Writing well.	- Time keeping - Condensing information

Student's Name	Katie Eynon	Date	16/04/18
Student's Signature	K.Eynon		

How to improve involvement of children during outdoor learning, in a Foundation Phase classroom, using positive behaviour management strategies.

The Enquiring Teacher

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Abstract and Purpose of Research

The aim of this research project was to experience and determine how to improve children's involvement during outdoor learning through positive behaviour management strategies; the essentiality of both is well documented. In the school attended during placement, the children very rarely learnt outdoors seemingly only twice in the two terms I was there, once in each of the separate phases. So, this became our research focus.

Outdoor learning interested both my research partner and I because we had not experienced teaching lessons outdoors. We wanted to see whether the involvement and behaviour of students differed when learning outdoors, as opposed to indoors. Whilst we established that our different positive behaviour management strategies worked well indoors, to combat barriers to learning, we wanted to trial these previously used techniques for effectiveness when teaching outdoors. Due to the weather and our prescribed timetables we didn't have this opportunity whilst on placement. Thus, this could build our own confidence and professional development.

Research Context

The research took place in a large, inner-city school. The school comprises over 400 pupils and has 13 full time classes. Both research observations/sessions were undertaken in the same school. The research took place in two, Year Two Foundation Phase classes of 28 and 27 pupils respectively.

In both classes, the children varied greatly in terms of ability and this was reflected in the children chosen for the research. Upon discussion with my partner the outdoor learning was an area of professional development we had not experienced. We both agreed that we wanted to develop our understanding of trialling positive behaviour management strategies in a different environment and how this could benefit children's involvement in a lesson.

The research used the Leuven Involvement Scale to measure this at five-minute, time-scaling intervals and utilised field notes to document other interesting behaviour. Brookfield's Reflective Lens was used to reflect on our lesson delivery and to consider areas for change, which informed the following lesson, this structure was proposed by Lesson Study methodology.

If weather permitted, the research would have taken place in an enclosed, outdoor area which joins the Year Two classrooms; in the event of poor weather, somewhere indoors. On both days, the weather was unsatisfactory. Our focus group interview questions took place in the Atrium just outside the classroom, in a semi-private booth, which is an area accessible by the whole school.

Together, our research question is: 'How to improve involvement of children during outdoor environment learning, in a Foundation Phase classroom, using positive behaviour management strategies.'

For my class, this meant we would gain a better understanding of how their behaviour varied indoors and outdoors, whilst also considering how effective positive behavioural techniques may alter learner responses when used outside of the indoor, class environment.

Overview of Relevant Literature

Everyone should have the opportunity to learn in the 'natural world' (National Trust, 2008; RSPCA, 2012; English Outdoor Council, 2018; LOTC, 2018). The essentiality of outdoor learning is agreed by the Welsh Government. Conversely, due to cultural shifts in our society, children spend less time outdoors in favour of technological advances and safety (Richardson 2011; Grigg and Lewis 2016). It is essential for schools to offer this outdoor alternative experience for children who do not have access to these opportunities at home; as it can have 'social, economic, environmental and health benefits' (Morris, 2003; Louv, 2005; Moss, 2012; Learning Lifford, 2017). Yet, this phenomenon is not new, and the effectiveness of outdoor learning, is championed by many older theorists including: Steiner, Froebel and Dewey and Montessori (Barratt and Greenway, 1995 The Forest School Association, 2015; Eddy, 2016). Furthermore, it is highly supported throughout the worldwide and in UK, with Wales 'leading the way' (Estyn, 2011; Cristie et al, 2014; Bento and Dias, 2017; Sage Publications 2018).

Yet, even though it is heavily supported, especially for the Foundation Phase, here in Wales, it is uncommon practice (WAG, 2009). Teachers are not taking the initiative to utilise this opportunity often enough, possibly stemming from fear; even though it can benefit children in a multitude of ways, particularly encouraging children's involvement in learning (Ross et al., 2007; Dillon, 2010; Waite, 2010; Estyn, 2011; Ratcliffe, 2016; Isaac, 2016; Williams, 2017). Essentially, outdoor learning can be taught across the curriculum, and could have significant benefits for stimulating interest in subjects (Estyn, cited in BBC News, 2011).

Outdoor learning is an essential component for teaching and learning. However, due to the excitement it generates, it may be necessary to use functional positive behavioural management strategies to encourage positive pupil involvement in the learning process. Praise, encouragement and clapping are particularly recommended for 'drawing back' the attention of pupils and (Dix 2010; Melinda, 2012; WAG, 2012; Bromley, 2013; Joachim, 2018).

So, what are the benefits to children's learning when learning outdoors? One of the most interesting findings arguably is the possibility to make children feel more confident, capable and happy about themselves (Rickinson et al 2004; Beames and Ross, 2010). Thus, it will naturally encourage independence and involvement in the learning. This is often through: experimentation in new situations, sensory experience and direct contact with the weather and the seasons (Council for Learning Outside the Classroom, 2009).

The memorable nature of outdoor learning encourages a correlation of feeling and cognition, 'higher order learning' and 'long-term memory', which can lead to greater academic achievement, including in exam conditions; but also, can influence choices generally in life (Rickinson et al 2004; Peacock, 2006; Jenkin, 2016). Naturally boosting well-being and self-esteem, which are essential for societal progress, it can also make learning more relevant, improve children's behaviour and attendance (Neill & Richards, 1998 and revised for Wilderdom, 2006; Travlou, 2006; UNICEF; 2011; Sedgwick 2012; Creative education, 2017). Outdoor learning therefore, encourages involvement.

It can also encourage, empowerment and ownership over one's own learning (Jenkin 2016; Porter, 2018). In the fast, ever-changing climate we live in, this is essential as is the need to become lifelong learners and actively involved in one's own learning, as suggested by Donaldson (2015; Department of Education and Skills for Wales, 2010). Research often reports experiences where children who are usually quiet in class or may limit themselves, become 'motivated and capable' learners, as outdoor learning can 'awaken potential' (Beames et al 2009; Kinver, 2016). It particularly, proves to benefit boys, in encouraging a love for reading and has helped children with learning difficulties, including ADHD (Morris, 2003, BBC News, 2011; Estyn cited in BBC News, 2011; Suzuki, 2017). This has major implications for the potential to encourage and balance learning differences between boys and girls and to improve the involvement of children in learning activities. Outdoor learning can also help overcome challenges to learning, 'aesthetic awareness' and self-control through offering sensory experience (Wales institute for physical literacy, 2015; Learning Lifford, 2017). If children are experiencing opportunities to achieve in these ways, surely involvement when learning will be encouraged.

Outdoor learning helps to encourage the development of problem solving skills and creativity (Dillon et al., 2006; Farr, 2016; Knight, 2017), which is essential in Donaldson's plans for Successful Futures in Wales also. Learning Lifford (2017) this suggests something as simple as students gardening can help. Costing very little but delivering many benefits for pupils and staff (Natural Connections, 2016), especially in the Foundation Phase (Bratton et al, 2005).

Similarly, the development of crucial team work and cooperative social skills (leading to active citizenship), expression of values and opinions can be encouraged through outdoor learning and in turn, involvement in outdoor learning can be encouraged (English Outdoor Council, 2018). The essentiality of planning suitable small and mixed groupings to ensure this can happen, to break down barriers and to offer opportunities for specific development milestones is essential (Rickinson et al, 2004; Jenkin. 2016). Children must be offered the opportunity to reflect upon these experiences, in a supportive learning environment, which should make children want to be actively involved in learning (Barratt and Greenway 1995; Waite 2011, 2017).

Is it not essential that it is more readily incorporated into the curriculum and lesson planning of teachers? We think so!

Explanation of Lesson Study Methodology

The methodology used for the project is Lesson Study research, which is a form of action research (Baumfield, et al., 2014). Lesson Study research originates from Eastern countries such as Japan and has proven to be effective practice (Department for Children, Schools and Families, 2008; Lewis et al., 2006). Dudley (2008; 2011; 2014) summarised the beneficial elements of Lesson Study research, which is increasingly a popular form for researching, while others argue continual reflection has minimal effect on student attainment (Dudley 2011; Research schools Network, 2017).

Lesson study research congregates teacher knowledge and learning, creating a depth of changes in professionalism and practice in terms of being able to better student outcomes and subject content (Dudley, 2011; Lewis and Hurd, 2011; Bush 2009; Norwich and Jones, 2014). This knowledge can then be passed onto other practitioners, best practice theory.

It involves a group of professionals establishing a focus, possibly in need of improvement, together for discussion and research and including: the process, methods and variables required for improvement (Wragg et al 1996; Takahashi, 2005). In this case, the research involved two PGCE students focusing on an area of professional development, not yet experienced. Estyn (2011) raised the importance of outdoors, experiential learning opportunities, which is an area underdeveloped by primary schools.

Together, a lesson was formulated, which closely observed six children from one Year Two class and six children from another Year Two class, on separate days. The intention was to collect data which evaluated the impact of positive behaviour management strategies on increased involvement, in an outdoor environment. Observation can be used to enhance children's care and education, although, we planned to only reflect on the behavior which was observable, refraining from making evaluation at this stage (Chesterfield, 1997; UNCRC, 1989; Naughton & Hughes, 2008). "Stimulating *interventions* are open impulses that engender involvement," (Laevers 1994, cited in Encyclopedia of Early Childhood Development, 2018). Thus, with the backing of research literature we chose to teach gardening (BBC, 2014; Wyevale, 2018).

The Leuven 5-point scale, developed by Dr Ferre Laevers, was used to measure involvement and engagement in an activity of all the pupils, at five-minute intervals. The higher the score, the more involved a child is in the learning experience (Woods, 2016; Early Learning HQ, 2018). The use of this time-sampling method, adds precision and accuracy, indicating how involved a child is over the course of a lesson, (Papatheodorou, et al., 2011).

However, a limitation of scoring involvement, is the potentially biased opinion of the observer, crucially, everyone can interpret behavior differently and fail to be objective (Mack et al, 2005). The observation was positivist, non-formal, objective and non-participant in nature, as is often used when observing children, best described by Chesterfield (1997). Hopefully this allowed for a more natural learning experience, as both researchers are familiar to the students.

In this research project three case students, ranging in ability, were asked to answer questions relevant to the research, after taking part in the lesson. Based on Mack et al., (2011) ideas about sample size, and choosing especially when conducting outdoor learning. Three boys and three girls were selected from each class; giving good indication of the wide range of ability throughout the classroom, without bias and discrimination; and which would hopefully enable a variety of children to experience the same lesson, but inevitably, uniquely.

Given our prior knowledge of the three target pupils, we ensured that the interview questions were based on what we wanted to find out about each session and were posed in a relaxed way, without leading the answers, to encourage involvement. The children were made aware that they were free to leave at any time, without repercussion. Focus group interviews are a common method of qualitative data collection and semi-structured interview questions were used, due to the young age of the children (Heary and Hennessy 2012).

The three pupils experienced the lesson alongside another three pupils, to add to authenticity of small group work and mirror real-life learning conditions that the children are used to. Thus, there were children possibly willing to answer the research questions if others wished to withdraw, were absent, did not receive consent or give assent. Creative, child friendly methods were used for gaining assent from the children to willingly answer how they felt the session went; ways to improve it and whether they prefer involvement in indoor or outdoor learning.

Asking pupils of their opinions about a lesson is essential to reformulating that lesson. It is important for children to 'have say' as Bragg (2007; Takahashi, 2005; WAG, 2011) suggests. This feedback and the data gathered, was key in re-designing the next session. The lesson plan was re-designed after the former lesson, ready for the following lesson, see Appendix C. The UNCRC (2016) state that "Every child has the right to say what they think in all matters affecting them, and to have their views taken seriously" (UNICEF UK, 2016).

Furthermore, to continue professional development and to influence the improvement of teaching, practitioners must be reflexive (Wragg 1996; Pollard, 2008; Bell, 2010; Denscombe, 2010; Grigg 2010; Hansen, 2012; Hattie 2012). Through learning new insights, change of

behaviour ensues and enables control over one's own learning. (Moon, 2004; Finley 2008; Naughton & Hughes, 2008; WAG, 2015).

While many people argue the benefits of learning outdoors, practitioners focus too heavily on gaining knowledge about it rather than ways to teach it more effectively, reflective practitioners will be able to teach outdoor learning both knowledgeably and effectively (Jarvis, 2017). The completion of the Brookfield reflection method on each day was used to capture reflections and the improved session was taught by the student who observed first, to the other six pupils selected. The student who taught first became the observer, closely monitoring the three new focus pupils. The Brookfield method, although is not backed by a great amount of research (WAG, 2015), is used to reflect upon: one's own opinions, the learner's opinions, relevant literature and the research partner's opinion (Brookfield, 1995; Trevit, 2007). The latter therefore, works well alongside the Lesson Study approach and lends itself well to maintaining ethical practice.

Ethical Considerations

The many ethical considerations made from observing children were compiled into the ethics forms, completed prior to undertaking this research project, and verified by an ethic's committee, see Appendix A. Potential risks to the participants and school, oneself as a researcher and the university were reflected upon. However, these risks are relatively low through: not placing the children in situations uncommon to the school settings and routines and whilst adhering to school's policies and procedures, as well as that of the universities and UK law.

It is true to say that all research carries risks, however, after extensively reading the: University guidelines concerning ethical research (2018), EWC code of practice (2016) and the BERA Ethical Guidelines for Educational Research (2011).

Consent was obtained from the parents, through a letter devised by the University, providing relevant information, in order to make informed choices and additional pupil's involvement in the research was granted, in the event that the chosen children were unable to partake in the research. Assent was obtained from the children, in a child-friendly way, following explanation of: the lesson structure, research questions and the right to withdraw or speak freely, without discrimination, see Appendix B. Data gathering naturally raises issues of ethical empiricism, (Mukherji & Albon, 2015; David et al, 2001), and face-to-face interviewing, even more so. Familiar AFLs such as hands on heads, tummies or toes, were verified by a lecturer at the university, and used to show understanding.

Questions were posed by us, in a familiar, open environment, to avoid potential emotional stress. The questions were non-judgemental, straightforward, non-misleading and open-ended way (Mukherji P. & Albon. D., 2015). The questions did not take a long period of time to

complete, and further feedback was not encouraged, nor incentives, to draw conclusions or to manipulate data. Therefore, the research was fit for purpose, reliable, and valid (Code of Practice, 1998; BERA; 2011).

The identities and names of the children remained confidential and data will continue to be stored correctly, only viewable to the researchers (Data Protection Act, 1998). Reflections were continually made to remain ethical (as suggested by Naughton & Hughes, 2008).

Lesson Study Analysis

During the first lesson every pupil seemed interested and eager to be there. The children, were involved, and attention was present throughout and this is reflected through the Leuven scale scoring. Similarly, pupils asked if they were able to put more soil in the pots and continue planting in the first taught lesson. I feel that the children achieved the lesson goal and seemed to enjoy involvement in a practical task which allowed them to use their senses to understand, learn and develop. This is partly displayed through the children adding positively to discussion during and after the session, however, some data was not recorded (see Appendix E & F).

I feel that the all the children could more readily and comfortably answer questions or offer feedback at the end of the session due to the fact they had just experienced the activity for themselves. Thus, this way of teaching enabled them all to be knowledgeable. The children learnt a great deal, I feel, particularly, the science of the life cycle of plants and worms, thanks to a little visitor. Although some children's involvement varied, nobody scored less than 2s for the first lesson. However, at times some children were involved less and distracted. This was possibly because the children would often be called, by the TA, back to class, to briefly finish another task and this hindered the research process.

Similarly, it would be true to suggest and from previously teaching the students, some pupils are more likely to be distracted and can relate to developmental traits or personal issues. This is reflected by one child in Lesson One (see Appendix E). However, the fun and practical nature of the lesson enabled that child to become immersed in the lesson, and therefore, not requiring positive behaviour management strategies for this.

Quieter pupils, were eager and chatty and seemed to be more confident, this may be due to the size of the group or the nature of the lesson. One child showed clear dislike for getting his hands dirty and changes to routine, at first seemed apprehensive, yet once I used positive behaviour management strategies became calmer, more confident and asked to be able to plant more seeds, (see Appendix E, Child 5 at 11.20). This individual was quite difficult to manage on times, but this seemed to be due to feelings of excitement, whereas the rest of the class demonstrated better control over emotions despite individual difference (see

Appendix E Child 5 at 11:45). One lesson objective was not met as the session had to take place indoors. The research findings show the children enjoyed being outside of the classroom, even if not outdoors (see Appendix F).

The poor weather conditions seemed to have a detrimental effect on some of the children's responses to some positive behaviour management; at times this was unpredictable and personally challenging. When the majority of positive behaviour management strategies were used, which was not frequently enough, the children responded well, however, this was not documented in the field notes for Lesson One. The use of clapping however, proved not to work well, except for one child but this is likely to be a personality trait. From previous experience however, clapping can take a while to establish and varies in effectiveness with this particular class. Therefore, the first thing to change for Lesson Two, was to introduce positive behaviour management strategies that worked the best previously and to utilise a list as a memory aid.

Furthermore, the lesson could have been improved through utilising a bigger indoor area enabling us to see how effectively the behaviour management strategies were working. The Sports Hall, which was originally offered as our indoor space, was then unavailable. I feel this would have also helped with the children's excitement levels rising to 'off peak' at times because of the lack of space in the Atrium provided, meaning the children were often squeezing past each other. Although this did not seem to affect pupil involvement.

Due to the layout of the Atrium, this also led to quite a lot of mess, being made on the carpet. Thus, we decided to introduce a protective tarp mat for the flooring in the next session, in order to respect the school's facilities and trialled pre-filling some of the pots with soil. This is something me and my research partner and I did not agree on, as I believed, even though messy, the children fully experienced gardening. Through reflection about other resources a decision to improve the picture quality of the introductory jigsaw was made. Although this worked well and achieved the desired outcome, it could have been more aesthetically pleasing for the children.

Through reflections using the Brookfield method, fewer plenary activities were trialled, focusing more about the tools we used, see Appendix D. I did not agree with going too far in depth, in order to keep the children engaged and involved, and with my class this seemed to work. Thus, the findings would be interesting. On a more positive note, the children took turns, cooperated and worked well in groups. Children who would not usually choose to work together, were equally involved and supported each other. Boy/girl mixtures, alongside mixed ability grouping, also seemed to work well and it was a pleasure to see children engaging with new people in this way!

My research partner believed the observation sheets were a useful way of recording the information and did not feel they needed changing. Similarly, the involvement scale was useful and easy to use when recording involvement. The questions however, did not provide us with much extra detail other than closed yes, no answers. However, given the age of the pupils, this was valid and should not be changed.

During Lesson Two every pupil seemed interested and seemed eager to be there. However, the Leuven scale scoring paints a different picture where certain children were often lacking involvement and engagement with the lesson, see Appendix E. The involvement scoring varied more greatly than the first session. There were distractions again, including parents and teachers coming and going, although fewer than the previous day. Personality traits seemed to play a role here as the same children were often the ones distracted but like the first session, the children cooperated and worked well in pairs, often with pupils they wouldn't usually work with.

On the whole, the children showed enjoyment and good involvement in the lesson and again, this was reflected in the focus group answers, see Appendix F. Child 1 enjoys conversation generally but can be quieter around bolder personalities, yet, when the use of tools was discussed, Child 1 spoke excitedly about it and planting seeds, and made comments like "They're seeds!", "It's an apple tree". However, I also believe the in-depth discussion about the purpose of the tools by my research partner, partly led to the distraction of the other children.

Furthermore, the lack of plenary, seemed to lead to less engagement, towards the end of the session, which is reflected in the Leuven scale scorings, see Appendix. The children learnt some new concepts when they were paying attention and the lesson was a fun, sensory experience. Although, a few children had good prior knowledge, this didn't seem to make the lesson less enjoyable.

I also feel that due to the lack of plenary and intensity of learning about the tools, which I myself found less interesting, the children were less likely to want to stay and answer questions. This was reflected as only two children out of six agreed to. Better time management would have helped with this. With hindsight, I believe the updated introductory jigsaw, made little difference to the overall session. However, the children learnt in a bigger area joining the Atrium, which meant there was less mess, and I feel this helped with their behaviour and excitement also. The list of five positive behaviour management strategies, introduced as a memory aid, worked very well.

The children were less noisy, and it was easier to regain most of their attentions, if only briefly with some. The children reacted better and more quickly to my research partner's different positive behaviour management strategies, which were fun. I will be utilising them

myself in Foundation Phase classes. Again, the clapping technique did not work as well, and this is reflected by all of the children particularly, Child 4 at 11.45, see Appendix E.

The lesson was again fun, engaging and motivated active involvement from the children, although the research could not be conducted outside again because of the rain. I still believe the lesson would have been better taught outside, for the children to 'get the most' out of the lesson, and for the lesson to be more engaging. This may have led to the children being less distracted and was requested by Child 3, "Are we going outside? It's not raining anymore", see Appendix E. In future this will be more possible when we have our own classes and not set days, where the weather is unavoidable. Although learning happens everywhere (Matterson, 2014), while 'there's nothing wrong with indoor learning; it's just that it's not outdoors' (Farr, 2016).

I agree that the observation sheets, field note method was a useful way of recording the information and feel they should be utilised again. The use of the involvement scale was useful and a quick method for compiling notes. However, time-scaling required the observer to have good self-control, alertness and ignore distractions, in order to record at set times. Avoiding key information and pupil involvement occurring outside of scheduled timings did limit the findings and this is reflected in the second session results, as suggested by Fawcett, (1996).

From experiencing these myself now I do feel they could have been taken more frequently and must agree that it is not a subjective method of collecting data. With hindsight, there would have been less opportunity to make other field notes, detailing behaviour or speech, which were equally important, and these could have also been documented more frequently. This enabled us to note the time and exact observation of interest at any time and this was essential as some of the vital information occurred (as suggested by Wolfinger, 2002), outside of the designated times the Leuven Scale demands. Initially, it seemed daunting assessing 6 children, 12 times, over a 60-minute session. The volume of the quantitative and qualitative data collected, alongside many 'school-life' variables, had the potential to become overwhelming. Both did however mean, that there was a lot of qualitative information to compile at times and a lot less at other periods in the lesson.

Again, the focus interview questions did not provide us with extra detail, although I still believe these were appropriate for the children. In my own future class, I would also utilise video recordings to obtain rich data more frequently, as often done so by teachers. This can capture much more aspects of children's behaviour to draw conclusions about. This would help me to assess the children's behaviour better and to more confidently draw on conclusions from the data presented.

To conclude, we avoided checklists in order to not have too rigid boundaries for this type of observation. However, in the future I would use checklists to remember to note specific information, as speech in particular was missed in the first observation. I will however, continue to use reflective methods and Lesson Study to create more effective lessons rather than focusing on what I merely now know.

From the experience we learnt that through good knowledge of the lesson structure and better time-management, to ensure quality plenaries occur, teaching is effective. Utilising memory aids to remember to use positive behaviour management strategies helped to manage the children well. However, the fun and engaging lesson motivated active involvement from the children the most. We still believe an outdoor environment may have been less distracting and the choice to teach seed planting was definitely the correct one, as reflected in the data collected. Outdoor learning is essential in the Foundation Phase and gardening is a perfect way of achieving this.

Discussion of Research and Literature

The research findings showed us, that what literature stated too often be true. Like Estyn (2011) suggested, outdoor learning is not taught nearly as often as it should be in primary schools in Wales, nor readily assessed. Furthermore, 'you can't really claim to have a broad and balanced curriculum sitting at a desk for most of the day.' (Farr, 2016). I began this research project by looking at how involvement in outdoor learning can be improved. However, what I have discovered, is that involvement in learning naturally arises from outdoor experiences and there are a lot more benefits to it than I had first thought.

From the observations, as literature predicted, the activity which could be taught outdoors, provided opportunity for the children to 'lose themselves' in independently leading the learning and sensory experience, which clearly boosted some children's confidence. It would be true to say that if the research were able to be conducted outdoors, this would have stimulated even further, sensory experience, and would have made the learning more relevant. The children also seemed more interested in nature and the environment and like the literature suggested, gardening was a cost-effective approach of enabling this to happen.

Even though the children were at times excitable, the experience did improve the behaviour of those children with the potential to be disruptive. Similarly, as literature suggested, it encouraged a very capable and initially cautious learner to experiment and upon gaining independence planting the seeds, didn't want to stop. Again, this correlates to literature findings, that some of the children developed positive attitudes to personal capabilities and a development in emotional intelligence, to persevere and try new things. Positive behaviour management strategies also helped with this, as through reassurance and praise, this was possible. There was a definite need for the use of positive behaviour management strategies to manage the children, as exemplified in the second lesson. However,

it is also important to remember that, this type of learning should offer 'unique opportunities to be creative, to move around, to be noisy and to take risks' (WAG, 2009). In fact, the exciting activity seemed to be the greatest factor affecting the involvement of the children in the learning.

The memorable nature of outdoor learning mentioned in literature, is clear from the findings: the children were able to easily answer the focus interview questions at the end and to retrieve information they had learnt in the lesson for plenary activities. It is true the lesson had to be well organised. Once both researchers were aware of what was expected for the first lesson teaching, the subject content was the easy part. Through essential reflection, the second lesson was formulated and again, the teaching of the lesson was well delivered, as reflected in the plenary activities also.

From careful planning, the children were provided with opportunities to be able to activate problem-solving and social skills independently, once spilling the soil, working well in pairs to achieve the desired outcome, both of which are said to develop children into lifelong learners. WAG (2009) suggest that children with these skills well-developed, are better able to learn and to retain that learning.

There was even distribution of responsibility and both boys and girls achieved equally well, and gender, nor ability difference defined involvement and engagement in or completion of the task. This lesson provided the opportunity for anyone to achieve, whilst Science was taught alongside physical activity. Suitable grouping was essential, as suggested by literature, to ensure there were enough diverse characters and abilities to ensure optimum learning prevailed. It was clear to see that 'less capable' learners flourish and become the more capable.

From these research project findings, it was clear that outdoor learning is a valuable and essential teaching style. As researchers, it became obvious how other subjects could be taught in the outdoors too. It is clear how necessary it is to continually teach in the outdoors or outside of the classroom to facilitate the most interesting and engaging learning, giving children the opportunity to want to be involved in their learning.

However, the methods used to capture this information could have been improved. Much data was missed through the methods utilised and this therefore, did not reflect how well the positive behaviour management strategies worked, in involving the children in the learning. Furthermore, the perceived involvement of the children in the learning, was largely based on opinion of what was being witnessed and this may affect its validity. However, the literature included in this paper supports our findings.

Conclusions

To conclude, at the start of this research project, the scope and positive impact of outdoor learning on children's learning and development, was unimaginable. Furthermore, whilst it was possible that learning outside of the classroom could in fact benefit children's engagement and involvement in learning, the findings and relevant literature are proof of just how much impact it can have.

There was also apprehension surrounding whether or not positive behaviour management strategies could actually have significant influence on involvement in learning outdoors. The research findings suggest that the correct techniques, relevant to the age group which consistently work in the classroom, can also work in other learning environments.

The literature gathered in this paper, reflects many views on outdoor learning, with the essential similar trend: outdoor learning or learning in a different environment, can in fact, really benefit involvement in learning. Outdoor learning has proved to have many benefits for children, not only for academic development, but also personal, social and emotional benefits. Outdoor learning for oneself will now be seen in a new light of appreciation. It is a pity therefore, that the children in the focus groups did not experience this. However, the lesson was still rich, seemingly rewarding and exciting. Thus, the children for the most part displayed much involvement.

While there were many elements of the research project which did not go to plan, through re-planning and refining of the second lesson, the children were able to be managed better and the session was less chaotic. However, the chaos of the first lesson added to the excitement in some ways and was far more child-led; this allowed the children to really 'take charge' of the learning and to learn through sensory experience. Once the initial excitement calmed, the children showed ability to manage themselves well.

As shown, Estyn suggest outdoor learning is still insufficiently evident even today, in schools across Wales. Yet, this research project and findings suggest it is possible and hugely rewarding. Whilst outdoor learning *can* be a daunting prospect for practitioners, if careful planning and appropriate lessons are facilitated, the practitioner is 'winning'. The enjoyment children can gain from these experiences is incomparable to any other, it is a shame that the research could not be conducted outdoors. Credit must be given to practitioners being reflective prior to the lesson, during and afterwards, through the Brookfield model, used in this project, see Appendix G. This, alongside ethical considerations, enables the practitioner to teach well and not discover these limitations too late as the process unfolds, which potentially hinders the lesson and research. Thus, the Lesson Study method used in this project, is an excellent tool. This experience has acted as a reminder that it is essential to 'know' your class

in order to anticipate what teaching techniques work best for them in order to keep them motivated and engaged.

There are aspects of both lessons that needed improvement. The second lesson has provided me with areas still in need of improvement, especially in consideration of the best ways to collect data. However, both lessons, on the whole, went very well. This research opportunity has provided the confidence to teach outdoors and also, more often, as its benefits outweigh its limitations. One of the most rewarding findings was the way pupils, unlikely to choose to work together, worked amicably and well. This would definitely improve maturity levels of students and openness to new ideas and opinions, as well as learning valuable personal and social skills, as research suggests.

Alongside Estyn recommendation, it would be beneficial to video record observations for better insight into the children's behaviour from beginning to the end of lessons; to assess the children and lesson delivery more thoroughly. Although, in this research project, the use of field notes and the Leuven Scale of involvement worked well, and was a start point for a first experience, video recording and other methods of assessing involvement, engagement and development will be used.

Outdoor learning and even learning outside the classroom, is arguably a way forwards for 21st century teaching, for bridging gender gaps and boosting a passion for learning, which can result in improved academic attainment. It can be taught across the curriculum, boost creativity, independence over one's own learning and help to mature personal, social and emotional aspects of children's development. All these ideals are essential requirements of Donaldson's Successful Futures outlook and so outdoor learning should be harnessed as one of many ways to achieve this potential.

Recommendations

The new understanding obtained from this research is a realisation of how vitally important learning outdoors and outside of the classroom, is! This experience will help me to move forwards in my confidence to teach outdoors, trial new positive behaviour management strategies and to 'build up' to organising trips outdoors, beyond the class environment.

In sharing good practice, I would suggest, that the Lesson Study method is a very useful approach when used alongside the reflective Brookfield model. Similarly, the Leuven Scale of Involvement is ideal for monitoring involvement of children, if carried out frequently enough. Furthermore, field notes are essential for capturing extra information, but that can overcomplicate and compete with involvement scoring at times. In light of this, if I carried out this Lesson Study research again I would ensure I have practised regular use of positive

behaviour management strategies and with permission, video record lessons. This could be utilised to better assess where improvement needs to be made and to avoid bias and opinion prevailing. Furthermore, practitioners should always aim to be reflective and through multiple tools, to avoid limitations in reflexive methods.

In regard to learning outdoors, it is a useful method, still not being facilitated enough in my opinion and from my experience. The essentiality of it for teaching across the curriculum, and to develop specific skills on an individual and collective basis has been contested in this research paper. However, from my experience, children's behaviour, even children who can be challenging, improves whilst learning outdoors, and this is essential to give them a fair chance at accessing the same information as their peers. This is not something which is achievable in just one session but glimpses of lifelong opportunities for development, were witnessed in this research study. Thus, it is essential that this method becomes a component of everyday teaching, in a curriculum for Wales.

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Appendix A

Ethics Form:

SECTION A: About You (Principal Researcher)

Full Name:	Katie Elizabeth Eynon				
Tick all boxes which apply:					
Member of staff:	☐	Student:	☒	Honorary research fellow:	☐

Faculty/School/Centre:	Yr Athrofa		
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Contact Telephone Number:	07983638372		
For students:			
Student Number:	P1050789	Undergraduate	☐
Programme of Study:	Primary PGCE	Taught Postgraduate	☒
Director of Studies/Supervisor:	Helen Lewis	Research	☐

SECTION B: Approval for Research Activity

Has the research activity received approval in principle? (please check the Guidance Notes as to the appropriate approval process for different levels of research by different categories of individual)	YES	☐	NO	☐
				Date
If Yes, please indicate source of approval (and date where known):	Research Degrees Committee	☐		
	Faculty Research Committee	☐		
	Other (write in) Module team	☒	28/02/18	

Approval in principle **must** be obtained from the relevant source prior to seeking ethical approval.

SECTION C: External Ethical Guidance Materials

Please list the core ethical guidance documents that have been referred to during the completion of this form (including any discipline-specific codes of research ethics, and
--

also any specific ethical guidance relating to the proposed methodology). Please tick to confirm that your research proposal adheres to these codes and guidelines.

BERA (2011) Ethical guidelines for educational research	x
UWTSD Research, Ethics and Integrity code of professional conduct and practice (2017)	x
Education Workforce Council Code of practice (2017)	x

SECTION D: External Collaborative Research Activity

Does the research activity involve collaborators outside of the University?	YES	☐	NO	x
If Yes, please provide the name of the external organisation and name and contact details for the main contact person:				
Institution				
Contact person name				
Contact person e-mail address				

Where research activity is carried out in collaboration with an external organisation

Does this organisation have its own ethics approval system?	YES	☐	NO	x
If Yes, please attach a copy of any final approval (or interim approval) from the organisation				

SECTION E: Details of Research Activity

Indicative title:	How to improve involvement of children during outdoor learning, in a Foundation Phase classroom, using positive behaviour management strategies.		
Proposed start date:	March 2018	Proposed end date:	April 2018
Purpose of research activity (including aims and objectives) Outline the purpose, aims and objectives of the research activity, including key research questions. Show briefly how existing research has informed the proposed activity and explain what the research activity will add and how it addresses an area of importance.			
Observation can be used to enhance children's care and education, (Naughton & Hughes, 2008; UNCRC, 1989) and " <i>stimulating interventions are open impulses that engender involvement,</i> " Laevers (1994, cited in <i>Encyclopedia of Early Childhood Development</i> , 2018). The purpose of this research is therefore to: <i>provide a rich learning experience to observe and identify ways of improving a group of children's involvement, in an outdoor task. Whilst, having awareness of poor behaviour can create barriers to learning; thus, using positive behaviour management strategies, the essentiality of which is well documented.</i> Estyn (2011) raised the importance of outdoors, experiential learning opportunities, which is an area underdeveloped by primary schools.			

Aims include: recognising changes of involvement in outdoor activities, using the Leuven Involvement Scale to measure this, at five-minute intervals (time-scaling method) and using field notes to document other interesting behaviour. We will attempt to find how techniques that are used in the normal classroom environment may have altered outcomes when taken outside that environment.

Objective: Creative methods will be used for gaining assent from the children, and a standardised letter from the University will be used to obtain informed consent from the children's guardians.

Objective: To adhere to the school-life of the setting, agreed times, conditions and its policies.

Objective: Following the University's rules, regulations, ethics and the law for the research to be reliable and valid, as suggested by Mukherji and Albon, (2015); the Code of Practice (1998), and BERA (2011).

Objective: To ensure the children's safety, needs and routine is upheld as well as, child protection, safeguarding procedures and fire safety regulations.

Objective: To follow the lesson plan devised and evaluated by my tutor.

Key questions to be considered are:

Does the way the children respond to the behaviour management strategies, that they are used to in the classroom, differ, when they transition to a different location?

Does this change in environment effect their involvement in the learning and can the behaviour strategies help with this?

Importance of research: Although my research partner and I used positive behaviour management strategies whilst teaching indoors, the weather didn't permit opportunity to practice using them outdoors. This is of interest to us and has lead us to question whether, a change of environment will promote or hinder the receptiveness of the children, their behaviour and engagement in the learning opportunity. Thus, this research will help ourselves and other developing practitioners to develop their confidence in and broaden their knowledge of these areas, to ensure effective outdoor learning can flourish.

Proposed methods

Provide a brief summary of all the methods that may be used in the research activity, making it clear what specific techniques may be used. If methods other than those listed in this section are deemed appropriate later, additional ethical approval for those methods will be needed.

Our methods will include:

- My research partner and I will be using a lesson study format which has been used effectively for many years in far eastern countries such as Japan and South Korea. The benefits of which have been summarised by Dudley (2011) and this format is now a popular form for researching. It incorporates a group of professionals, in this case a pair of PGCE students, who will establish a focus or teaching technique to improve upon, jointly deciding methods for improvement. There will be three case pupils, in this research project, who will

be selected based on mixed ability and gender, to answer questions. This should give a good indication of the wide range of ability throughout the classroom, without bias and discrimination.

- The observation will be positivist and non-participant in nature, utilising positive behaviour management strategies, hopefully allowing for a more natural learning experience, the observer is a familiar face to the students also.
- A research session will be jointly planned, and the six children will be closely observed at scheduled times. Three focus pupils, who we will have parental consent for and hopefully obtain assent from themselves, will be asked a series of questions (focus group interview) regarding: how they felt the session went; ways to improve it and whether they prefer involvement in indoor or outdoor learning.
- This feedback will be key in re-designing the next session. My research partner and I will proceed to alter anything that did not work, analysing the data and feedback as suggested by (Naughton & Hughes, 2008). The improved session will be taught by the student who observed first, to different pupils, selected using the same method. The student who taught first will become the observer, closely monitoring the three new case pupils. Feedback will be received from these children in the same interview format.
- We will use a 5-minute, interval-recording method (Palaologou, Needham, Male 2016) to observe the children's behaviour, responses and involvement throughout the session, using the Leuven scale, to assess this later. Using a time-sampling method will add precision and accuracy, indicating how involved a child is over time, (Papatheodorou, et al., 2011). However, this method of observation has drawbacks, for instance, over a 60-minute session, the observer must assess 6 children, 12 times, as we will have to observe the 'reserve' children also. In the event that, our three chosen children withdraw from the focus group interview, are unwell or absent, this contingency plan is in place.
- The sheer volume of the quantitative and qualitative data to be collected, alongside many 'school-life' variables, has the potential to become overwhelming. Furthermore, time-scaling requires the observer to have good self-control, alertness and ignorance of distractions, to record at set times; whilst avoiding key information occurring outside of scheduled timings, (Fawcett, 1996). Thus, to counteract this problem and provide optimum understanding about the children's involvement in the task, we will be using behaviour recording/field notes to document other interesting behaviour. We avoided checklists as this created too rigid boundaries for this type of observation.
- The Leuven scale, 5-point scale will be used to measure involvement and engagement in an activity of all the pupils. A team at the Leuven University in Belgium has developed the Leuven scale, led by Dr Ferre Laevers; the higher the scoring, the more involved a child is; leading to a deeper degree of learning.
- Given our prior knowledge of the three target pupils, we will ensure that the series of interview questions based on what we want to find out about the session, are posed in a way that the children feel comfortable answering and sharing, to reduce any emotional distress. The children will be made aware that they are free to leave at any time they choose, without repercussion.

Location of research activity Identify all locations where research activity will take place.
The research will take place in a large, inner-city school. The school comprises over 400 pupils and has 13 full time classes. Both research observations/sessions will be undertaken in the same school, in foundation phase settings, Year Two classes. The one class contains 28 pupils and the other 27 pupils. The names of these pupils, along with that of the schools will remain confidential. If weather permitting, the research will take place in an enclosed, outside area which joins the Year Two classrooms. In the event of poor weather, we will organise for the research to take place in the sports hall. Our focus group interview questions will take place in the Atrium, just outside the classroom. This area is accessible by the whole school, there are often many activities taking place at one time, so we will use a semi-private booth available there.
Research activity outside of the UK If research activity will take place overseas, you are responsible for ensuring that local ethical considerations are complied with and that the relevant permissions are sought. Specify any local guidelines (e.g. from local professional associations/learned societies/universities) that exist and whether these involve any ethical stipulations beyond those usual in the UK (provide details of any licenses or permissions required). Also specify whether there are any specific ethical issues raised by the local context in which the research activity is taking place, for example, particular cultural sensitivities or vulnerabilities of participants.
N/A

SECTION F: Scope of Research Activity

Will the research activity include:	YES	NO
Use of a questionnaire or similar research instrument?	☐	x
Use of interviews?	x	☐
Use of diaries?	☐	x
Participant observation with their knowledge?	x	☐
Participant observation without their knowledge?	☐	x
Use of video or audio recording? (Possibly – students to decide if they wish to record the interview. If so, suggest audio recording more appropriate than video.)	☐	☐
Access to personal or confidential information without the participants' specific consent?	☐	x
Administration of any questions, test stimuli, presentation that may be experienced as physically, mentally or emotionally harmful / offensive?	☐	x
Performance of any acts which may cause embarrassment or affect self-esteem?	☐	x

Investigation of participants involved in illegal activities?	☐	x
Use of procedures that involve deception?	☐	x
Administration of any substance, agent or placebo?	☐	x
Working with live vertebrate animals?	☐	x
Other primary data collection methods, please explain in this box	☐	x

If NO to every question, then the research activity is (ethically) low risk and **may** be exempt from **some** of the following sections (please refer to Guidance Notes).

If YES to any question, then no research activity should be undertaken until full ethical approval has been obtained.

SECTION G: Intended Participants

Who are the intended participants:	YES	NO
Students or staff at the University?	x	☐
Adults (over the age of 18 and competent to give consent)?	☐	x
Vulnerable adults?	☐	x
Children under 18?	x	☐
Prisoners?	☐	x
Young offenders?	☐	x
Those who could be considered to have a particularly dependent relationship with the investigator or a gatekeeper?	☐	x
People engaged in illegal activities?	☐	x
Others (please identify):	☐	x

Participant numbers and source

Provide an estimate of the expected number of participants. How will you identify participants and how will they be recruited?

Three children will take part in our interview questions, from each class, during two focus group interviews. The research session will have a larger group of children working (6), but we will only interview three children. We will choose our three target children based on general ability and mixed gender. A lower, middle and higher ability child will be selected, to get a better representation of the class and will hopefully ensure non-biased and rounded research observations. This should enable a variety of children to experience the same lesson, but inevitably, uniquely to them and this feedback may be highlighted in their opinions given at the end.

We have identified three pupils who will partake in the lesson, this is to ensure the lesson is somewhat more authentic to real learning conditions the children are used to, so that, there are children who can step in if a child wishes to withdraw, is absent, does not receive consent or doesn't give their assent.

Information for participants:	YES	NO	N/A
Will you describe the main research procedures to participants in advance, so that they are informed about what to expect?	☒	☐	☐
Will you tell participants that their participation is voluntary?	☒	☐	☐
Will you obtain written consent for participation?	☒	☐	☐
Will you explain to participants that refusal to participate in the research will not affect their treatment or education (if relevant)?	☒	☐	☐
If the research is observational, will you ask participants for their consent to being observed?	☒	☐	☐
Will you tell participants that they may withdraw from the research at any time and for any reason?	☒	☐	☐
With questionnaires, will you give participants the option of omitting questions they do not want to answer?	☐	☐	☒
Will you tell participants that their data will be treated with full confidentiality and that, if published, it will not be identifiable as theirs?	☒	☐	☐
Will you debrief participants at the end of their participation, in a way appropriate to the type of research undertaken?	☒	☐	☐
If NO to any of above questions, please give an explanation			
Questionnaires will not be used for this research project.			

Information for participants:	YES	NO	N/A
Will participants be paid?	☐	☒	☐
Is specialist electrical or other equipment to be used with participants?	☐	☒	☐
Are there any financial or other interests to the investigator or University arising from this study?	☐	☒	☐
Will the research activity involve deliberately misleading participants in any way, or the partial or full concealment of the specific study aims?	☐	☒	☐
If YES to any question, please provide full details			

SECTION H: Anticipated Risks

Outline any anticipated risks that may adversely affect any of the participants, the researchers and/or the University, and the steps that will be taken to address them.

If you have completed a full risk assessment (for example as required by a laboratory, or external research collaborator) you may append that to this form.

Full risk assessment completed and appended?

Yes ☐

No ☒

Risks to participants

For example: emotional distress, financial disclosure, physical harm, transfer of personal data, sensitive organisational information

- All research carries risks however, after extensively reading the University guidelines concerning ethical research, the EWC code of practice and the BERA Ethical Guidelines for Educational Research, we have come to the following conclusions regarding the risks to participants, investigators and the University itself.
- The children who will be taking part in the focus group interview will be informed that they have the right to withdraw from the research at any given moment. A child may feel that they are being treated differently. Thus, they must take part in the lesson, but they have the right to refuse questioning during the interview section.
- We will also make it clear to the children that there will be no adverse effects or discrimination if they choose to withdraw from the research and will be highlighted in the informed consent for parents, the school and in the children's assent, which is in line with BERA and the university's ethical guidelines.
- The group will have had parental/legal guardian consent form and their assent will also be needed. To gain this consent, creative methods can be utilised. We will use a sequenced diagram and pictures for informed assent and gathering of information, alongside AFL strategies that the children are familiar with. I have read the University's guidelines on ethical research and will obtain assent in a way which is checked by the University and consent from a letter devised by the University.
- Similarly, there may be situations where a child's safety is at risk. However, the children will be under no risk that is not already commonplace in a school setting. It will be essential to inform the children that, while for the most part, information will remain confidential, there are times when this is not always possible. We will adhere to school policies regarding fire drills and safeguarding protocols, and policy of the school and of the University. Any disclosures will be dealt with in accordance with these and UK law.
- During the last section of the research process the focus group interview, children will be asked a series of questions regarding the session and how they think it went, whether they learned anything etc. This set of questions will be posed in a familiar environment and they will be posed in a way that proposes a sense of calmness and ease. Every child will have the opportunity to speak and all we will create a climate where the children know there isn't a 'correct answer' or to feel embarrassed about their answers.
- Data gathering naturally raises issues of ethical empiricism, Mukherji & Albon, 2015, and face-to-face interviewing, even more so. Therefore, Research questions will be

non-judgemental, well-presented, straightforward, child-friendly and non-misleading, open-ended and will not take a long period of time to answer, Mukherji P. & Albon. D., 2015. The children will not be lead with their answers so that a particular conclusion can be found or manipulate any data. If any of the questions are seen to induce any kind of negative emotional response the children will be encouraged to speak up and they can freely withdraw from the questions. Research methods are fit for purpose and there will be no incentives on offer for pupils who do take part, in order so that pupils do not feel pressurised into part-taking. • It will be made clear to the children that no repercussions will come from answering the questions honestly. In light of this, the research questions will take place in the Atrium. This space is safe, familiar and is open to the whole school at any given time. The doors are unlocked and there are large windows surrounding it. • Names and identities will be hidden and remain confidential, in line with the data protection act (1998). Any potential injuries sustained will be dealt with in accordance to the first-aid available at the school and a teacher's assistance. • Similarly, any data will be stored securely and participants, the school and their guardians will be informed of this. This research will not be used past the allocated time unless granted, (Data Protection Act, 1998). • The children may feel uncomfortable being observed, however, myself and my research partner have spent considerable time in the setting so the children know us well and this should help them feel at ease.	
If research activity may include sensitive, embarrassing or upsetting topics (e.g. sexual activity, drug use) or issues likely to disclose information requiring further action (e.g. criminal activity), give details of the procedures to deal with these issues, including any support/advice (e.g. helpline numbers) to be offered to participants. Note that where applicable, consent procedures should make it clear that if something potentially or actually illegal is discovered in the course of a project, it may need to be disclosed to the proper authorities.	
N/A	
Risks to investigator For example: personal safety, physical harm, emotional distress, risk of accusation of harm/impropriety, conflict of interest	
• The risks in the research project will be low. • We will be conducting the research in an environment that is different to the classroom, but we will be familiar with it, as will the children. • The observation will take place in an outdoor area overlooking the Year Two classroom, within full view for other practitioners. • Risks could include falls or circumstances that accidentally harm the pupil. However, with staff close by, first-aid if required could be given immediately. • If I have a concern about the research or a pupil. I know I can speak to my university mentors about these concerns. • The research involves positive behaviour management strategies, this could come with a risk of altering personal relationships with the participants as not all participants will react in the same way. I must adhere to the rules and routines of the school. These are familiar to me now, from experience in the school. Similarly, I	

must adhere to the fire safety rules which I was fortunate to experience a drill during my time previously at the school. • I will request and encourage that a teacher is present whilst the observation takes place, due to lack of insurance. There will also be myself and the other student present. We will take it in turns to teach and observe. • The interview will take place in an open area, in the Atrium. The Atrium is a shared space, with various small areas, accessible to everyone and, with many surrounding windows, so it is a safe space. • There is a possible risk of accusation, that the children that are chosen are being treated differently and this will be addressed by providing seeds for the whole class to plant at some point. • Having been these children's teacher, the children may feel they have to take part, this is not the case and I will state this to them, in order to protect my integrity and the ethical assent of the children. • A small risk may include one of our three chosen pupils for the lesson study does not receive parental consent or they withdraw their assent on the day that the research is due to take place. If a child or many of the children refuse to give assent I will have a contingency plan in place. Every child in the class will be asked for their guardian's consent. I will ask for parental consent via a letter written by the University. If the children decide to withdraw or is absent, I will ask another child to take that individual's place, if they are willing. This is also the reason for the 6 children part-taking in the lesson. I will hopefully gain the children's assent through asking them and using an AFL which will be reviewed by the University. • I will need to be aware of myself and reflect continually upon my attitudes, stereotyping, categorising, bias or opinions and will acknowledge the emotions and well-being of the students in my care (Naughton & Hughes, 2008).
University/institutional risks For example: adverse publicity, financial loss, data protection As the research is a university-based practice, we will adhere to their policies and procedures on ethical research to uphold the university's good name. We will follow the school's policy also, in order to do this. We will not falsify, fabricate information, nor will I plagiarise. We will strive to be good role models for the pupils also and through all of the above, we hope to minimise risk to the participants, ourselves and the University. Similarly, we will represent ourselves in an appropriate way which will reflect the University and maintain a good partnership with themselves and the school. Our punctuality to the time arranged with the school and our DBS certificates are proof of character and professionalism also. We will act in a professional, ethical and appropriate manner.
Adverse outcomes List measures put in place to limit any adverse effects or outcomes of research activity where appropriate. Include any emergency protocols. We have in place the following contingency plans: • Change date if too many children are absent.

- Change of location due to weather.
- Change of secondary location.
- Change of target children.
- Fire drill/alarm.
- Safeguarding procedures.
- We will be recording audio, extra equipment (back up) to be made available.
- To manage factors that could hinder involvement in activities i.e. confidence, attention, lack of understanding, we will explain the children can withdraw from the research interview if they wish to do so.

Disclosure and Barring Service			
If the research activity involves children or vulnerable adults, a Disclosure and Barring Service (DBS) certificate must be obtained before any contact with such participants.	YES	NO	N/A
Has a DBS certificate been obtained?	☒	☐	☐

SECTION I: Feedback, Consent and Confidentiality

Feedback What feedback will be provided to participants, how will this be done and when?
The assignment, once completed will be made available to the head teacher of our school if requested. If the children that take part in the research want to see the end result, then they are welcome to.
Informed consent Describe the arrangements to inform potential participants, before providing consent, of what is involved in participating. Describe the arrangements for participants to provide full consent before data collection begins. If gaining consent in this way is inappropriate, explain how consent will be obtained and recorded.
• The informed consent of the children's guardians will be obtained through written letter, drafted from the University. Without this letter of consent, we will be unable to carry out our research. Once we have the parental consent, those children who have been chosen to take part in our focus group interview and the contingency children

will be asked for assent in person. These children will have every right in saying no and there would be no ill will or discrimination against them. • Only after we have both consent from the parents or legal guardians and assent from the children themselves can we proceed to ask the focus group questions. We will also seek consent from the head teacher, which is detailed in this form. • We have devised a small age appropriate paragraph that we will read to the children. This will be accompanied by some visual aids to keep them engaged. In this paragraph we will explain how the session will be conducted and that they are allowed to refrain from answering questions. The purpose of the research will be explained in this, and without this the research is unable to be carried out. • We will hopefully gain their assent in ways that are familiar to them, I will use a hands-on heads, tummies and toes if they understand and clarify things that they do not. We will spend a good amount of time on this, as without it, our research cannot take place. • This process will be ongoing, any time any participant, guardian or other involved body requests the information about the research, this shall be divulged. • At any point in the project, participants can withdraw and without repercussions, and no detrimental effect. The children have right to say no and no discrimination, with both, only then can proceed to continue, which detailed in this form.
Confidentiality / Anonymity Set out how anonymity of participants and confidentiality will be ensured in any outputs. If anonymity is not being offered, explain why this is the case.
• Everything in this project is confidential and will be kept safe. • The children's identities will not be named, nor will the schools, or class. Numbers will be used to address the children in the research documentation, following the Data Protection Act (1998). • This will be held in line with the University's documentation and management of data. • We will not collect personal data, or sensitive personal data, health or background information is not relevant. • The name of the observer will also remain confidential. • Information stored will be password protected and held on a memory card which will be encrypted, so that is cannot be accessed by anyone else.

SECTION J: Data Protection and Storage

In completing this section refer to the University's Research Data Management Policy and the extensive resources on the University's Research Data Management web pages (<http://uwtsd.ac.uk/library/research-data-management/>).

	YES	NO
Does the research activity involve personal data (as defined by the Data Protection Act)?	☐	x

“personal data” means data which relate to a living individual who can be identified— (a) from those data, or (b) from those data and other information which is in the possession of, or is likely to come into the possession of, the data controller, and includes any expression of opinion about the individual and any indication of the intentions of the data controller or any other person in respect of the individual.		
If YES, provide a description of the data and explain why this data needs to be collected:		
(this box should expand as you type)		
Does it involve sensitive personal data (as defined by the Data Protection Act)? “Sensitive personal data” means personal data consisting of information as to – (a) the racial or ethnic origin of the data subject, (b) his political opinions, (c) his religious beliefs or other beliefs of a similar nature, (d) whether he is a member of a trade union (within the meaning of the Trade Union and Labour Relations (Consolidation) Act 1992), (e) his physical or mental health or condition, (f) his sexual life, (g) the commission or alleged commission by him of any offence, or (h) any proceedings for any offence committed or alleged to have been committed by him, the disposal of such proceedings or the sentence of any court in such proceedings.	☐	x
If YES, provide a description of the data and explain why this data needs to be collected:		
(this box should expand as you type)		

Will the research activity involve storing personal data on one of the following:	YES	NO
Manual files (i.e. in paper form)?	☐	x
University computers?	☐	x
Private company computers?	☐	x
Home or other personal computers?	☐	x
Laptop computers/ CDs/ Portable disk-drives/ memory sticks?	☐	x
“Cloud” storage or websites?	☐	x
Other – specify:	☐	x
For all stored data, explain the measures in place to ensure data confidentiality, including details of password protection, encryption and anonymisation:		
We have referred to the University guidelines and will adhere to follow their suggestions. The data will be password protected on computers, encrypted on memory sticks and locked away in cupboards if hard copies are kept. In line with the Universities guidelines and the Data Protection Act (1998), all of the information held will be non-personal in nature.		
Will the research activity involve any of the following activities:	YES	NO

Electronic transfer of data in any form?	☒	☐
Sharing of data with others at the University? Research partner only.	☒	☐
Sharing of data with other organisations?	☐	☒
Export of data outside the European Union or importing of data from outside the UK?	☐	☒
Use of personal addresses, postcodes, faxes, emails or telephone numbers?	☐	☒
Publication of data that might allow identification of individuals?	☐	☒
Use of data management system?	☐	☒
Data archiving?	☒	☐
If YES to any question, please provide full details, explaining how this will be conducted in accordance with the Data Protection Act (and/or any international equivalent):		
The data that we collect will be stored according to University regulations. We will adhere to their policy on data protection. The data will be shared with my research partner. This data will be stored on a password protected computer of which will only be known to myself.		

List all who will have access to the data generated by the research activity:
There will be my research partner and myself, who will have access to this research data.
List who will have control of, and act as custodian(s) for, data generated by the research activity:
I will have control of the data generated by this activity, I will seek to ensure that the data does not fall into other hands.
Give details of data storage arrangements, including where data will be stored, how long for, and in what form. Will data be archived – if so how and if not why not.
The data will be stored on a computer with a back-up created on a password protected memory stick. The data will be stored until completion of the assignment. The data will then be archived upon completion on a password encrypted external hard drive, which only I have access to. The data will then be deleted upon completion of the PGCE course, some months later.

SECTION K: Declaration

The information which I have provided is correct and complete to the best of my knowledge. I have attempted to identify any risks and issues related to the research activity and acknowledge my obligations and the rights of the participants.	
In submitting this application I hereby confirm that I undertake to ensure that the above named research activity will meet the University's Research Ethics and Integrity Code of Practice	
Signature of applicant: K. Eynon	Date: 25/02/18

For students:

Headteacher / Senior Mentor:	Mr Russell Dwyer
Signature:	
Date:	26/02/18
Director of Studies/Supervisor:	Helen Lewis
Signature:	
Date:	

For staff:

Head of School/Assistant Dean:	
Signature:	
Date:	

Checklist: Please complete the checklist below to ensure that you have completed the form according to the guidelines and attached any required documentation:

☒	I have read the guidance notes supplied before completing the form.
☒	I have completed ALL RELEVANT sections of the form in full.
☒	I confirm that the research activity has received approval in principle
☐	I have attached a copy of final/interim approval from external organisation (where appropriate)
☐	I have attached a full risk assessment (and have NOT completed Section H of this form) (where appropriate)
☒	I understand that it is my responsibility to ensure that the above-named research activity will meet the University's Research Ethics and Integrity Code of Practice.
☒	I understand that before commencing data collection all documents aimed at respondents (including information sheets, consent forms, questionnaires, interview schedules etc.) must be confirmed by the DoS/Supervisor, module tutor or Head of School.

Appendix B

Ascent Paragraph:

Today, we are going to be learning outdoors, or out of the classroom.

We will be learning about gardening and planting some interesting seeds.

You will work in pairs to help each other plant the seeds.

We would like you to share ideas and be as involved in this, as you feel comfortable.

We will say things to encourage you to be involved, enjoy and help each other during the lesson.

After the lesson we would like to ask some of you some questions about this lesson, in the Atrium.

You can answer the questions in any way you would like.

These questions are not to test you, but to understand how much you enjoyed the lesson and how we can improve and if the way we talked to you helped.

We want to know if you enjoy learning outdoors as much as indoors.

We would like you to be as honest as possible, if there is something you did not like, please tell us this.

You can go back to class at any time, if you don't want to answer the questions, you will not get into any trouble.

This is for us to understand, not for you to show us how much you know.

It is up to you if you want to answer the questions.

For Assent Signatures and Accompanying Pictures

	Are you happy to answer questions about the lesson today? Write your name next to the face.	
	Are you happy to answer questions about the lesson today? Write your name next to the face.	
	Are you happy to answer questions about the lesson today? Write your name next to the face.	



Appendix C

Lesson Plan:

Name of Trainee: Katie Eynon		Session ref:	Research lesson: Gardeni ng.	Date: 27/03/18	Class:	Year Two	Cynllun Ffocws y Cyfnod Sylfaen 2d
Targed(au) Hyfforddi Personol		To select and prepare resources to be used effectively.		Number of learners: 27	6 pupil rotation.	6-7	
Learning objectives/intentions:	To plant fruit, vegetable s and flowers.	Success Criteria	- Creative and logical thinking. - Activate prior knowledge. - Work in pairs to complete the task. - Be able to work and behave sensibly.		Meeting learners' needs:	Active support provided throughout.	
Introduction/plenary tasks		Main activities			Resources/ Key Vocabulary	Assessment for Learning (strategies and opportunities)	
Introduction - The children will be gathered in the Atrium to discuss ascent and, if they agree to task, introduce them to the task. - 5 minutes for ascent. AFL hands on head, knees and toes and emoji faces will be used to gain ascent and to calculate pupil understanding. - 10 minutes for introduction to task and put the children in pairs. - Total time 15 minutes. Plenary: - The children will return to the Atrium. - We will discuss what the children have done and learnt. - We will look at pictures of strawberry, carrot and marigold life cycles and the children can guess which is which, explaining how they know. - Focus group questions on the		Trainee focused task: - Move to outdoor area. - Generate ideas about the life cycle of plants, looking at a tree in particular (what does it eat, does it breathe? etc.), put a jigsaw together of an Oak trees life cycle. - Re-introduce the task and use thumbs up and down. - I will ask the children to pick the equipment they think is appropriate for the task, there will be red herrings. I will ask the children to explain their choices. - We will look at pictures of the equipment needed and discuss their purposes. - We will discuss what sort of things they could plant and how to plant something. - I will model how to plant on of the items. - I will ask the children to go to the plant pots their starting on and then they can begin planning with support and instructions. - We will rotate and plant at least one of each thing, the children can then put their naming sticks in to the soil before they finish. - Total 30 minutes. Additional adult tasks: - Hopefully, a TA will be present to observe and support the children.			Resources: - Plant pots. - Seeds. - Gloves. - Trowl and fork. - Watering can. - Assent. - Pictures. - Ruler. - Measuring stick. - Outside area. - Part of the Atrium. Key vocabulary: - Seeds - Gardenin g - Planting - Life cycle - Marigold, carrots, strawberry es. - Towel, fork, watering can, soil, water, name sticks, plant pots, gloves.	- Discussi ons and particip ation at beginni ng and end of the lesson. - Using AFL hands on head, knees and toes and emoji faces. - Knowledge of student ability. - Ascent paragraph and constant opportunity to leave, ask questions. - Mini plenaries and letting the children	

lesson and the AFL strategies used. - 10 minutes for plenary. - 10 minutes for focus group questions. - Total time – 20 minutes.	Independent learning opportunities: - Collecting and sorting information. - Making decisions about what information to include, when completing the task. - Activating prior knowledge. Enhanced Provision: - The children can support each other independently after watching planting seeds. They can take it in turns. Continuous provision: - The children can help plant, tidy the area and make decisions regarding the task.	Welsh: - Gwrande wch - Eisteddwch - Stopwch - Pump-un - Da iawn/da - Pwy sy'n barod - Diolch - Ydw/Nac ydw - Dwylo i fyny - Mae hi'n amser tacliso - Mae hi'n amswer - Enw ar y ben. - Yn gymraeg. - Edrychwch I mi. - Dim siarad. - Arddecho g. - Gwych. - Marched/bachgen dda. - Dw i ddim yn gwybod. Behvaïour strategies: - Clapping - Un, dau, tri, look at me - Grandwch and barod – expecting the children to repeat. - Whispering. - Puppets. - Praise, Dojos and smiley faces. - Eyes on me, eyes on you. - Waiting and hand raising. - Stopwch, grandewch, bored, pwys syn barod, dywli fyny.	know how long they should have left, as well as what should already be completed.
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Curriculum coverage (range and skills) Language, Literacy and Communication Skills: Active learning opportunities that build on prior experiences and support them to become independent thinkers and learners. Range: Experience a language-rich environment that immerses them in spoken and written word. Skills: Build on previous experience, speaking confidently and making themselves clear; express opinions, giving reasons, and provide appropriate answers to questions; contribute to discussion keeping a focus on the topic and taking turns to speak. Personal and Social Development, Well-being and Cultural Diversity: Range: Activities that allow them to communicate their ideas; become independent thinkers and learners. Skills: Experiment with new learning opportunities, including ICT; become independent thinkers and learners; concentrate for lengthening periods; form relationships and feel confident to play and work cooperatively. Welsh Language development: Skill: Show that they understand basic instruction. Knowledge and Understanding of the World: Range: participate in different types of play and a range of planned activities, including those that are child initiated and those that build on previous experiences; work on their own and in pairs and small groups. Skill: exploring and experimenting; listening to others' ideas; identifying what they want to find out and how to do it; making observations and measurements and keeping record; making comparisons and identifying similarities and differences; sorting and grouping information using ICT on some occasions. Creative development: Range: Be involved in different types of play and a range of planned activities, including those that are child initiated; be involved in activities that allow them to work as individuals and in groups. Skills: Explore and experiment with a variety of techniques and materials; make choices when choosing materials and resources; use a variety of materials and tools for experimentation and problem solving.			
Literacy (LNF) Speaking: Express opinions, giving reasons, and provide appropriate answers to questions. Listening: Listen to others with concentration, understanding the main points and asking for clarification if needed. Collaboration and Discussion: Contribute to discussion, keeping a focus on the topic and taking turns to speak. Organising Ideas and Information: Use talk to plan writing; re-read and improve their writing/typing to ensure it makes sense; follow and build upon a form modelled by the teacher. Language: Use simple subject-related words appropriately.		Numeracy (LNF) Using number skills: Find halves and quarters in practical situations. Review: - Use checking strategies to decide if answers are reasonable. Fractions, decimals, percentages and ratio: Find halves and quarters in practical situations.	
DCF: - /	Thinking: - Activating Prior Knowledge and Understanding. - Determining process, method and strategy. - Generating and developing ideas. - Monitoring progress. - Evaluate own learning and thinking. - Reviewing the process and method.	ESDGC: - Links to prior knowledge.	YCC: - Links to prior knowledge.

What we changed in session 2

- 1) Location – more space – parents wandering in and out though
- 2) Protective tarp on floor
- 3) Pre-filled pots up with soil
- 4) Let the children fill up the rest, less messy
- 5) Changed up introduction jigsaw game about the life cycle of a tree
- 6) Used a list of behaviour management strategies - 5 in total
- 7) Different children observed due to illness.

Appendix D

Resources:



1



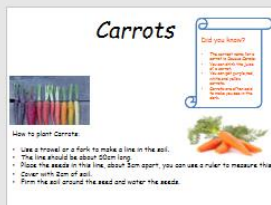
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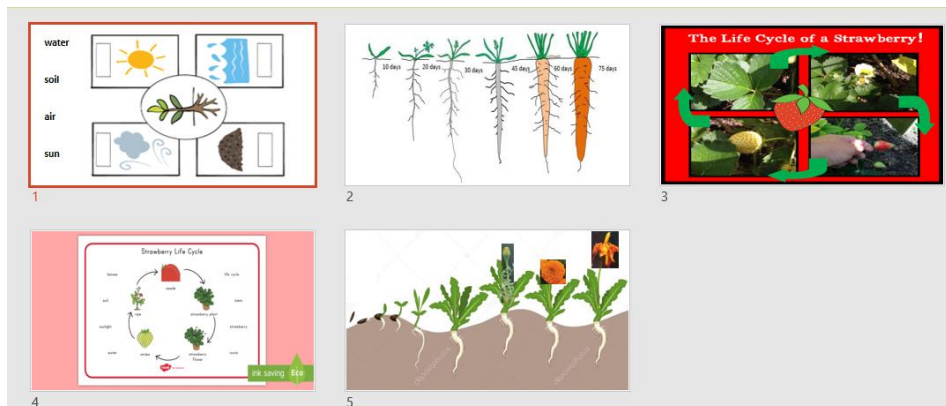
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Appendix E

Leuven Scale of Involvement

Lesson One:

	Leuven Involvement Scale (ranking 1-5)					
Time	Child 1	Child 2	Child 3	Child 4	Child 5	Child 6
10:50	2	3	3	3	3	3
10:55	3	4	4	4	3	4
11:00	4	5	5	5	5	5
11:05	4	4	4	3	4	4
11:10	4	4	5	5	5	5
11:15	5	5	5	5	5	5
11:20	3	4	3	4	4	4
11:25	4	4	4	3	4	4
11:30	4	*	4	*	4	5
11:35	4	4	5	5	4	5
11:40	3	3	4	4	4	3

* Child was called back to class, to complete a task.

Lesson Two:

	Leuven Involvement Scale (ranking 1-5)					
Time	Child 1	Child 2	Child 3	Child 4	Child 5	Child 6
10:50	3	3	3	3	3	2
10:55	4	4	4	4	3	3
11:00	4	4	4	4	4	2
11:05	4	4	4	2	2	2
11:10	5	4	5	4	2	1
11:15	3	3	3	4	3	4
11:20	4	4	4	4	3	4
11:25	3	2	2	2	1	2
11:30	5	3	3	2	1	2
11:35	5	5	5	5	4	5
11:40	5	4	3	2	3	2

Field Notes

Lesson One:

	Field notes:		
Child number	Extra information, including time.		
1	Time: 10.51 Observation: Staring into space	Time: 11.14 Observation: Laughing at the feel of the soil, seemed more than happy to get hands dirty.	Time: 11.20 Observation: Take it in turns and being patient.
2	Time: 11.11 Observation: Very happy when putting hands into the compost bag, very excitable.	Time: 11.30 Observation: Had to go back to class to complete another piece of work.	Time: 11.40 Observation: Was able to come back to answer the FGQ. Was confident and spoke clearly when
3	Time: 11.01 Observation: Put hand up, when everyone else was shouting out.	Time: 11.17 Observation: Found worm in compost bag, did not bother him, just picked it out.	Time: 11.38 Observation: Able to discuss well, what he had learned and whether he enjoyed the session.
4	Time: 10.56 Observation: Worked well with child 3. Task was to put together a jigsaw of a life cycle	Time: 11.01 Observation: Responded well to clapping from teacher.	Time: 11.30 Observation: Had to go back to class to finish a piece of work.
5	Time: 10.54 Observation: Raised hand when asked if he wanted to answer the interview	Time: 11.20 Observation: Was not happy putting hand in soil, got stuck in but very vocal about feelings.	Time: 11.45 Observation: Asked to be able to put more soil in the pots and continue to garden. Which was
6	Time: 11.03 Observation: Gave good reasons when picking items needed for gardening.	Time: 11.18 Observation: Was happy being patient and letting others grab the soil.	Time: 11.36 Observation: Was concentrating fully, when teacher was slowly revealing a life cycle of a carrot.

Lesson Two:

	Field notes:		
Child number	Extra information, including time.		
1	Time: 11:06 Observation: Distracted	Time: 11:07 Observation: "They're seeds!" "it's an apple tree" Very involved.	Time: 11:16 Observation: "I've seen this before" <u>Good use and knowledge of</u>
2	Time: 11:06 Observation: Distracted	Time: 11:20 Observation: Responded well to macaroni and cheese.	Time: 11:35 Observation: Flat tyre worked well
3	Time: 11:03 Observation: "Are we going outside?" "It's not raining anymore"	Time: 11:20 Observation: Responded well to macaroni and cheese.	Time: 11:35 Observation: Flat tyre worked well
4	Time: 11:06 Observation: Distracted	Time: 11:35 Observation: Flat tyre worked well.	Time: 11:37 Observation: Remembered to respond to clapping behaviour strategy but only on the second
5	Time: 11:06 Observation: Distracted	Time: 11:09 Observation: Didn't get really involved in picking out the items.	Time: 11:32 Observation: Really involved in the planting part of the lesson.
6	Time: 11:00 + 11:06 Observation: Distracted by other people	Time: 11:08 Observation: Distracted, didn't get involved in picking out items for gardening.	Time: 11:29 Observation: Playing with <u>other</u> child, gently reminded of task. 11:36 – Really involved with

Appendix F

Focus Group Interview Questions:

1. Are you looking forward to Easter?
2. What are you having for lunch?
3. What did you think of the session?
4. Did you learn something new?
5. What did you do in the lesson?
6. Do you enjoy working outside the classroom and what about it do you enjoy?
7. How could Mr Smith's group work better in pairs?
8. When I clapped and you copied me, etc did this help you to focus on the session?

Focus Group Interview Answers:	
Lesson One:	
Focus Group Questions	<u>Key</u> Child 1 Child 2 Child 3
3	Good – I like getting my hands dirty (gave a thumbs up) (Gave a thumbs up) I liked digging. Good – I liked putting the earth in the pot
4	No, I've done it before in my old school. No. Yes, I know how to plant things now.
5	We got our hands dirty. We dig up the mud. We planted seeds.
6	Yes, I enjoyed it. Yes, I enjoyed digging. Yes, putting dirt in the pot.
7	Don't know. They could go outside. Didn't know.
8	Yes. Yes. Yes.

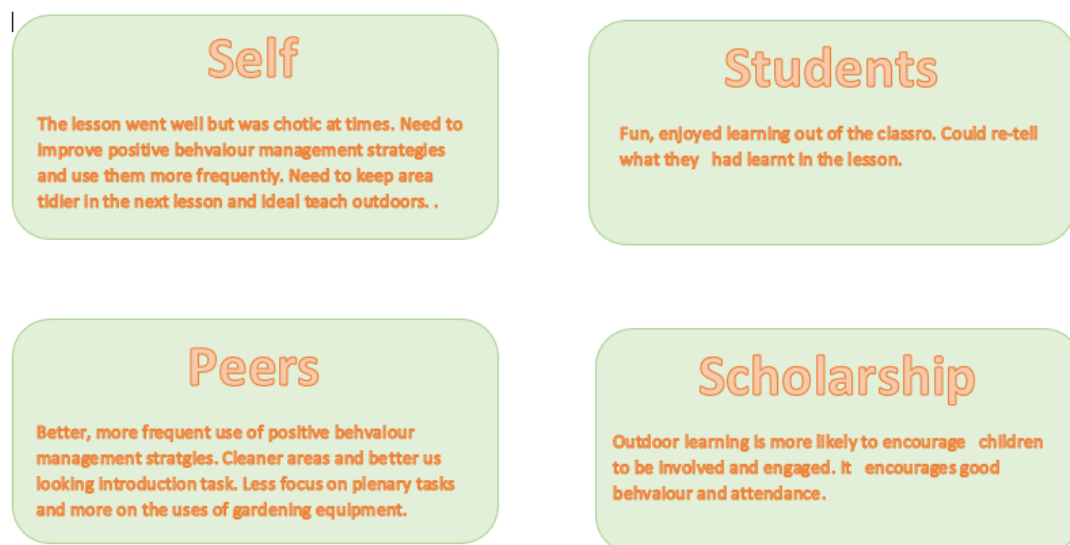
Focus Group Interview Answers:	
Lesson Two:	
Focus Group Questions	<u>Key</u> Child 1 Child 2
3	Easy (grinning). Easy peasy, lemon squeezy.
4	No response. Plants grow when you add water.
5	Planted seeds and strawberries. Planted all different plants – strawberries, flowers and carrots.
6	Yes. Yes.
7	No. No.
8	Yes. Yes.

Appendix G

Reflections Using Brookfield's Reflective Lens

Lesson One:

Brookfield's Reflection Model



Brookfield's Reflection Model

