Making an atlas of an urban farm
– Community mapping as a pedagogical tool in urban environments

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Abstract

Outdoor education in the UK has been growing in popularity and with it a further understanding of its benefits. Research shows that many young people still don’t access natural environments and many educators still struggle with how to provide them. This is particularly prevalent in urban environments where spatial inequality has been linked to a decline in health, well-being and personal development. Community mapping involves a community coming together to create a map of their locality and share local knowledge. This can take many forms. Sometimes it might be a traditional cartographic map while other times it may be stories, sculptures or poems. In this research I explore how community mapping can be used as a pedagogical tool, looking particularly at how it can help educators approach outdoor education in an urban environment. I take a teacher action research approach, inspired by previous art-based approaches to educational inquiry. Through doing a community mapping project with two groups of 8 to 10 year olds on an urban farm in central London I share the visible and often invisible components of our pedagogies, including children’s voices and work as well as the voice of myself and another educators, reflecting on the realities of outdoor education in an urban environment.

I discover the cross curricular possibilities that such a project brings, the spaces it opens up for us to learn from children’s voices and the many ways in which community mapping can be used to address aims and goals of the UK primary curriculum. Community mapping can help educators overcome a lack of confidence in how to approach outdoor learning. The child-led nature of projects can allow children and educators to work together to co-create their understanding of the locality, noticing the small details they hadn’t seen before. It can provide a space for educators to learn more about how the young people they work with see the world around them while also providing authentic experiences that can be utilized in wider classroom learning. This research allows other educators to take away what resonates with them, with their experiences and pedagogies, and use these new understandings to enhance their own educational practices in their own settings.
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Acknowledgement

When writing about outdoor education and aesthetic experience John Quay describes how ‘learning through being-in-the-world involves more than an individual mind; it involves self, others and environment submerged in holistic aesthetic experience,’ (Quay, 2013, p45). Throughout my research my role as a teacher action researcher involved more than just my own mind. It involved my young participants, other educators, my supervisor, my peers, the urban farm environment and the areas of London and Linköping where I did my reflecting, writing and researching. It also involved friends, lovers and family members who were there to lend a listening ear and keep me going when times got rough.

Thank you to the people and places that made this research possible.
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Introduction

In recent years there has been a growing interest in the benefits of outdoor education within the UK (Nundy, Dillion and Dowd, 2009; DfES, 2006). Mainstream schools have started providing forest school sessions for their pupils (Ward, 2015). Forest school nurseries are opening at a surprising rate (Barkham, 2014). Learning outside the classroom day has grown from an initiate started by a handful of London schools in 2012 to a global movement now taken up by over 600 schools in more than 15 countries (“The History of Outdoor Classroom day,” n.d.). Despite all this a government study in February 2016 discovered that one in nine UK children had not set foot in a park, beach, forest or other natural environment in the last year (Hunt et al, 2016). Reading this statement, like me, you might also be shocked. Even if young people are not accessing natural environments in their day to day lives are educators not working to provide these opportunities for them? Unfortunately educators are also facing barriers to getting their students outdoors. There are funding issues, perceptions of high risk and increasing pressures on curriculum time and resources (House of Commons Education and Skills committee, 2005). On top of this many educators do not feel confident or prepared to teach lessons out of the classroom (O’Donnell, Morris and Wilson, 2006). What, if anything, can be done to help young people access the benefits of outdoor learning?

While reading through back issues of the Canadian Journal of Environmental Education I came across an article by Wanda Hurren (2014) where she described a process she called mapwork. It was a process she had developed that linked places and people through the creation of ‘maps,’ the collage of various texts and experiences. These texts could be anything from a hand drawn map to a photograph to a poem, but what they had in common was that they presented peoples lived understand of a location. It was a process that fascinated me. I could see the cross curricular possibilities within the classroom, students exploring and observing their local areas and using their artistic, literary, scientific, historical and geographical skills to map their understanding. It could be used to help students investigate a fieldtrip location, their school grounds or develop their understanding of their place within the local community. It takes peoples experiences and lived understanding as a starting point, which might help overcome barriers of teacher confidence, setting young people as the expert of their area. In describing the process Hurren states that ‘as a process that can be taken up in research studies wherein place is a prominent feature, mapwork can also be used as a pedagogical approach within social studies and geography classrooms’ (Hurren, 2014, p533). Inspired by this concept I wondered how this process could be used within educational settings. I wanted to discover how it could be used as a method of developing young people’s connection to their locality, while also allowing it to influence my method of presenting our co-created findings – their projects and my final reflections.
Aim

Through my research I explore the use of community mapping within an educational setting. The following questions were at the back of my mind throughout the research process:

- How can community mapping be used as a pedagogical tool?
- Can the process of community mapping help educators to approach outdoor education in an urban environment?
- Can community mapping help educators to learn more about young peoples’ understanding of their locality and what might the values be in this?

Why here and why this?

Often when people think of outdoor education they think of exploring forests, taking part in white-water rafting activities or going on a weeklong residential trip. Outdoor education is all these things and more. It is a biology lesson, where teenagers learn about the risks to local plant species through growing and caring for these plants themselves; a maths lesson, where children record information about different vehicles passing their school and create subsequent graphs and charts to share their findings; a series of science lessons, where pre-school children repeatedly visit a local park and observe the changes to animals and plants throughout the seasons. Could community mapping projects be a way for urban educators to actively engage their students with the local area? Could it assist them to develop their sense of place and ownership of an area while subverting the usual power dynamics of teacher and student? As I mused over these ideas I realised that it’s only through trialing new teaching techniques and ideas that we learn their effectiveness, that we gather what information they provide and whether they are something we wish to use again, remodel and adjust, or simply resign to the back of our minds as an interesting idea that didn’t quite make it in reality. I decided that it was time that I tried out this technique myself.

Throughout this study I worked to get to the heART\(^1\) of educational research. I was another voice, inspired by the conversations of action research and arts-based research, which explored the idea of outdoor environmental education. Much of the current research around community mapping in educational contexts is based in the US and Canada, as will be further discussed in Situating the study. My research represents a new voice in this conversation, piping up from a new location, a urban UK context. Often it is urban educators who struggle with how to approach outdoor environmental education (House of Commons Education and Skills committee, 2005; Kings College, 2011; Thomas and Thompson, 2004). I

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\(^1\) This is a term used by Kathleen Nolan (2014) when referring to how arts-based approaches to educational inquiry can disrupt traditional texts and in doing so contribute new ways to question what we know and how we know it.
therefore chose to situate my study in an urban setting to provide an example of how this process could be planned for and actualised. It is also the setting I am most familiar with working in and so I was be able to utilize my personal experiences and knowledge of teaching throughout the research process.

During my research I developed, planned for, implemented and reflected on a community mapping project that I carried out with two groups of 8 to 10 year olds on an urban farm in central London. This is a small case study that will develop understanding about this context but also, as Butler-Kisber states, ‘in-depth context-specific work…allows others to take away from the particular what resonates with their experiences and use these understandings to enhance educational practices in other settings’ (Butler-Kisber, 2002, p231). I hope that my findings from this research will resonate with the experiences of other educators and provide them with new understandings that they can take with them into their own settings.

Identifying myself in the research

Considering the self study aspect of my research I feel it important to identify myself. My motivations and background are important to my research and therefore important for a reader who wishes to understand and critique it. I grew up in an urban area of London in a family where gardening, growing food and spending time in natural environments was not unusual. During school holidays I visited the countryside, staying with family members in Ireland and Scotland and developing a love of nature. I further developed this love through school where I also developed a fascination with education and a love for learning. After studying for an undergraduate degree in contemporary history, where I became fascinated with political reclamation of ‘space’ and ‘place’ as well as psycho-geography and urban exploration, I later went on to study for a Post Graduate Certificate of Education and train to be a primary school teacher, specialising in early childhood education and Geography. While studying to become a teacher I became fascinated (in particular due to the inspiring efforts of one tutor) by opportunities for learning outside the classroom. Much of my personal life and career has been spent appreciating the natural aspects of urban environments and therefore it has become a feature for this research, influencing both the aim of this study and my approach to it. My experiences within educational settings, as a trainee teacher and as an educator have built my pedagogical toolkit and in doing so influenced by method of research. They have allowed me to take the role of teacher action researcher throughout this project, where I simultaneously acted as a teacher and a researcher. During the research process it has been a challenge to balance my instincts as a teacher with my role as a researcher but I have continued to mediate on it throughout.

The research process

Throughout this research I tried to take an ecological approach, inspired also by my knowledge of the benefits of experiential learning. I had read that an ecological researcher ‘reads widely and deeply, soaking
in ideas and information, not necessarily ordering them, simply letting them accumulate and percolate,’ (Pivnick 2003, p150) and this effected both my literary research and my later data analysis. I knew that I needed to understand the territory, to know what kind of ideas were out there. I also reflected on how running this project was experiential learning as a researcher, testing out a way of doing something new. Through the process of teacher action research I experienced ‘being-in-the-world’ (Heidegger, 1996/1927, p49), developing my thinking in practice through a Deweyan holistic experience where ‘doing’ and ‘knowing’ were submerged (Dewey, 1934, p274). This aesthetic experience, and the opportunity to use the reflective process of writing to further develop my understanding, could be seen as turning my experience as a researcher into experiential learning. Without the authentic experience of leading the community mapping project and the personal reflective cycles that came with it this research could not have become what it is today.

Thesis overview

Through this thesis I explore the process of community mapping as a pedagogical tool. In Situating the study I explain the benefits of outdoor education, the situation within the UK and, more specifically, the situation within urban settings. I also look at barriers faced by educators and give a brief overview of the history of community mapping and the little that has been written about its use within educational settings. In my Methodology I present my research methods and the influence I took from both teacher action research and A/r/tography. In Preparing for the project I explain my planning process. I show how I used the UK national curriculum, discussions with my young participants’ usual educator and reflections from those involved in previous pedagogical mapping projects to influence the planning of my own project. In The community mapping project I present the beginning of my thematic analysis, sharing conversations, artwork, sculptures, children’s writing and comments from the project itself. In Reflections on making an atlas of an urban farm I present my discussion of the themes I developed from my data, how they fit into the wider academic conversation and how they helped me answer my research aim. Finally in Findings and conclusions on a community mapping project I discuss the research as a whole, look at possibilities for future research and present my recommendations and the implications for educators and their practice.

I set out to discover how community mapping could be used as a pedagogical tool. I wanted to see if it could be useful for urban educators, who studies have shown not only face multiple barriers to taking their students outdoors but are also likely working with young people who are no longer developing strong connections to the local environment or getting these opportunities out of school (Thomas and Thompson, 2004). I wanted to see if community mapping could help me to learn more about young peoples’ understanding of their locality and what the value of this might be. Might it assist teachers to become more confident through allowing young people to be experts of their area? Through this context specific case study I share my lived experience and understandings of planning for, implementing and reflecting on a
community mapping project in an education setting. I hope this research inspires and informs others to also build on and develop their personal pedagogies within their own settings.
Situating the study

‘Is the exploration of the natural world just a pleasant way to pass the golden hours of childhood or is there something deeper? I am sure there is something much deeper, something lasting and significant.’ (Carson, 1956, p100)

Throughout my childhood I frequently found myself wandering outdoor spaces, through inner city parks full of blooming spring flowers and alongside busy roads. Noticing the plants bursting up through the cracks in the pavement I would feel instilled with a growing sense of peace and awe at the natural world. Like Rachel Carson, I often wonder to myself if there was something about these spaces, something innate in the natural environment that helped rejuvenate my tired brain and enhance my concentration, something special about how it frequently sparked my interest. As I read more about the perceived benefits of experiences in nature it appeared that I was not the only one who has been puzzling over such matters.

Outdoor experiences in childhood

Research suggests that interactions with nature are beneficial in a range of ways including having positive effects on physical health (Ulrich 1984, Maas et al 2006, Richardson and Mitchell 2010), cognitive ability (Han 2009), psychological well-being (Bodin and Hartig 2001, Kaplan 2001, Fuller et al 2007) and social cohesion (Shinew et al 2004). Exposure to nature can also improve concentration. For example people who can view flowers and gardens from their home have been proven to be more positive, focused and alert while views of trees have been seen to reduce distraction and increase feelings of peace (Kaplan, 2001). Although science has yet to discover exactly why these patterns occur, for children growing up in an increasingly test-driven and work focused society these opportunities for increased positivity, peace and focus are important. FaberTaylor and Kuo did multiple research projects that showed that repeat exposure to green spaces reduces symptoms of ADHD in school age children (FaberTaylor and Kuo, 2004; FaberTaylor and Kuo, 2009; FaberTaylor and Kuo, 2011), while Kaplan’s (2001) research investigating the restorative effect of exposure to nature discovered that it had a positive effect on psychological and mental wellbeing, as well as assisting in regaining a mental balance after periods of stress or directed attention. Kaplan describes directed attention as a process that ‘requires effort, plays a central role in achieving focus, is under voluntary control...is susceptible to fatigue, and controls distraction through the use of inhibition’ (Kaplan, 1995, p170). This discovery could be seen as having particular relevance to educators and the school age children they work with, as the school day requires extended periods of directed attention, often leading to fatigue, stress and a reduction in students effectively approaching tasks. Kaplan’s findings, that exposure to nature can not only help mitigate stress and restore productivity but also assist in preventing future feelings of stress, seems an important one for educators. Natural spaces can provide a
space away from every day pressures and regular visits can reduce feelings of stress while also providing these restorative benefits (Kaplan, 1995).

It has been argued that the cognitive gains from experiences with nature lead to raised achievements and attainment levels among children. (Ofsted, 2008; Ofsted, 2009; Kings College, 2011; Defra, 2011; DfES, 2006). One example of this is presented in Nundy’s seminal study of the effects of fieldwork on upper primary aged children, in which he discovered positive impacts on students’ long-term memory, caused by the memorable nature of the setting, as well as an improvement in social skills and personal growth (Nundy, 1999). Nundy also noticed students who partook in fieldtrips were consequentially able to access higher levels of learning due to these cognitive and affective outcomes. The UK office for standards in education, child services and skills (Ofsted)² reinforces the positive effects that outdoor experiences have on wider learning and school experiences when they state that ‘learning outside the classroom can help to make subjects more vivid and interesting for pupils and enhance their understanding,’ (Oftsed, 2008, p7).

They also explain that it can help in combating underachievement and assisting at risk learners. This could be due to the previously discussed impact on concentration but may also be influenced by the sensory, experiential and hands-on nature of much out of class learning. Waite (2010) claims that the unpredictable nature of the natural world can help to rekindle children’s innate excitement and curiosity for learning, through providing motivational experiences on which further curriculum developments and environmental attitudes can be built. Dahlgren and Szczepanski (1998) further support this idea, claiming that the sensory nature of outdoor experiences allow children to be fully engaged in a task, enhancing concentration and thus attainment.

Natural environments also provide an ideal location to develop environmental awareness. Chawla (1998) did an in-depth study of interviews with environmentalists in the USA and Norway in an attempt to retrospectively explore what had led to their developed environmental sensitivity. She described environmental sensitivity as a predisposition to feel concern for the environment, to acting to conserve it and wanting to learn about it, based on formative experiences (Kollmuss and Agyeman, 1998 p251). The most frequently mentioned factor in developing environmental sensitivity was childhood experiences in nature, followed closely by experiences of pro-environmental destruction, pro-environmental values held by the family, pro-environmental organizations, role models such as friends or teachers, and education. Although Chawla’s study presents the importance of a number of different factors the fact that childhood experiences in nature were an integral early experience for all the environmentalists she interviewed suggests the important impact that early experiences in nature can have on a person’s environmental attitudes. The fact that positive role models, such as teachers, and education were also frequently mentioned reflects positively for educators. Although nature experiences may not directly lead to

² Ofsted is a non-ministerial department of the UK government that is responsible for inspecting and regulating services that care for children and young people within the UK. They provide guidelines for schools and also carry out inspection visits which result in published evaluations and, in certain case, intervention in the running of the school.
environmental behaviour they can help contextualize ecological understanding and provide ‘a comprehensive existential perspective’ that comes from developing aesthetic and emotional relations with nature (Sandell and Ohman 2010, p125). As David Sobel famously said, ‘If we want children to flourish, to be truly empowered, then let us allow them to love the earth before we ask them to save it’ (Sobel 1996, p39). Especially now, when globally we are becoming aware of our loss of climate stability, of the resilience and productivity of our natural systems, of our biological diversity and natural beauty, it is of upmost importance that our young people are taught in a way that helps prepare them for life on our planet, a planet whose biosphere operates by the laws of ecology (Orr, 2004).

What is outdoor education?

The philosophy of Outdoor education (OE) and its history varies as you travel around the globe. In Scandinavia it is tied up with the concept of Friluftsliv (literally translated as open-air living) and in Germany with Erlebnispädagogik (experiential education). In Finland with Erä (forest based survival skills historically linked to surviving colonization) and in the Czech Republic with Turistika (journeying outdoors which connects outdoor life with learning about historical sites, culture and the environment) (Festau et al, 2006, p25). Indigenous communities across the Americas have also been involved in place based education, education that is based in the local, for centuries (Cajete, 1994). The works of German émigré, Kurt Hahn (1886-1974) are often referenced by the outdoor education sector in the UK while in the USA John Dewey (1895-1952) provided a philosophical basis for experiential education which is now internationally respected (Higgins, 2010). Scotland’s Sir Patrick Geddes (1859-1952) also wrote of the role of education in holistic development, which he based on learning via the ‘three Hs’ – ‘Heart, Hand and Head’ (Boardman, 1978, p224) as opposed to the ‘three Rs’ (Reading, Writing and Arithmetic). Despite their differing origins what all these ideas and concepts have in common is that they involve a relationship between people and ‘place.’ This place might be a rural landscape but it might just as likely be an inner city park, a museum or a school playground. As Fägerstam so concisely explained, OE is a ‘multifaceted field of research and education that includes adventure education, leadership skills, tranquil outdoor life, friluftssliv, and human nature relationship as well as fieldwork and other school-based learning in different subject and settings’ (Fägerstam, 2012, p1). Global ideas around outdoor education have molded and morphed, fitting with social movements and educational ideas, however aesthetic and experiential learning have usually played a central part.

Aesthetic learning was described by the German philosopher Martin Heidegger as ‘being-in-the-world’ (Heidegger, 1996/1927, p49). It is thinking in practice, where ‘doing’ and ‘knowing’ are submerged into a holistic experience (Dewey, 1934, p274). In this sense aesthetic learning is when a student is fully immersed in an experience, in the learning ‘flow,’ and it is this aesthetic experience that provides a basis for experiential learning (Quay and Seaman, 2016).
Experiential learning is a term that is in widespread use in education and refers to an approach which trusts learners to learn through experience (Higgins, 2010, p1). It has much in common with ‘constructivist pedagogy’ where an individual constructs and adds to their knowledge through regular visits to the real world (Dahlgren and Szczspanski, 1998, p 20). The importance of situating outdoor learning experiences within wider teaching and classroom learning has been emphasized by many researchers (Dewitt and Storksdieck, 2008; Quay and Seaman, 2015). Creating clear connections between outdoor learning and classroom learning not only contextualises outdoor activities but also provides opportunities for reflection. It is this opportunity for reflection that turns an experience into experiential education (Joplin, 1981). ‘Learning through being-in-the-world involves more than an individual mind; it involves self, others and environment submerged in holistic aesthetic experience,’ (Quay, 2013, p45), showing that it is therefore our role as educators to provide the environment and facilitate the experiences that allow for such learning to occur.

The UK context

There is a long history in the UK of outdoor environments being used as an educational resource yet in their 2004 research review of outdoor education Rickinson et al. reported a growing concern at outdoor learning opportunities having significantly decreased in recent years (Rickinson et al, 2004). Since then there has been an increased interest in outdoor education at a national level (Nundy, Dillion and Dowd, 2009). In 2006 the Department for Education (DfES) published the learning outside the classroom manifesto, stating that ‘every young person should experience the world beyond the classroom as an essential part of learning and personal development, whatever their age, ability or circumstances,’ (DfES, 2006, i) Following on from this Ofsted released a report in which they evaluated the impact of learning outside the classroom in a variety of educational settings across England. One of their key findings was that ‘when planned and implemented well, learning outside the classroom contributed significantly to raising standards and improving pupils personal, social and emotional development,’ (Ofsted, 2008, 5). They went on to explain that although it could be argued that a curriculum that doesn’t include learning outside the classroom can still promote high achievement, the evidence gathered demonstrated that well planned activities outside the classroom significantly contributed to the depth and quality of learning.

Within the past decade outdoor education in England has also received greater attention at a grassroots level. We can see this when we look at the increase in mainstream schools providing forest school sessions (Ward, 2015), at the opening of more forest school nurseries (Barkham, 2014) and at the growing popularity of learning outside the classroom day3 (“The History of Outdoor Classroom day,” n.d.). We also

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3 Learning Outside the Classroom Day was initially started in 2012 by a handful of London schools. By 2015 over 600 schools in 15 different countries were involved and the following year it gained sponsorship from Unilever, creating a global movement to encourage play and learning outdoors.
see this trend when we look at the growth of charitable educational organisations who aim to promote, enable and support environmental education, such as SEEd, Sustainability and Environmental Education (SEEd – Sustainability and Environmental Education, n.d.) and the UNESCO initiated eco-school initiative (Eco-schools, n.d.). However, despite increased initiatives and research showing that outdoor education can promote personal, social and cognitive development, as well as add value to school curriculums (Waite and Rea, 2007), outdoor education isn’t as prominent within the UK education system as an outsider might initially imagine.

In 2016 Carrington wrote an article in the Guardian4 entitled ‘Three-quarters of UK children spend less time outdoors than prison inmates’. They referred to a survey of 2,000 parents of primary school aged children that discovered only 26% of these children spent 60 minutes or more playing outside each day, while UK prison guidelines suggest at least one hour of open air exercise daily (United Nations, 1955, p3). Although the headline may seem incendiary these statistics are supported by a 2-year government study published in February 2016 which also highlighted that one in nine UK children had not set foot in a park, beach, forest or other natural environment in the last year as well as the social inequalities that effected childrens access to these natural environments (Hunt et al, 2016). Seemingly in response to this in January of this year the UK department for environment, food and rural affairs (Defra) announced a 25 year environment plan which included pledges to help primary schools ‘create nature-friendly grounds,’ (Defra, 2018 p75) assist children from disadvantaged areas to access the natural environment and support schools to regularly take trips to natural areas. Despite this seemingly positive move the necessity for such pledges clearly highlights the current lack of provisions. Martin Smith, the head of The English Outdoor Council (EOC), responded to the government’s 10 million pound pledge to outdoor learning with the following statement:

*Through our members we reach nearly all schools in the country and we know that teachers are doing amazing work to bring children the benefits of outdoor spaces, but we also hear how they are struggle [sic] with accountability measures and, although £10 million has been allocated with the plan to support this work, there are still tremendous funding pressures felt by schools.* (Smith as quoted in Allen-Kinross, 2018, n.p.)

Although he mentions that teachers are attempting to utilize the benefits of outdoor education, Smith’s statement in schools week5 also references the excessive accountability measures and seeming lack of financial investment that many UK schools face. This presents the problem that there may be many barriers for teachers to overcome in their provision of outdoor education.

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4 The Guardian is a British daily newspaper.
5 Schools Week is a weekly print newspaper and online site dedicated to in-depth investigations and breaking news related to schools and education policy in England.
Barriers faced by teachers

Learning through Landscape, a UK charity dedicated to improving outdoor learning and play opportunities for children, found that despite 97% of teachers believing outside spaces in schools need to be used effectively to enhance pupils’ development only 18% felt their own school was making the most of this important resource (Learning through Landscape, 2010). This huge disparity in beliefs and reality suggests UK educators may face severe barriers when implementing out of class learning. In 2005 the House of Commons Education and Skills committee released a report identifying a variety of barriers to providing Learning Outside the Classroom (LoTC). These ranged from risks associated with school trips, to available curriculum time and resources, to the cost and availability of activity centres and other out of school facilities (House of Commons Education and Skills committee, 2005). They explained that, although some schools are active in providing well-organised outdoor education programmes that significantly contribute to the teaching and learning process, many are deterred by a false perception that outdoor education involves a high level of risk and burdensome bureaucracy, as well as high levels of funding, time and resources. They also discovered that although recent in-service training related to outdoor education has been effective, initial teacher training has not been effectively providing trainee teachers with the confidence needed to take pupils out of the classroom. The relevance of this can be seen when looking at a study done by Kings College which discovered that the benefits of learning in natural environments can easily be reduced by weak pedagogy and inadequate preparation or follow-up back at school (Kings College, 2011, p4).

In 2006 the UK national foundation for educational research released a report looking at education outside the classroom in schools and local authorities across the UK. It cited teacher confidence as one of the key factors that determine the extent to which outdoor learning was provided in schools (O’Donnell, Morris and Wilson, 2006). Teachers with high levels of confidence and training and who felt supported were, it showed, also more likely to provide outdoor education activities to their students. Interestingly in the same year a study by Kendall et al. (2006) into the provision of outdoor education training offered during initial teacher training courses suggested that some student teachers were inadequately prepared for teaching outside the classroom and that when training was provided it often focused on the theory rather than providing practical experiences. This idea, that teacher training may not be effectively preparing teachers to engage with the practicalities of teaching outside the classroom, further emphasises the previous discoveries of the House of Commons Education and Skills committee. Considering the apparent link between the confidence and competence of teachers and the extent of provision for learning outside the classroom, there have been calls for improvements in support and training for teachers if they are to become more engaged in outdoor education (Rickinson et al. 2004; O’Donnell, Morris, and Wilson 2006; Nundy, Dillon, and Dowd 2009). The learning outside the classroom manifesto states that ‘learning
outside the classroom is about raising achievement through an organised, powerful approach to learning in which direct experience is of prime importance. This is not only about **what** we learn but importantly **how** and **where** we learn’ (DfES 2006, 3, emphasis in original). In this sense outdoor education offers a unique opportunity to contextualise learning, connecting it to the community and real lives of the young people we are working with.

Outdoor education in urban settings

Peter Higgins, a professor in outdoor education at the University of Edinburgh, argues that ‘developing a connection with place’ is a key part of outdoor education. He argues that it is this connection with place which provides a basis from which students can develop relationships, or connections with people in the community, facilitating further developmental outcomes such as citizenship and care or the consequences of actions (Higgins, 2010, p5). Paradoxically he explains that many outdoor programmes take place in distant, often rural locations, far from the school grounds and cities in which many students live their daily lives. In these far off places developing an understanding of the ‘connections’ with people and community and the ‘consequences’ of our actions can prove far more difficult than in a local area familiar to students and their daily routines. Higgins doesn’t discount the educational value of carefully planned trips to relevant further afield locations, but instead emphasises the relevance of regularly using familiar local areas for outdoor education. This idea is further supported by Orr who believed that the study of place plays a significant part in re-educating people to live well where they are (Orr, 1992). As Moffet, a senior lecturer at Queens University Belfast, explained, ‘if the learning that takes place in school is embedded in the culture of the classroom, then children will have problems applying their knowledge outside school unless they have experience of engaging with real world problems,’ (Moffet, 2011, p279). In this way the ‘real-life authenticity’ of the outdoor environment and the activities which we do in it can help to ‘**embed decontextualised learning**’ (Waite and Rea 2007, p23). Local areas, as well as being easily accessible, have environmental relevance and can assist young people in situating wider learning within their own understanding and daily lives. Place-based pedagogies are necessary so that peoples education can have a direct impact on the social and ecological well-being of the places people actually inhabit (Gruenewald, 2003).

In 2004 the Green Alliance\(^6\) published a research report in which they presented findings from a series of interviews with 10 and 11 year olds, analysing children’s attitudes to their environment and consequentially developing a series of lessons and guidelines for policy makers. Their findings showed that many children are no longer developing strong connections with the natural environment and that it is children in urban environments that this is having the strongest impact on (Thomas and Thompson, 2004).

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\(^6\) Green Alliance are an independent charity and think tank which works with businesses, politicians and NGOs on environmental leadership issues.
They learnt that children in urban areas, particularly those from disadvantaged backgrounds, often lacked access to outdoor space at home and at school. Many hadn’t access to private gardens and those that did often faced problems such as overgrown nettles or noisy neighbours. These children generally had fewer opportunities and often stated they hadn’t engaged in a variety of outdoor experiences, such as visiting the beach. Although many of the children interviewed had learnt about environmental issues at school the study found that they gained richer learning experiences when learning through direct experience, with a number of children spontaneously mentioning that exploring new spaces and outdoor play contributed to their learning and personal well-being. The research concluded that although all children benefit from access to outdoor space, opportunities to access outdoor space are not equally available to all children. Such spatial inequalities particularly impact urban children, especially those living in disadvantaged urban areas, and are inextricably linked to a decline in well-being, health and personal development (Thomas and Thompson, 2004). For educators working with young people in urban environments not only emphasises the important part we can play through providing outdoor learning opportunities to the young people we work with but also what an impact these provisions can have. Although outdoor education is often assumed as involving out-of-school visits, which may be perceived as expensive and difficult to organise, Chillman (2003) suggests there are various advantages to using the school grounds as an alternative context for outdoor learning, yet this resource is often underutilized. School grounds can be used with little to no financial demand and are available at short notice; it is relatively easy for students to make repeat visits to carry out longer term projects; the use of school grounds can help reduce vandalism and improve break-time behaviour as a result of an increased sense of ownership which can in turn encourage a greater sense of belonging to the school (Chillman, 2003).

Place-based pedagogies have a particular importance in preparing young people to live well in their local social and ecological environments. Considering the findings of Thomas and Thompson (2004) this can be seen as especially relevant for those growing up in urban areas. Gruenewald developed the idea of critical pedagogy of place in which he merges the discourses of critical pedagogy, which grew from the teaching of the educational scholar Paulo Freire, and place based pedagogy. Critical pedagogy of place challenges educators to reflect on the relationship between the kind of places they live in, and want to leave for future generations, and the pedagogies they engage in (Gruenewald, 2003, p3). Gruenewald encourages educators and their students to re-inhabit the places they live, through taking part in social action that improves the social and ecological life of the places both now and for the future. In this sense this approach is radical as it juxtaposes against many current educational discourses that seek to standardize educational experiences (Gruenewald, 2003). Gruenewald believes this critical pedagogy of place can help students develop an increased understanding and engagement through experiential, intergenerational and multidisciplinary learning that is not only relevant to students’ lives and starts from their point of knowledge, but also potentially benefits the wider community. Zandvliet (2010) furthers this with the argument that environmental learning must include a critique of dominant social and industrial practices,
as these also contribute to both the local and widespread environmental problems experienced by communities across the globe.

Community mapping and Mapwork

Maps are representations of the spaces we inhabit and reflect our relationships with ourselves, each other and our environment (Dorling and Fairburn, 1997; Lyndon, 2003). They can also be seen as ‘an expression of power’ as whoever is making the map gets to choose, and enjoy, a central position (Clifford and King, 1996, p5). Community mapping on the other hand is mapping of the local, collaboratively produced by local people, and usually including local knowledge (Perkins, 2008). As Lydon (2003) explains it ‘requires people to dig into the past, to walk their local territories and streets, and to talk to their neighbours,’ (Lydon, 2003, p22). Although community mapping has historically focused on humans and built resources the Parish Map project of the late 90s also addressed the more-than-human world (Common Ground, 1996; Jagger, 2008). Started in the UK by Common Ground this project was heralded by Michel Dower, director general of the Countryside Commission7, as a way for local people to talk about the things that matter in their locality and agree on actions that need to be taken (Clifford and King, 1996). Through creative mapmaking, Parish maps allowed local people to share the landmarks, festivals, wildlife, history and stories that they cherished. These maps appeared in various forms and were created with paint, wool, sculptures, written word, drama, film, photography and even song (Clifford and King, 1996). This creative approach to mapping can be seen as taking influence from Guy Debord’s dérive in the streets of 1960s Paris (Perkins, 2008). Dérive, literally translated as drifting, was described by Debord as involving ‘playful-constructive behavior and awareness of psychogeographical effects,’ and therefore ‘quite different from the classic notions of journey or stroll,’ (Debord, 1956, n.p.). This psycho-geography, described by Debord as ‘the study of the precise laws and specific effects of the geographical environment, consciously organized or not, on the emotions and behaviour of individuals,’ (Debord, 1955, n.p.) could be seen as an early example of mapping not just a fixed representation of a place but its creation as part of a wider project. In this way artistic mapping facilitates people to come up with new ways to think about their places and in doing so bring new places into being (Perkins, 2007). So far empirical studies of community mapping have mainly focused on indigenous mapping and the role maps play in reassertion of property rights, rather than on the practices involved in community mapping projects (Parker, 2007).

Although mapmaking has traditionally been associated with the powerful, this kind of democratic approach to mapmaking can be seen as providing new opportunities for talking about social, political, economic and aesthetic claims and assist previously marginalised groups to have a voice (Perkins, 2008)

7 The Countryside Commission was a statutory body in England and Wales that co-ordinated government policy in relation to national parks and the countryside between the years of 1968 and 1999.
Considering the important part they will play in its future we might imagine that children’s voices would be central in decision making and planning around regeneration issues, however so far they seem to only play a passive role (Green Alliance, n.d.). As the Green Alliance pointed out in their previously mentioned survey, new requirements within the Children’s Bill suggests that local authorities are likely to increase future opportunities for children to engage with and be involved in environmental issues, particularly in relation to regeneration (Thomas and Thompson 2004, p14). Community mapping could therefore be seen as a potentially important pedagogical tool because ‘as the need for community and ecological recovery and connectedness grows, so will the relevance of the unique and powerful spatial learning and planning tool - community mapping,’ (Lyndon, 2003, p1)

Despite the potential of community mapping little has been written about its possible use as an education tool. Hurren (2014) describes Mapwork as a process she developed that links places and people through the creation of ‘maps.’ As a project ‘mapwork involves combining various place-related texts (expository, poetic, traditional maps, hand-drawn maps, images, photographs, etc.) with personal experiences of a place, and then collaging these various texts and experiences to create a new map or collection of maps,’ (Hurren, 2014, p533-534). Apart from reports of her own Canadian based projects little has been written on the potential of this promising pedagogy. Jagger (2009), a student at the University of Victoria in Canada, did a research project into the effect of a community mapping project on a group of fourth grade students’ environmental worldviews. From this she concluded that community mapping had a positive effect on changing students views of the environment and could be a useful pedagogical tool to include in the curriculum. She further expanded that the experiences within natural spaces helped provide experiential learning opportunities across the curriculum, especially in relation to environmental education (Jagger, 2009, p79). She showed that a community mapping project can provide opportunities for hands-on cross curricular learning, making connections between the classroom and the community while also assisting to develop environmental sensitivity and awareness in students, a forerunner to developing environmental citizenship (Jagger, 2009; Hungerford and Volk, 1990).

Community mapping ‘tells the stories of what is happening in our communities; and every community has stories, recently or long-buried in the lives and landscapes of our common ground,’ (Lyndon, 2003, p3). Jagger (2009) showed how using community mapping could provide an opportunity for students to make links between their classroom learning and these authentic experiences that can be found outside the classroom, enabling students to see the interconnectedness of different disciplines (Jagger, 2009, p34). Educationalists Catling and Willy (2009) emphasise that we must remember that locality is not just a physical entity, but importantly includes human, community and neighbourhood dimensions, further emphasising the importance of a pedagogical tool that could work to engage with all three.
Methodology

Rather than walk step by step through my methodology, and its literature, discussion and process, I have chosen instead to ‘blend’ these sections. This is not only an aesthetic decision but also a representation of the reflective, meandering nature of my approach to research, ‘following the meanders that a topic suggests, however time consuming, however frustrating, however much we are diverted from the path that we intended to follow,’ (Pivnick, 2003, p149).

In Pivnick’s reflections on her search for an ecological approach to research she asks herself ‘What would research look like that is grounded in an ecological worldview? What would it mean not simply to do ecological research but to do research ecologically?’ (Pivnick, 2003, p143) Among other things she explores how traditional scientific methods of research, that set out to find a definitive answer to a question, may not be the most appropriate for addressing ecological worldviews. Reading her reflections I puzzled over how I was going to approach my own research. Did I believe I should be working towards creating a meta-narrative that could be used to explain how all teachers should teach all students or rather do a more context-specific piece of work? If I was going to do a research project investigating community mapping, a style of learning that necessitates educators and learners working together to co-create knowledge, how could I present my research in a medium that exemplified the ideas I was trying to present? With all these questions swirling through my mind I set myself the task of discovering how those before me had grappled with these questions and what paths they had forged.

Teacher action research

Mills (2014) describes action research as rarely setting out to prove something is true, instead it ‘tries to find out if something will work or not. But that is not the end of the story. The journey can become more important than the destination. As we travel we see many things that we did not know were there,’ (Mills, 2014, p5). Teacher action research incorporates the discourse of action research, research carried out in the course of an activity or occupation to improve methods and approaches of those involved, into an educational setting where the teacher becomes the researcher. In many ways this style of research seems natural for a teacher as it builds on ‘our natural teaching cycle of reflection, implementation, evaluation and improvement with minimum disruption to teaching and learning,’ (Mills, 2014, p4). In this case my reflection is the introduction and situating of the study you have just read, the implementation was my facilitation of a community mapping project with a group of young people, my reflections on and disscussion of the project become the evaluation, and the improvements are my suggestions for future research and my actions in the future when I continue with my teaching career. This kind of action research allows teachers to not only develop their practice though reflection, but also to become more autonomous, to develop dynamic and engaging teaching and learning environments, to articulate their personal
pedagogies, and to recognise and appreciate their own expertise (Pine, 2009, p30). It can also be seen as empowering teachers to take the lead in educational change as it sets the teacher in the position of researcher, allowing them to be the subject rather than the object of research. Action research has also been described as a technique which can break ‘silences and free up the voices of people who have been marginalized or who feel powerless’ (Pine, 2009, p46). As previously discussed young people’s voices, within their communities, curriculum creation and wider environmental issues, often remain unheard, therefore I feel this further highlights the relevance of this democratic approach for my own study.

Teacher action research has been described as ‘a habit of continuing inquiry – a Deweyan attitude of questioning,’ (Pine, 2009, p42). I find this Deweyan attitude especially relevant to outdoor education, which takes much of its theoretical basis from Dewey’s education philosophy. Despite seeming like the natural choice of research method it would be remiss of me to continue without also addressing the critical responses. Despite growing popularity for self-study styled research, it has also been described by critics as solipsistic, self-indulgent, narcissistic and low-quality (Pine, 2009, p59). Feldman (2003) responded to these critiques of self-study by suggests four ways researchers could increase validity; clearly and carefully describing what is considered data and how it is included; clearly and carefully describing how data is constructed into representation; extending triangulation beyond multiple ways of representing a single case study and providing evidence of the values of any pedagogical changes (Feldman, 2003, p27-28).

Taking these considerations on board I have ensured to develop my methodology accordingly and further describe how within ‘Data collection’ and ‘analysis.’

A/r/tography – being an artist/researcher/teacher

As I continued to read about researchers who came before, I found myself drawn to read Nolan’s article on educational inquiry and deconstructing the boundaries between research, knowing and representation. Here she discusses arts-based research and how she approached her own educational research stating that ‘Arts-based, or performative, research highlights how the message is not only IN the medium, the message IS the medium’ (Nolan, 2014, p68). I pondered on whether it would be possible for me to do like Nolan and not only write my research about different ways of knowing and learning but actually write my research through different ways of knowing and learning (Nolan, 2014, p521). For such a short project as the one I had ahead of me it seemed unlikely I would be able to tackle not only a research project but also develop an effective aesthetic creation through which I could share my process. Never the less this postmodern style of approach to research sparked my interest and I chose to read further, looking for how I could take inspiration from these methods while developing my own methodology.

A/r/tography is ‘an action-orientated form of living inquiry that stems from continuous reflection upon action within the roles of artist, researcher and teacher,’ (Sinner et al, 2006, 1254). The similarities between
this, teacher action research and also the process of Mapwork, that Hurren (2014) describes as both a pedagogical method and a research tool, seem clear. In reviewing the practice of new scholars in arts-based educational research, Sinner et al. (2006) summarise the characteristics of an effective a/r/tography methodology as involving:

‘commitment to aesthetic and educational practices’
‘inquiry-laden processes’
‘searching for meaning’
‘interpreting for understanding’ (Sinner et al, 2006, p1223)

During my research I used this inquiry-laden process; to constantly question the process of community mapping and its use as an educational tool; to question its use for teachers; to question its use for learners. I searched for meaning in children’s communication, their maps and their writing as well as in my own reflections, taking influence from the discourse of auto ethnography. I also interpreted for understanding, analysing and reflecting to develop an understanding of the use this process could play within an educational setting. My commitment to educational practices was central to my study however my commitment to aesthetic practices was, in this case, limited. As Nolan (2014) mentioned, in arts-based education research (ABER), the medium is the message and therefore the presence of aesthetic qualities or specific design elements infuse both the inquiry process and the final research ‘text’ (Barone and Eisner, 1997, p95). For Lee (2004) her music education dissertation used autobiographical and creative nonfiction approaches when interviews with musicians who had entered into music teaching grew into creatively narrated stories of their personal hardships. For Gaylie (2003) this meant including her own poetry when researching the value of writing poetry in an inner city school. In my research I took influence from the creative writing process, using emotive vocabulary and first person reflections to infuse my research with personal aspects of teaching, self-study and the reflexive process of writing. In this way I took inspiration from ABER through working to make my research meaningful and accessible to a diverse audience beyond peer academics (Cahnmann-Taylor and Siegesmund, 2017). I found this of particular importance for my research, where I was investigating a pedagogical process which holds value for peer academics, but also for pedagogues and policy makers. ABER practices are not only valuable as a form of educational inquiry but also also appeal to a diverse range of scholars and audiences outside academia, including teachers, politicians, administrators, and other involved in pedagogy and decision-making processes in educational settings (Cahnmann-Taylor, 2017, p12). With the growing acceptance of arts-based educational research I wanted to be part of this new movement but was aware that, for the case of this research, I was able to only take a limited aesthetic approach due to requirements and time constricitions.
Participants

My fieldwork focused on working with young people, 8 to 10 year olds, who are part of a weekend youth group based on a city farm in central London. 10 young people are on the register for the morning group and another 10 for the afternoon group, although attendance can vary. They come weekly for half a day to take part in sessions that explore themes of animal care, food growing, environmental conservation, healthy cooking and rural crafts, in an interactive hands-on way. They were chosen as I already have a positive rapport with their educator, having worked with her previously. I already have knowledge about the locality, having previously worked as an educator in the same setting, and therefore additional time was not needed to familiarise myself.

Previous studies have shown that learning performances of students who are familiar with a field trip location are significantly higher than that of students not familiar with a site (Anderson & Lucas, 1997; Falk, 1983; Falk et al., 1978; Orion & Hofstein, 1991). Due to the limited time available for my study I felt that choosing to work with young people who were already settled and aware of their outdoor surroundings on this city farm assisted in reducing the novelty. If I had instead worked with a visiting class it would have been useful, and maybe even necessary, to take them on an introductory visit to the location so initial explorations could be done before deeper learning began.

Cobb states that ‘there is a special period...approximately from five or six to eleven or twelve, between the strivings of animal infancy and the storms of adolescence – when the natural world is experienced in some highly evocative way, producing in the child a sense of some profound continuity with natural processes,’ (Cobb, 1959, p538). Having a choice of working with two different youth groups on the farm, 8 to 10 year olds or 10 to 13 year olds, I chose to work with the former feeling that, if Cobb’s (1959) statement is correct, the process of community mapping could be particularly relevant for this age group. This idea was further supported by Sobel (1999) who explained that between the ages of ages seven and eleven children want to merge with nature, to try and make geographical sense of the world that surrounds them. He discusses how this phase of bonding with nature involves actively exploring natural spaces. This period of discovery also involves personally constructing knowledge about the environment. Sobel uses this as a basis for discussing the important part mapmaking can play in developing young people’s geographical awareness, further emphasising the relevance of carrying out my fieldwork with my selected participants, who fall into this exploratory phase.

Location

This study took place on a city farm based in the urban area of central London. It is a working community farm which aims to promote being active outdoors and educate local people about where their food comes from. As well as having farm animals on site there are allotments on which food, plants and herbs
are grown, a section of which is reserved for use by the young people attending the weekly youth groups. There is also an blacksmiths workshop and a wildlife garden which contains a pond, a bird hide and a cob\(^8\) wall, both built by members of the farms youth groups. The farm is situated on the edge of the river Thames and the young people I worked with were familiar with making visits to the Thames foreshore to investigate and observe what washes up on the banks of the river. I chose this location, not only for its familiarity and accessibility, but also because it exemplifies the opportunities to access natural environments within a highly urbanised area. Entry to the farm is free for individuals, and local schools, youth groups and mother and toddler groups regularly utilise the site. City farms are a familiar sight across cities in the UK, with many of them being located in deprived urban areas where people have limited access to their own outdoor spaces (The Guardian, 2017). I felt that this location was a particularly relevant place in which to carry out my research.

**Delimitations**

**Pre and post testing**

One of the ways previous researchers have attempt to measure the impact a project has on attitudes of young people is through pre and post testing. I initially considered using pre and post testing to analyse the impact my project had on my young participants. I looked into using the Children’s Environmental Attitude and Knowledge Scale (CHEAKS), the Children’s Attitudes towards the Environment Scale (CATES) and the New Ecological Paradigm for Children scale (NEP) but upon further consideration various factors suggested this kind of qualitative analysis wouldn’t be suitable (Leeming, Dwyer, & Bracken 1995; Mussler & Malkus 1994; Manoli, Johnson, & Dunlap, 2007). In her analysis of her community mapping project Jagger found that changes in students environmental attitudes were measureable at about 3 months beyond the pedagogy (Jagger, 2009, p148). Considering the 2 month duration for the implementation and write up of my own research such a quantitative approach didn’t seem recommendable. Working with a maximum of 20 young people across 2 days I also felt it unlikely I would gather enough data for significant statistical analysis.

As well as the small scale of my project, I was aware of a number of other notable disadvantages across these methods. Although NEP was significantly shorter than CATES and CHEAKS, with only 10 questions as opposed to 25 and 66 respectively, all three still required children to be able to maintain focus on a prolonged reading and writing activity, as well as having language which I felt would not be accessible to all children I would be working with (Leeming, Dwyer, & Bracken 1995; Mussler & Malkus 1994; Manoli, Johnson, & Dunlap, 2007). As well as this CATES and CHEAKS could be seen as having problematic wording.

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\(^8\) Cob is a natural building material made up of subsoil, water, fibrous organic material (typically straw), and sometimes lime.
which already suggests a ‘right’ answer, therefore possibly providing more information on children’s test
taking abilities than their environmental understanding (Jagger, 2009, p55).

When considering the possibilities of pre and post testing I had also thought about the particularities of
the group I would be working with. I considered the age of the children, the limited time I had to work with
them and the possible lack of continuity of students between sessions, not every member of the group was
guaranteed to attend every week. I also considered their varied reading and writing levels and concluded
that such tests would not easily provide useful information. I felt it would instead be best to use the limited
time I had with them to focus on the project itself, looking at the process of teaching, the experiences of
the young people and what impact a detailed knowledge of these two could have on future pedagogical
endeavours. I felt this was particularly relevant considering the groups’ regular educator had notified me
that multiple children were statemented, meaning attainment levels of reading and writing varied greatly,
as well as the ability to focus on one activity for a prolonged period of time. Doing written tests would not
only require adults to read and transcribe for multiple children but could also lead children to become
overwhelmed by the process, discouraging them from partaking in the rest of the project with the
knowledge there would be another ‘test’ at the end.

Structured interviews

Another technique I initially considered but decided against was interviewing students. Although
interviews can be advantageous in gaining students views, which as previously discussed play a central part
in teacher action research, there are also disadvantages to this method. Structured interviews can be
biased by factors such as interviewer characteristics, acquiescence and social desirability (Bryman, 2015,
p227-229). Interviewing can also be a time consuming process. I have adapted to the environment and time
constraints, as is always a necessity with teaching, and instead decided to rely on students’ comments and
reflections during the sessions.

Data collection

I developed a relational approach to this study that was informed by action research, a/r/tography and
ethnography (Mills, 2014; Pine, 2009; Barone and Eisner, 1997; Sinner et al, 2006; Cahnmann-Taylor and
Siegesmund, 2017; Agar, 1996). This pluralistic methodology was partially inspired by a rejection of
hierarchical conceptualizations that present research as something done to students and teachers, rather
than with them. In relation to this students were actively involved in the collection of data, through the
creation of maps and taking of photographs. As a result of my teacher action research approach I was

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9 Statemented is a term used by teachers within the UK to refer to when a young person is officially assessed as having
special educational needs.
acting as both a teacher and a research throughout the community mapping project, which impacted my data collection. Having trained and worked within Early Years settings\(^\text{10}\) in the UK, where educators are often required to lead sessions while simultaneous observing all children and making written notes, this is something I have previous experience of doing. A critic might point out that there may have been things I missed as a teacher action researchers that a research who was solely observing may have noticed. On the other hand I feel that had I solely been observing I would have missed out on the active process of being a teacher within this community mapping project and lost the opportunity to critically reflect on the process from an educators perspective.

My data collection included:

- 6 pages of observational notes on the students, taken throughout the sessions
- 8 pages of my reflective notes on the pedagogical process
- 4 pages of observational feedback and reflections from the groups usual educator
- 2 stars and a wish - written feedback on a post-it note from each students at the end of each session
- 44 pages of Students work from sessions – including photos taken by students, drawn maps, written comments and explanations
- 5 hours of audio recording from the second day of the project
- 22 pages of ethnographic write up

I chose to collect the data I did as I wanted to make the study as useful as possible for future educators wishing to use community mapping as a pedagogical tool. I therefore chose to collect data in a similar way to how a teacher might be able to while teaching a lesson, making brief observational notes on students’ actions and writing more extended notes after the session. Through mimicking the pedagogical style I tried to increase the studies relevance. A concurrent triangulation approach was also used (Bryman, 2015). This meant I used different research methods to gather a variety of data, observing students, taking part in autoethnography, collecting audio recordings and talking to the groups regular educator after sessions. This type of triangulation is suitable for shorter periods of study as opposed to sub sequential triangulation which requires a longer process and was therefore less suited to my study (Creswell, 2009). I felt this approach also assisted in gathering a richer selection of data, as of course different data and research methods are likely to provide different information.

Audio recording were only made during the second day as this part of the project took place almost entirely inside. Due to the noisy nature of the outdoor environment on the farm it was not practical to

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\(^{10}\) Early years settings is a term used within the UK to refer to private, maintained, voluntary and independent settings that follow the Early Years Foundation Stage curriculum and offer a range of services for children from birth to at least 5 years of age.
collect audio recordings of parts of the project that took place outdoors. Instead written observations were made during this period and notes were also written up at the end of each outdoor session. Although this may not be ideal, teaching always involves adapting to different situations and making the best of a circumstance for both yourself and your students. This what I did in the case of this research.

**Ethical considerations**

When carrying out action research it is important that everyone involved has consensually agreed to participation and that research it compatible with both educational aims and democratic human values (Groundwater-Smith and Mockler, 2007). The farm manager and the groups’ usual educator were initially contacted via email to explain the project and situate its relevance within the wider educational goals of the farm. Written consent was also gathered from the farm manager via a consent form that clarified how the study would comply with the site guidelines and health and safety regulations (See appendix A).

An email, providing my credentials and giving a clear overview of children’s potential involvement, was used to gather consent from parents and guardians of my young participants (see appendix B). The email also included an -opt in reply, which could either be returned to me via email or printed out and handed in at their child’s weekly youth group. The groups’ usual educator also printed copies of the form for parents and guardians who did not have access to it via email.

Due to the collaborative process of action research learner voices are central in data collection and it is therefore important to ensure that students genuinely agree to participation and are not pressured into agreeing to involvement (McIntyer et al., 2005). With this in mind I created a child-friendly script to gather consent from participants (see appendix C). I designed it so that it could be read out to children who weren’t confident with reading. Once consent had been gathered from parents and guardians the groups’ usual educator shared this consent form and information sheet with potential participants. It explained what they would do if they took part, what would happen to information about them, the concept of anonymity and emphasised they were allowed to change their mind about taking part without giving a reason. There was a series of questions at the end of the short text with options to circle yes or no, to show their understanding of the text and clarify if they needed any further information. I designed it this way so as to be inclusive of any young people who were not confident in providing written responses.

**Data analysis**

During this study I took a data-driven approach to thematic analysis. Although some academics have debated whether thematic analysis is a method in its own right (Holloway and Todres, 2003; Boyatzis, 1998; Ryan and Bernard, 2000), Braun and Clarke describe thematic analysis as ‘a flexible and useful research tool, which can potentially provide a rich and detailed, yet complex, account of data,’ (Braun and Clarke, 2008,
They also explain its many advantages, including that it provides results that are accessible to the general public and is a useful method for participatory research, where participants also collaborate in the research process (Braun and Clarke, 2008, p97). I felt this was an appropriate method to choose considering the participatory nature of my study, with students comments, work and reflections being central to my analysis, and the influence from a/r/tography of wanting to make my study accessible to a wider audience.

A criticism of thematic analysis has been that it involves choices which are not often discussed within the presentation of the research, but which are crucial to the method and should be made explicit (Braun and Clarke, 2008, p81-82). In response to this criticism I have set out to clearly explain the active part I took as a researcher throughout my data analysis. In planning for my thematic analysis I followed the ‘15-point checklist of criteria for good thematic analysis,’ (See table 1).

Table 1 - 15-point checklist of criteria for good thematic analysis (Braun and Clarke, 2008, p96)

<table>
<thead>
<tr>
<th>Process</th>
<th>No.</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transcription</td>
<td>1</td>
<td>The data have been transcribed to an appropriate level of detail, and the transcripts have been checked against the tapes for 'accuracy'.</td>
</tr>
<tr>
<td>Coding</td>
<td>2</td>
<td>Each data item has been given equal attention in the coding process.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Themes have not been generated from a few vivid examples (an anecdotal approach), but instead the coding process has been thorough, inclusive and comprehensive.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>All relevant extracts for all each theme have been collated.</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Themes have been checked against each other and back to the original data set.</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Themes are internally coherent, consistent, and distinctive.</td>
</tr>
<tr>
<td>Analysis</td>
<td>7</td>
<td>Data have been analysed — interpreted, made sense of — rather than just paraphrased or described.</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Analysis and data match each other — the extracts illustrate the analytic claims.</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Analysis tells a convincing and well-organized story about the data and topic.</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>A good balance between analytic narrative and illustrative extracts is provided.</td>
</tr>
<tr>
<td>Overall</td>
<td>11</td>
<td>Enough time has been allocated to complete all phases of the analysis adequately, without rushing a phase or giving it a once-over-lightly.</td>
</tr>
<tr>
<td>Written report</td>
<td>12</td>
<td>The assumptions about, and specific approach to, thematic analysis are clearly explicated.</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>There is a good fit between what you claim you do, and what you show you have done — i.e. described method and reported analysis are consistent.</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>The language and concepts used in the report are consistent with the epistemological position of the analysis.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>The researcher is positioned as active in the research process; themes do not just 'emerge'.</td>
</tr>
</tbody>
</table>

To begin with I transcribed the audio recordings. This process can be seen as an important part of data analysis within an interpretative qualitative methodology (Bird, 2005, p227). This is argued by Lapadat and Lindsay (1999) who emphasise that the close attention paid during data transcription helps develop the interpretative skills and in-depth knowledge needed to effectively analyse the data. Concurrent to this process I also worked to familiarize myself with the non-audio data, actively reading and re-reading, searching for meanings and patterns. I then spent time generated initial codes and sorting data into different documents for potential themes. I followed Braun and Clarke’s (2008) advice when reviewing my themes and considered the validity of each theme in relation to my data set as well as whether my thematic map ‘accurately’ reflected the story of my whole data set (Braun and Clarke, 2008, p91).
Considering what I knew about the limited research done on community mapping as a pedagogical tool I wanted to ensure a rich description of my data set. I was aware this could be an especially useful method when researching under-investigated areas (Braun and Clarke, 2008, p83). Having identified the ‘essence’ of what was in each theme, and ensured that each one effectively captured an aspect of my data set, I began organizing them into a coherent and consistent account of the project, with an accompanying narrative. This process assisted me to identify what was of interest about each theme and why. The final step of my analysis was to attempt to produce an interesting account of the story of my data, both across and within the themes 7 themes and 12 further subthemes I had developed (see table 2).

Table 2 – The themes and sub-themes I produced through my thematic analysis

<table>
<thead>
<tr>
<th>Themes</th>
<th>Sub-themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Senses</td>
<td>Smell</td>
</tr>
<tr>
<td></td>
<td>Hearing</td>
</tr>
<tr>
<td></td>
<td>Touch and taste</td>
</tr>
<tr>
<td>Attention to detail</td>
<td>-</td>
</tr>
<tr>
<td>Created names</td>
<td>-</td>
</tr>
<tr>
<td>Children sharing</td>
<td>Planned activities</td>
</tr>
<tr>
<td></td>
<td>Spontaneous sharing</td>
</tr>
<tr>
<td>Questions</td>
<td>Children’s questions</td>
</tr>
<tr>
<td></td>
<td>Educator’s questions</td>
</tr>
<tr>
<td>Making connections</td>
<td>To physical locations</td>
</tr>
<tr>
<td></td>
<td>Children making connections to wider knowledge</td>
</tr>
<tr>
<td></td>
<td>Adults making connections to wider knowledge</td>
</tr>
<tr>
<td></td>
<td>To personal experiences</td>
</tr>
<tr>
<td></td>
<td>As an educator</td>
</tr>
<tr>
<td>The process of community mapping</td>
<td>-</td>
</tr>
</tbody>
</table>
Preparing for the project:

Pedagogical considerations, curriculum links and situating the study

While planning for the community mapping project I ran with my young participants I relied heavily on a number of different sources. The National Curriculum for England assisted me in situating the sessions within the discourse and targets of the UK education system (Department for Education and skills, 2014); reflections and write-ups from those involved in previous pedagogical mapping projects provided me with inspiration and insight into the process (Jagger, 2009; Hurren, 2010; Hurren, 2014; Hurren, 2000; Lydon, 2003; Sobel, 1998); discussions with the groups usual educator helped me tailor the sessions specifically for the young people and setting I would be working with.

The National Curriculum

Although this study didn’t take place within an educational setting that followed the National Curriculum I wanted to ensure its relevance for future educators by linking the goals of the project to curriculum guidelines for this age group. The young people taking part in the study were aged from 8 to 10 and therefore likely working towards the learning goals within the key stage 2 curriculum.\(^{11}\) I was aware that some of the students were statemented as having special education needs and not likely to be working at an attainment level predicted for children of this age. Taking this into consideration I planned differentiated activities to cater for different participants as well as allowing for a child-led focus to many activities (see lesson plans, appendix D and E).

At the end of key stage 1\(^{12}\) children are expected to be able to ‘use simple fieldwork and observational skills to study the geography of their school and its grounds and the key human and physical features of its surrounding environment,’ (Department for Education and skills, 2014, p185). This mapwork project not only worked to solidify these skills but also targeted a number of other areas within the national curriculum. The table below shows the areas of the National Curriculum covered during the planning stage of this community mapping project, although as with many teaching experiences new connections and curriculum links appeared throughout the delivery. These will be explained further in the discussion.

Catling and Willy explain that investigating a locality addresses the personal, social, health and economic (PSHE) requirements within school curriculums. It provides students with an opportunity to develop and express their attitudes and values in relation to their local area and their role within the community, while also supporting wider citizenship education which aims to involve children as community participants

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\(^{11}\) Key stage 2 refers to the four years of schooling in maintained schools in England and Wales normally known as Year 3, Year 4, Year 5 and Year 6, when the pupils are aged between 7 and 11 years.

\(^{12}\) Key Stage 1 refers to the two years of schooling in maintained schools in England and Wales normally known as Year 1 and Year 2, when pupils are aged between 5 and 7.
Although the direct requirements of PSHE are not stated in the National Curriculum it does state that ‘all schools should make provision for personal, social, health and economic education (PSHE), drawing on good practice,’ (Department for Education and Skills, 2014, p5).

### Table 3 - National Curriculum links planned for through the Community mapping project

<table>
<thead>
<tr>
<th>Subject</th>
<th>Curriculum link</th>
</tr>
</thead>
<tbody>
<tr>
<td>Art</td>
<td>‘produce creative work, exploring their ideas and recording their experiences,’ (Department for Education and Skills, 2014, p176)</td>
</tr>
<tr>
<td>Geography</td>
<td>‘use fieldwork to observe, measure, record and present the human and physical features in the local area using a range of methods,’ (Department for Education and Skills, 2014, p187)</td>
</tr>
<tr>
<td></td>
<td>‘understand geographical similarities and differences through the study of human and physical geography of a region of the United Kingdom…and a region within North or South America,’ (Department for Education and Skills, 2014, p186)</td>
</tr>
<tr>
<td>Science</td>
<td>‘use the local environment throughout the year to raise and answer questions that help them to identify and study plants and animals in their habitats,’ (Department for Education and Skills, 2014, p161)</td>
</tr>
<tr>
<td></td>
<td>‘explore examples of human impact (both positive and negative) on environments,’ (Department for Education and Skills, 2014, p161)</td>
</tr>
<tr>
<td></td>
<td>‘work scientifically by: using and making simple guides or keys to explore and identify local plants and animals; making a guide to local living things; raising and answering questions based on their observations of animals and what they have found out about other animals that they have researched,’ (Department for Education and Skills, 2014, p161)</td>
</tr>
<tr>
<td>History</td>
<td>'how Britain has influenced and been influenced by the wider world,’ (Department for Education and skills, 2014, p188)</td>
</tr>
<tr>
<td>Spoken language</td>
<td>‘Attention should also be paid to increasing pupils’ vocabulary, ranging from describing their immediate world and feelings to developing a broader, deeper and richer vocabulary to discuss abstract concepts and a wider range of topics,’ (Department for Education and Skills, 2014, p17/18)</td>
</tr>
<tr>
<td>Written English</td>
<td>‘Continue to have opportunities to write for a range of real purposes and audiences as part of their work across the curriculum,” (Department for Education and Skills, 2014, p39)</td>
</tr>
</tbody>
</table>
Insight from previous pedagogical community mapping projects

Hurren (2014) lists 5 general processes that are involved in Mapwork, although emphasises that it is not necessary to undertake them all in one Mapwork project, do them in a linear fashion or aside from the site study. These are:

‘sit study’
‘document analysis’
narrative inquiry’
‘image-based inquiry’
‘collage work’ (Hurren 2014, p534)

She also mentions ‘sensitizing activities’ to consider including:

‘making a list of things seen, felt, heard, smelt’
‘creating a web of various aspects noticed’
‘completing framing sentences, such as: In this place I feel...In this place I want to... In this place I wonder...’ (Hurren 2014, p 535)

When planning for the project I took influence from Hurren’s words, having students create both sound and scent maps. This was both as part of a study of the site and as a way of further sensitizing themselves, assisting them to utilize senses they might not usually focus on in a familiar place. The relevance of such activities was also emphasised by Jagger (2009) from her observations during a community mapping project with grade 4 students. She noticed that students were much more likely to observe and remember visible signs of animals and plants, highlighting the dominance of sight in observations. She goes on to suggest that curriculums should actively encourage students to observe using all their senses and recognise that doing so helps to develop a deeper understanding (Jagger, 2009, p73). To further assist my young participants to develop their understanding I also planned for Hurren’s framing sentences to scaffold children’s spoken and written discussions about their feelings, wants and wonders within a chosen place, aiming to facilitate all children’s involvement in the process.

Hurren presents her work on the geography curriculum and its poetic possibilities as an Atlas, aiming to ‘write back’ by using a form that has historically been exclusive and linked with the possessive hierarchies of colonialism (Hurren, 2000, pxv). Through making an atlas of the everyday, peoples personal experiences and everyday understandings, she attempts to ‘be playful (both in the deconstructive sense and in the transgressive sense), poetical, political and performative,’ (Hurren, 2000, pxv). Inspired by this I chose to present the community mapping project to my young participants as a collective attempt to create an Atlas
about the farm and their experiences on it. Through this I was able to provide a way to collate multiple individually and collectively made ‘maps’ into a form which they could then share with family members and the wider farm community. It also assisted in presenting the project in a form they could understand and were hopefully familiar with. To ensure this I brought a selection of children’s Atlas’ with me so my young participants could browse through, looking at how different maps and information about plants and animals were presented as well as providing a starting point from which to discuss and debate different features of an Atlas. One common feature of an Atlas that we tackled was the glossary. In her own Mapwork project Hurren use the technique of creating a partial glossary to illustrate how she mapped the town she grew up in (Hurren, 2014, p534). She explains that this process could also be a way for students to explore a location visited on a field trip (Hurren 2014, p 534). In the case of this project I used it to facilitate students reflecting on their shared knowledge of the place, thinking about what words were familiar to them as regular farm visitors yet might not be known to others. In this I attempted to provide a space for them to critically reflect on their relation to the place in contrast to others who may not have developed the same sense of place.

Both Hurren and Jagger write of using photography as a method for young people to share their experiences and views of a place. In fact the process of participatory photomapping in general is becoming more popular within wider democratic and community based mapping projects (Buckingham and Dennis, 2009). Jagger (2009) describes how photography encourages students to stop and closely observe their surroundings, gives them ownership and a part in the construction of knowledge and also provides a resource for later mapping and classroom activities. This is supported by Berson (2004) who noted that the use of digital photography within curricular studies helped motivate students as they especially enjoyed working with images they captured themselves. I planned opportunities for students to take photos of their ‘favourite place’ on the farm. This not only provided an opportunity for students to reflect on their surroundings and take ownership of the photography in the Atlas but photos were also used for later activities, providing a clear visual resource for students to refer to (See lesson plan, appendix E).

In her guidelines for making a community map or atlas Lydon instructs readers to ‘use a wide range of materials and mediums: colours, clay, tapestry, photos, written narrative, hand-drawings,’ (Lydon, 2003, p18). This multi-method approach is especially relevant for primary school children’s mapping. It fits with Sobel’s understanding that for young people should build and sculpture maps as often as they draw them (Sobel, 1996, p22). In response to this I planned for my young participants to each make a plasticine model of their favourite places and then work collaboratively to create a 3D map of the farm.

Discussions with the groups usual educator

To make the community mapping project relevant and appropriate for my young participants I was in close communication with their usual educator throughout the planning process. She notified me that they
were about to begin a two year project linking with Illuminate Rotherhithe for the 400 year anniversary of the Mayflower setting sail from Rotherhithe and going to the New World (Illuminate Rotherhithe, n.d.). As part of this project they were going to focus on themes of migration, journeys and family, as well as look at how the Pilgrims and Wampanoag tribe worked in partnership to survive through the intrusion of Westerners. She explained that they would be working at the farm, trying to grow crops available to both groups and possibly build a miniature traditional Wampanoag hut. Various community groups were also working on this project in the lead up to the 2020 anniversary (Illuminate Rotherhithe, n.d.). She explained that incorporating a map into the project would be very relevant but due to limited space on the farm a booklet might be an ideal form for the presentation of the project. This solidified my idea that working to make a farm Atlas that included all their maps and information was an ideal form for the project to aim towards.

I planned for the project to broadly tie to the theme of migration so as to link with the Mayflower project and therefore emphasise its relevance within wider learning. This was done by getting my young participants to think about what they knew about the farm, as local experts, and what information they could share with a new migrant to the area. This included focusing on special farm vocabulary and knowledge about plants, animals and different areas (See lesson plans, appendix D and E). Our aim was to create a farm Atlas that could be used by a new migrant to the area, or alternatively by a new child joining the group, to learn about the farm. This also created a starting point for future work related to the Mayflower project as it provided a point of reference to compare how the farm is now with how it was in the past, as well as compare the area with the area the Pilgrims landed in Canada. This provided explicit links to the previously mentioned history and geography goals within the UK national curriculum (Department for Education and skills, 2014). It also provided links to the Mayflower projects goal of celebrating the diversity of different communities, providing an opportunity for the young people to share their different views of the farm as well as incorporating their learning with wider community activities (Illuminate Rotherhithe, n.d.). As children’s views are often different to adults, and many adults are not exposed to them, I felt this fitted with the aim of providing an inclusive pedagogical space for young people to share their thoughts and opinions as well as providing the opportunity for us as educators to learn from our students. Learning from the students about their thoughts and opinions, as well as about their knowledge base, could provide a useful basis for future teaching and learning.
The community mapping project:
Making an atlas of an urban farm

Senses

Using senses to facilitate a deeper exploration of the local area played a central part in both the map making activities on the first day’s session and consequentially many of the discussions on this first day centred on these senses (See appendix D for lesson plan). As one child mentioned to another at the end of this day “I’m always here but today I smelt and heard new things. It’s nice to focus on a new sense not just seeing,” (PM group, first session, observational notes). As well as this facilitated focus on scent and sound I noticed that my young participants and their regular educator, who was working alongside me, also used their other senses while moving around the local farm area they were all familiar with. Overhearing a discussion among children as they tidied up at the end of the session I became aware that they too were starting to think about different sensory approaches. ‘They start talking about if there is a sense that is most important and try and rank them. “sight is number 1” “Can we say one is most important?” They are unable to decide,’ (PM group, first session, observational notes).

Smell

During the first day’s session both the AM and PM groups worked to create scent maps of the farm. Throughout this first day many of my young participants comments centred around their sense of smell.

‘When we got to the allotment the children were moving around in groups, smelling plants and leaning over fences sniffing. They shouted out different smells and beckoned to each other to join them in smelling. A group moved towards the muck heap and started discussing the difference in smell between the “liquid poo” leaking from the muck heap wall and the “poo” in the muck heap.’ (AM group, scent map, ethnographic write up)

These discussions led to the creation of group and individual scent maps where they noted down words to indicate the smells they found in their chosen area (See figure 1).

Through their discussions some children made connections to what they already knew. For example when walking past the fire pit one child noted the different smells there in relation to a previous fire making experience saying “Look, come smell here. It smells like fire, or like ash. I can smell the ash, it smells like when we made the fire,” (PM group, scent map, ethnographic write up). Another child sniffed a not yet flowering apple tree and commented “I think this apple tree probably smells of apples. Yes I think it does a
“bit but there are no apples on it yet.”’ I smell it too although I can’t get much of a smell from it,’ (AM group, scent map, ethnographic write up). On smelling the tree I was unable to smell anything and wondered whether this was due to having a less heightened sense of smell or whether they had made the connection of what they expected the tree to smell like and, unable to smell a clear scent themselves, had used their prior knowledge that apples grow on this tree and what they smell like to imagine what the tree might therefore smell like. This imaginative connection to prior knowledge was also made by another child:

“‘Look I found a snail!’ one boy cries as he picks up a small branch with a snail on and sniffs it. “It smells like, like snail? Like what I think slime smells like.”’ (PM group, scent map, ethnographic write up)

As well as discussing what they smelt children also commented on this focus on scent. One child commented ‘“I didn’t know hay smelt so strong!”’ (AM group, first session, ethnographic write up) while in their written feedback at the end of the session another child wrote:

‘I loved smelling because you realised smells that you never realised were there. I would have liked to go round the entire farm when smelling because, I would have added more smells to my senses.’ (first session, 2 stars and a wish)

References to the focus on senses characterised many of the children’s written feedbacks. One child wrote ‘We got to explore sounds and smells we may not have noticed before. Eucalyptus smells of haribos, jelly babies and sprite/7up,’ while another wrote ‘I loved going to diffrrent [sic] places, seeing what noises we could hear and smelling diffrrent [sic] objects/plants,’ (first session, 2 stars and a wish)
Despite the focus on scent one child was unable to engage in many of these discussions as ‘she had a blocked nose and couldn’t smell anything. I suggested maybe she could be in charge of the clipboard and noting down what other people could smell,’ (AM group, scent map, ethnographic write up). Although she was initially less engaged with the activity this changed later on.

“Have you smelt the eucalyptus tree.” The other adult questioned and they eagerly ran up to it, picking leaves and crushing and sniffing them...the child who previously had worried about not being able to smell through her blocked nose shouted “I can smell that!” (AM group, scent map, ethnographic write up)

Hearing

A focus on sound was facilitated through the sound mapping activity where children chose an area on the farm and listened to the surrounding sounds, adding words, pictures and symbols to their paper to indicate what sounds they heard around them. “They began making symbols to record the sounds; a car driving past to the right, rain dripping from the roof. They started chatting too “Oh can you hear that?” “Is that the chicks or is that a bird in a tree? I can’t tell where it’s coming from,”” (AM group, sound map, ethnographic write up).

Although some children noted down many different sounds on their maps others appeared to find it more difficult to engage with. An example of this was a group of three children who:

‘between moments of silence kept blurting out ideas about what they could hear. They soon noted down each other’s voices on their maps...When we returned [to the indoor classroom] one of the three talking children marvelled at the lone child’s map. “Wow, how did you hear so many different sounds?” He then looked at the other adults map, “Look! You drew us on your map! Look she put us on! Could you hear us?” The other adult commented that they were the main thing she could hear and we discussed how many more sounds they might have heard if they had been quieter,’ (PM session, sound map, ethnographic write up).

Another differing approach to the activity was shown by a child who utilized multiple senses when creating her sound map.

‘One girl was finding it more difficult to focus and I noticed she had started drawing what she could see. “I can hear the sheep eating” she said pointing to a sheep in an adjoining field with his snout stuck in a trough. I asked her what sound she could hear from him “What does it sound like?” and she puzzled for a little. “Can you hear him eating or can you just see him eating?” “I can see him but I can hear in my head what it’s like when he’s eating.”’ (AM group, sound map, ethnographic write up)
This child had used her prior experiences of hearing sounds made by sheep to ‘hear in her head’ the sounds she connected to what she could see.

Figure 2 – A sound map made next to the blacksmiths on the farm. This map was created during the first day of the project.

Touch and taste

Although none of the planned activities actively encouraged children to use their senses of touch and taste they also engaged with these senses. One child used his sense of taste and personal experiences when choosing the kitchen as his favourite place on the farm (See figure 3).

Figure 3 - The kitchen - a photo and explanation of one child’s favourite place on the farm
Children also touched different objects and plants around the farm as they engaged with them throughout the different activities. While exploring the farm as part of the scent mapping activity one ‘child touches an old mangle in the corner of the field and bends down to sniff it. “What is it?” “It’s a mangle. Like for doing your clothes in the old days.” “It smells of….of rubber? I think it’s made of rubber,”’ (PM group, scent map, ethnographic write up). On another occasion at the allotments the children ‘inspected the growing garlic, carefully touching the leaves and commenting on how much it had grown,’ (AM group, scent map, ethnographic write up).

Paying attention to the details

As seen so far many of my young participants talked about paying attention to details on the farm they had not previously noted. This attention to detail did not only occur in relation to new sensory experiences. When reflecting on the plasticine models made of children’s favourite places on the farm the groups usual educator noted the ‘very detailed design with plasticine – paying attention to minute detail,’ (PM group, second session, educator reflections on learning). Some of the children also picked up on this attention to detail and when observing each other’s work ‘asked about which children from the morning group had made which piece and admired the detail and different objects, commenting on how the turkey had his tiny beard and on the petals falling off the tree in the wildlife garden,’ (PM group, second session, ethnographic write up).

Figure 4 – ‘The miss tree’ in the wildlife garden was one child’s favourite place. Here is their photo, plasticine model and write up about it.
One child also talked with her usual educator about the details she’d included in her models. Unlike other children she had been unable to decide on one favourite place on the farm so had taken multiple photos and made multiple plasticine models (See figures 4, 5 and 6)

C: I did some little petals falling off. That’s what’s the little white stuff.

Educator: that is beautiful.

C: I like doin’ art. I really like doin’ art.

Educator: And this is the den isn’t it?

C: Yep

Educator: it’s even got a little entrance way.

C: And then we got the fire and then we got the pond with a little bubble on it. Cause you know the frogs make like the little bubbles. (PM group, second session, audio transcript)

Such attention to detail was seen throughout the activity of making favourite places out of plasticine. Children had in-depth discussions about the size and shape of different buildings, the details of different animals, how to use different tools to get different effects in the plasticine to represent wood and pebbles, and exactly which colours to use. One child told another how he “used brown, pink, orange, white and yellow just to make the right orange,” (PM group, second session, audio transcription). Another child referred back to the authentic experience of the farm to ensure she could create exactly the right colour for the ferrets’ eyes.
C6: What colour are the ferrets’ eyes? Can I go check what colour the ferrets’ eyes are?

C3: They might be red actually.

C1: Yeah they’re red.

C6: They’re red?

Kirsty: I think they’re red but you can go look at them if it’d help.

[child goes out to look at ferrets and then returns]

C6: they’re red. Like red but a little yellow and a little brown if you look close. (PM group, second session, audio transcript)

Although many children paid great attention to detail during activities and spoke about noticing new sights, sounds and smells on the farm this wasn’t the case for everyone. A few children struggled to focus on sounds during the sound mapping activity and on reflection the groups usual educator noted that ‘after doing the sound map one of the noisier children had seemed surprised by how many sounds one of the quieter children had on her map. She thought that, opposed to just talking to children about the importance of listening, this activity may help with the awareness of why having good listening skills could be important,’ (PM group, first session, write up of educator feedback). This was backed up by the same child noting an improvement for the session as ‘be quiet,’ (PM group, first session, 2 stars and a wish). He asked to read out his feedback and explained that ‘I think I need to be quiet. If I’m more quiet next time I can hear the small things going on,’ (PM group, first session, observational notes).

Created names

Throughout the mapwork project children shared their own created names for different areas on the farm. Some names were commonly used among all children, such as ‘goat mountain’ to refer to the stack of pallets in the goat yard, while others were specific to different children. One child referred to the kitchen on the farm as “the pancake room” and explained “I call it the pancake room because that’s where we made pancakes,” (AM group, first session, observational notes). Throughout the activity of writing a glossary of farm words children’s created names became particularly apparent. Different names emerging for the same places, such as ‘ze hay barn’ vs ‘room full of hey [sic]” (PM group, second session, glossary words) and animals on the farm were allocated different names depending on which group of children were describing them.

This process of creating names was seen in one child while she talked to me about what she was going to write about her favourite place on the farm.
K: why did you choose this tree?

C3: because it has lots of flowers and it’s basically nature and I like nature. You can see the sun a lot through there. I’m gonna just write the tree. The mrs tree? The miss tree.

C2: The miss tree. Like mystery! (AM group, second session, audio transcript)

It isn’t known whether this child came upon the pun herself or was just playing with words when another child noticed the similar pronunciation of ‘miss tree’ and ‘mystery.’ Examples of children ‘playing’ with words were apparent throughout their written work as well, with many children using alliteration when describing their favourite places - ‘Great garlic,’ ‘The fabulous ferrets,’ ‘DANGER! Ducks!!!’ – and many also incorporating onomatopoeic words into their sound maps (See figure 7).

![A sound map created by a child on the first day of the project. Note the use of onomatopoeia.](image)

**Figure 4 – A sound map created by a child on the first day of the project. Note the use of onomatopoeia.**

Children sharing

Throughout the project there were many situations when children shared their thoughts, feelings, personal experiences and wider knowledge. Some of this sharing resulted from planned activities while other times it happened more spontaneously.
Planned activities

The activities that took place throughout the sessions provided opportunities for children to talk and write about their favourite places on the farm and to share why they liked these places. Some children shared that animals had led a place to be their favourite, such as H whose writing about his favourite place read “The GrEat [sic] Goat yard! The GrEat [sic] thing about the yard is the goats and chickin,” (See figure 8). In contrast to this other children shared what they enjoyed doing in a place, like M whose favourite place was “the forShore because you get pips [sic] and more stuff, it’s like tresoure [sic] burid [sic] from over 200 years ago. It’s fun just looking for stuff like a tresoure [sic] hunt!!” (See figure 9). Other children shared a combination of information about their favourite places, the animals that sometimes occupied it, experiences that had happened there and additional knowledge that they had.

![The Great Goat Yard!](image1.jpg)

**Figure 8 - The Great Goat Yard!: A child’s photo and write up of their favourite place.**

![For Shore](image2.jpg)

**Figure 9 – For shore: A child’s photo and write up of their favourite place.**

While building a glossary of farm words children shared their local knowledge, explaining the names of different animals, plants, tools and buildings as well as sharing further knowledge about different processes on the farm. One child wrote about ‘Lanoline [sic] – a greasy substance in a sheep’s wool (which is used in
beauty products’ (PM group, second session, glossary) while another described how the compost bin was full of ‘dead Plants, eggs, decid [sic] stuff’ (PM group, second session, glossary).

Children wrote ‘2 stars and a wish’ at the end of each session, two things they had liked about the session or what they had done and one wish they had about how the session could be changed. This activity led to children sharing their opinions on the process, ‘I enjoyed creating stuff,’ ‘I liked how we used plastecine [sic],’ ‘I liked that there was a new person with us,’ as well as their suggestions for adapting the session, ‘wish – more plastacine,’ ‘I wish we could do potery [sic] and make more stuff and I also wish to go camping somewhere!’ (first and second session, 2 stars and a wish). One child also shared their reflections on metacognition when they wrote ‘I liked working alone sometimes made you work quicker and sometimes more efficiently,’ (first session, 2 stars and a wish).

Spontaneous sharing

Throughout the project children spontaneous shared their thoughts, feelings, prior knowledge and personal experiences. One example of this was during the scent mapping activity on the first day.

‘We enter a field with a clay pizza oven in it where the grass is growing long. One child crouches down to pick a nettle, showing how he is pinching it hard so that it doesn’t sting him. “It just smells like nettles.” “No, nettles smell like...like kind of minty.”’ (PM group, scent map, ethnographic write up)

Here a child was sharing his prior knowledge that nettle leaves, which normally cause an irritable sting when touched, can be safely picked up if they are pinched hard. Another example of sharing of wider knowledge happened later during the same session.

‘As we walk around the rest of the farm one child keeps mentioning his excitement to reach the eucalyptus tree and smell its leaves. We reach it just before we go inside and he stops by it to pick some leaves, calling to the others to stop and smell but they have already bounded up the stairs to go back inside.’ (PM group, scent map, ethnographic write up)

Although on this occasion the child didn’t get to share his prior knowledge about how to identify a eucalyptus tree and the strong smell of its leaves with others in the group, his wish to do so is still apparent. Further examples of children sharing prior knowledge with each other occurred throughout the project with discussions about, among other things, how dens in the wildlife garden had been built, how
sound travels, how to make different colours, how to identify and name different plants and animals, and how to say different words using sign language and makaton. Throughout the project children regularly spontaneously shared information about personal experiences both related to the farm and in their wider lives. One child was eager to tell me all about her mum, who had the same name as me, while another provided an in detail description about a recent visit to the circus and the animals that she’d seen there. On showing me what she’d written about the her favourite place on the farm, the ferret cage, another child shared a personal experience she’d had with the ferrets.

C4: They used to always go down my fleece and then they sneeze on me. Because basically I used to have this fleece and it was very soft and there was this zip. I was holding booboo [the ferret] one day and talking to [child’s name] and he climbed down there and I’m just like this [holds arms out] and he’s just down there and he sneezes all over me. (PM group, second session, audio transcript)

Making connections

When reviewing all the data I collected it became apparent to me that throughout the project both children and educators were constantly making connections with what was happening. Connections were made to physical locations; children made connections between the project and their personal memories; both children and adults made connections to wider knowledge; adults also made connections as educators, linking what was happening to the wider pedagogical process.

To physical locations

While creating their own 3D map children and educators made verbal connections to physical locations. This happened when trying to position different plasticine places to create the 3D map, as well as while educators were assisting children to understand the example 3D map. While preparing for the project I had discovered an architect’s 3D map of the farm on site and we used it during the second day to assist children in developing their spatial understanding of the farm for the mapping process (See figure 10 and lesson plan, Appendix E).

Educator: So do you know where our allotment is? [gestures to architect’s map]

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13 Makaton is a language programme that uses symbols and signs to help people communicate. It is designed to support spoken language and can be used in conjunction with speech.

14 Names have been removed to retain anonymity.
C2: *Our allotment is ermm...its...* [pause]

Educator: *If you imagine you’re here where the pigs is* [points to building on the map] *how do you get to the allotment?*

C1: *You walk past the pigs and then you would ermmm...would the allotment be ermm around here* [points to map]

L: *Yeah it’s almost cut off the map but yeah it would be here* [points to the same place on the map] (AM group, second session, 3D map)

Figure 5 - An architect’s 3D map of the farm used during the second day of the project

Here the educator assisted the children to make connections between their prior experiences of moving around the farm and the map in front of them. Both children and educators repeated this process on various occasions while the children worked collaboratively to position plasticine models of their favourite places onto their own 3D map.

Educator: *Is that where the goat yard is going to be?* [ Watches child placing their plasticine model of the goat yard on a large sheet of paper] *Yeah the goat yard is sort of in the middle of the farm. So where are the other ones going to go?*

C1: *The ferrets are kind of near the goat yard* [child places their plasticine model of the ferret enclosure on the map]

C3: *Where should I put mine?*
Educator: well where does it belong? The goat yards in the middle of the farm. You can use that one there to help you [points to architects map]

C3: The goat yard is here [points to architects map]

Kirsty: so the wildlife garden is going to be...

C3: ...over here? [points to areas on architects map and plasticine map]

Educator: yeah that’s right (AM group, second session, putting the map together)

Adults making connections to wider knowledge

As well as making connections to experiences in the physical location of the farm adults also made explicit connections to wider knowledge throughout the project. Sometimes this involved making connections between what was happening and children’s prior knowledge and other times this meant providing connections to new knowledge. These connections were made frequently throughout the plasticine based activities, where adults made clear verbal links between children’s models, their knowledge of the farm and their knowledge about different colours. During this activity an adult volunteer who was present for the second day of the project gave a spontaneous explanation of how a colour wheel worked, making explicit connections between children’s attempts to mix new colours and knowledge about complimentary and primary colours. I also provided a verbal connection to the science of colours during a discussion between children who were working on creating plasticine models of their favourite places.

C5: How come you mix all the colours together to make white?

C4: because white is a colour that is all the colours. That’s why.

C2: How do you make white?

C5: you mix every single colour together.

C2: so white is all of the colours and black is none of the colours.

K: but that’s with light. All of the light colours make white.

C5: all of the dark colours make white too. If you put a piece of glass in the air when it’s a very sunny day you will see like a kind of rainbow. That’s what light does with water too. That’s why there are rainbows.
K: Yeah. That’s when the light gets refracted that you see all the colours in white light. But with paint and with playdough if you mix all the colours together that actually makes black. Look you can try it with this [holds out pieces of different coloured plasticine] (PM group, second session, plasticine places)

Here children were trying to make connections between their prior scientific knowledge and the activity of mixing different coloured plasticine to create new colours. I also tried to make a link between the children’s knowledge of light, the act of mixing different coloured plasticine and my knowledge about colours. I understood that the children’s misconception, that mixing all the different colours of plasticine would create white, came from their knowledge of light, as when all the primary colours of light are mixed it produces white light. In attempting to explain the difference my method of simplifying my understanding, that different light waves were perceived by the human eye as different colours, and describing them instead as ‘light colours,’ was misinterpreted by the child who responded ‘all of the dark colours make white too.’ In response to this I made further connections by providing verbal connections to knowledge and connecting our conversation to the authentic experience of mixing different coloured plasticines together to see what happened.

Adults also provided explicit connections to their own wider knowledge throughout the other activities. This happened when telling children names of plants as they sniffed and felt the leaves, through providing new adjectives to assist in describing new smells, when sharing information about animals and when giving children exact measurements to use when picking plants to feed to the rabbits.

‘We realised there was some time left in which they could go pick cleaver for the rabbits. “10 cm pieces!”’ (AM group, first session, ethnographic write up)

Children making connections to wider knowledge

Throughout the project children could also be seen making connections between the activities they were doing and their own wider knowledge. They talked about their scientific understanding of how sound travels during the sound mapping activity, used their knowledge of the literary techniques of alliteration and onomatopoeia during writing activities and made clear connections to wider knowledge about mapping through talking about ‘scale’ and ‘making a key,’ (first session, observational notes). Another example of these connections was seen during the scent mapping activity when one child stopped to smell a flower as he passed.
We stop by a tulip and one of the children smells it and asks what it is.

“It’s a tulip.” the other adult responds, “and look at its petals. When we passed earlier they were open and now they’ve closed because it’s been raining.”

“Oh, it’s like an eye that closes and get [sic] smaller when there is too much sunlight.”

“Like a pupil you mean? That part of your eye.”

“Yeah the tulip is like an eye.” (PM group, scent map)

Here the child made a connection between the adult’s description of how tulip petals close when it rains and his scientific knowledge of how a pupil gets narrower in bright light, stating ‘the tulip is like an eye.’

Another example of children making connections to their wider knowledge was seen during a break, when children had stopped activities half way through the session to have a drink, a snack and look at the example Atlas’ I had brought with me.

While having their break they look through the two Atlas’.

“It says there are 2.5 million species of insects in the rain forest”

“But you know it’s going down and down and down every day. It’s deforestation it’s called because the rainforest is being cut down.”

“I saw some trees that were all cut down the other day. They were being cut down to build houses. It’s sad.” (PM group, first session, ethnographic write up)

Here one child made a connection between the knowledge provided by the Atlas and their own knowledge about rainforest deforestation. The other child then connected deforestation to a personal experience he’d had when he’d seen trees cut down in preparation for building houses.

To personal experiences

Like the child who connected a discussion about rainforest deforestation to his personal experience of seeing trees being cut down, many of my young participants made connections between the project and their own personal experiences. This happened spontaneously throughout the project as well as in relation to planned activities. For example when writing about their favourite places many of the children made connections to experiences that happened in these places. One child described how the fire pit was his favourite place ‘because I like eating marshmallows,’ while another child, who described her favourite place as ‘Great Garlic,’ wrote ‘My favorite [sic] place is the garlic. Because it is growing and I planted it,’ (see figures 11 and 12). The first child had made a connection between the location of the fire pit and their personal experience of eating marshmallows by the fire, while the second child had made a connection
between this growing bed on the allotments and their personal experiences of planting garlic here and visiting it to watch it grow. Children could also be seen making connections to their personal experiences when they tried to work together to name all the places on the farm.

“the animal room where we wash up”
“the kitchen where we cook”
“the pizza oven and that thing next to it too! The mangle?” “Yeah there, where the ferrets like it in the dust!” (PM group, first session, observational notes)

In this last example the children referred to a previous shared experience, when they took the ferrets to roll in the dust by the pizza oven, as a point of reference to ensure they were talking about the same location.

During a break in the first day's activities one child chose to share a personal experience from home.

'We have a break where the children eat biscuits and drink squash. One child talks about the ants he has seen in his house and how they swarm around the back door and come into the house and how his family
doesn’t know how to get rid of them. “You should put down coffee. The grounds of it. That stops them” another child shares.’ (PM group, first session, ethnographic write up)

Although as an outsider this personal experience may not initially appear to connect to the project or its activities further insight can be gained by listening to the reflections of the educator who works closely with these children.

As an educator

On reading over my own ethnographic write up, observational notes and the observational feedback from the groups’ usual educator I was struck by the number of connections made between the project and our wider pedagogical knowledge and experiences. For example the following feedback from the groups’ usual educator makes a link to the last child’s personal experience, providing greater insight into the connections he might have been making.

“She noted that D had opened up about the ants at his house despite never talking openly about his home life or sharing experiences from home before. She connected it to noticing the small things on the farm and wondered if it showed a new awareness and openness with his peers.’ (PM group, first session, educator feedback)

Here the educator was able to make connections between the child’s sharing of his personal experience, her knowledge of the child and her experience during the project. Having made this connection she theorised that the mapwork activities, which facilitated paying attention to the small details on the farm, had led the child to think about times he had paid attention to small details at home. She then went on to connect this to her understanding that talking openly about his home life was not usual behaviour for this child.

Throughout her reflections on the project the groups’ usual educator regularly made connections between children’s actions and her prior knowledge of them, and often went on to theorize about what this might mean. She noticed that one child who struggled with remembering new words had written about the breed of pigs, ‘oxford and sandy blacks,’ and wondered why these words might have stuck with her; she noticed that one child had been involved in discussions, eager to share ideas and had volunteered to read her work out loud, which was unusual and she wondered whether it was due to ‘growing confidence’ and the creative nature of activities ‘allowing her to take own pace,’ (AM group, second session, educator feedback)
feedback). She also made a connection between a child’s favourite place and her personal memory of what had happened to him in this space.

‘She was pleased to learn that A has a positive memory of the lamb peeing on him and that it had caused him to think of the place where it has happened as his favourite place. At the time it had happened he has been shocked and afterwards appeared embarrassed and slightly panicked. She felt pleased that he’d been able to reconfigure this experience in a positive light and not think back on it as a negative experience.’ (PM group, first session, educator feedback)

![Image](image.png)

**Figure 6 - ‘The place the lamb peed on me’: a child’s photo of their favourite place**

Questions

The process of the mapwork project appeared to encourage both children and adults to ask questions, of each other and of themselves.
Children’s questions

Children asked questions about, among other things, names of animals and plants, where different sounds and smells were coming from, how to mix different colours and if other children remembered past experiences on the farm. While considering how they might make their notes about scents into a more extensive map one group of children asked a number of questions.

‘I ask how they think they could turn their notes into a map.
“We could draw a bird’s eye view of the farm, or get one that is already made, and then draw pictures on for the different smells.”
“We could do circles and squares at the different places and draw the smells in. Could we draw the smells?”
“We could take photos of the smells because how can you draw rust?”
They continued to talk about how some smells could be drawn and how some might be difficult to draw and about how words can be used to describe smells too.’ (PM group, first session, ethnographic write up)

During this discussion the children ask questions to further their understanding of how their personal experiences of smelling scents on the farm could be turned into a written form for others to access.

Children also asked questions in response to adults making connections to wider knowledge, which in many cases led to adults making further connections. One example of this happened as the children were putting together their plasticine places to create their 3D map of the area. Some children who had finished making models of their favourite places had gone on to make additional plants and animals to add to the map.

C3: I’m making pigs but not their house [mixes together pieces of white and red plasticine]

C4: but they aren’t pink!

C3: the adult pigs are pink

Educator: Ester and Dylan [the adult pigs] were pink weren’t they?

C4: yeah

Educator: In fact one of our Oxford and Sandy black piglets has a big pink patch on his back because he got sunburnt the other day.

C6: Can pigs get sunburnt?

Educator: Oh easily yeah. Of all the animals pigs have the closet skin consistency and texture to humans.

C1: Do we have to put sun cream on them?
Educator: *yeah, we do have to put sun cream on them.*

C3: *Put suncream on pigs!*

(children’s laughter)

K: *that’s why they roll in mud too. To cover their skin in mud so they don’t get burnt. It’s like sun cream for them.*

C2: *Ohhh, I just thought that was how they liked to play.*

Here the educator provides a verbal connection between the colour pigs might be and the pigs children know on the farm, before going on to provide a connection to her personal knowledge that one of the piglets got sunburnt. A child then responds with a clarifying question to which the educator confirms her statement, that pigs can get sunburnt, and makes another connection to her personal knowledge about how pigs and humans have similar skin. This leads another child to ask about how pigs stay protected from the sun and me to make a further connection to my own knowledge about how pigs use mud as sun protection.

Educator questions

Myself, the group’s usual educator and the adult volunteer who was present on the second day regularly asked children questions to further discussions, deepen our understanding of their knowledge and encourage them to think about their activities and actions. As well as this I noticed that my ethnographic write ups were frequently dotted with my own reflective, rhetorical questions.

“How does what is there change a place?”
“How do our ideas of places change?”
“How do our feelings about a place change?” (first session, my reflections)
“How can you see if an emotional connection has been developed?” (second session, my reflections)

The process of community mapping

The final theme that arched across the project, tying different activities and discussions together, was the community mapping process itself. During the project my young participants reflected on the process, through discussions during activities and more formally when writing their 2 stars and a wish at the end of each session. I and the other adults also reflected on the process during informal discussions throughout
the project as well as feedback sessions at the end of both days. I also constantly reflected on the mapwork process throughout my research, putting these reflections into words through my observational notes and ethnographic write up.

In their written feedback and during discussions children repeatedly mentioned that they would have liked the project to be longer, ‘It could be longer,’ ‘Given us more time,’ ‘if I wanted something else I wold [sic] make The it longer,’ ‘There was more time so everyone could finish their places,’ (first and second sessions, 2 stars and a wish). As the last child’s comment suggest this may have been because they needed longer to finish making their plasticine models. This wasn’t the case for all children however, as one child’s discussion while writing her 2 stars and a wish shows.

C3: I can’t choose not to like something and then don’t like something. I like everything. I can’t choose what I don’t like.

Volunteer: I know something maybe you didn’t like. Did you need more time?

C3: No

Volunteer: Oh, are you happy with the amount of time?

C3: yeah (AM group, second session, audio transcript)

Children also referred to wishes that they would have liked more plasticine, to spend longer interacting with different animals and to have done the same activities across all of the areas on the farm.

My reflections about the mapwork process partially centre around my own personal pedagogy and partially on the wider process. I made notes as to personal actions I would like to have improved on, ‘should have encouraged more opportunities for verbal discussion before they got down to writing,’ ‘could have provided more opportunity to record ideas about how places made them feel,’”clearer provision of writing frame?” (both sessions, reflections on teaching practice) as well as on the children’s responses to the project, ‘still confusion between favourite place and animal? Is this important?’ (second session, observational notes). I also reflected on how I started to build an understand of the children’s ‘relationship to the place’ and how this ‘could be very useful for future planning that builds on children’s current knowledge as well as providing opportunities to contextualise their learning and allow them to take ownership of it, focusing on personal interests,’ (first session, ethnographic write up)

The groups’ usual educator made regular reflections on the mapwork process. She noticed that the project provided ‘opportunities to reflect on space’ as well as ‘opportunities to see that they’re really taking it all in, which you don’t usually get on a day to day basis,’ (second session, educator feedback). She also commented on the effects of the child-led nature of some activities. An example of this was when she talked about how ‘G made the muck heap’ out of plasticine and then went on to explain that ‘he’s happy to
work there all the time. The activity really shows his personality,’ (second session, educator feedback). Here she had noted that G, who would happily spend whole sessions piling muck onto the muck heap, had chosen the muck heap as his favourite place on the farm and been thoroughly engrossed in the process of making his plasticine model, reflecting his feelings for the place.

The data I gathered gave further insight into how community mapping can be used as a pedagogical tool, showing the types of activities that could be included as well as children and educators responses to the process. Educators comments and reflections also show how community mapping can be used to help children engage with and reflect on their connection to their local environment, exemplifying how the process can be a means of approaching outdoor education in an urban environment. Through providing spaces to listen to childrens thoughts, feelings and personal experiences it also assisted me in developing my understanding of how they see their locality and their place in it.
Reflections on making an atlas of an urban farm

Senses

The processes of sound and scent mapping were used as ‘sensitizing activities’ to assist children to fully engage with their locality, through focusing on sensory exploration. This experiential approach was partially a response to Hurren’s (2014) advice on preparing for a mapwork project. It was also a response to previous research which emphasised the importance of encouraging students to observe using all their senses and of recognising the part this might play in developing a deeper understanding (Jagger, 2009, p73). This development of a deeper understanding could be seen in children’s comments, such as references by multiple children to discovering ‘sounds and smells we may not have noticed before,’ (AM group, first session, 2 stars and a wish). Through relying on senses, which are particular to each person, this style of experiential exploration assisted children in developing their environmental awareness, becoming increasingly familiar with local sights, sound and smells. This development of environmental awareness and sensitivity can be seen as an important precursor to responsible environmental citizenship (Hungerford and Volk, 1990).

While carrying out this project I was reminded of the importance of continually being aware of students’ wants and needs and being sensitive in planning for inclusive learning experiences. For many children these open ended activities appeared to assist in developing a sensitization to the local, bringing new opportunities to creatively explore a place that was familiar to them. The groups’ usual educator commented on this, reflecting on how the activities allowed children to approach at their own pace and were inclusive of different learning needs. Unfortunately the child who turned up on the first session with a blocked nose was not able to experientially engage with the scent mapping activity. Although she worked with the group, noting down other children’s comments and pointing out objects that might have interesting smells, she was unable to explore the scents herself. This event emphasised to me the importance of continually reflecting and adapting as an educator, working to ensure the engagement of all students.

Paying attention to the details

Throughout the mapping process children were seen paying attention to the small details within the local area and consequentially within their resulting models, maps and writing. They began to become aware of new sensory experiences in a locality that was familiar to them, providing them with new information they could incorporate in their resulting work. Sometimes this was details of colours, such as the ‘red but a little yellow and a little brown’ of a ferrets eye (PM group, second session, audio transcript), while other times it was the fact that despite it being spring tiny petals had already begun to fall off a flowering tree (see figure
These new details not only provided children with a deepened knowledge of their local environment, and the plants and animals in it, but also provided them with an authentic experience to draw upon when doing later activities indoors. When writing about their favourite places, making plasticine models and creating their map they constantly referred to their authentic exploratory experiences and used the new details they had observed to enhance their work. This can be seen as targeting multiple areas of the UK primary curriculum. It covers aims within art of creatively producing work that explores and records experiences, while also meeting geography and science aims through close observation of human and physical features of the local area as well as studying plants and animals in their habitats (Department for Education and Skills, 2014). By providing opportunities for my young participants to write about their experiences and thoughts and feelings about their local area I also exemplified how community mapping projects can allow students to continue to ‘write for a range of real purposes and audiences as part of their work across the curriculum,’ (Department for Education and Skills, 2014, p39) and in doing so assist in meeting the writing aims of the UK primary curriculum. These discoveries further emphasise Jagger’s (2009) research that concluded that community mapping projects ‘incorporate environmental education’s objectives in a meta-disciplinary approach and can easily incorporate problem- and issues-based approaches to learning,’ (Jagger, 2009, p151-152). Although in this case our brief project did not incorporate problem and issues based approaches to learning, its meta-disciplinary approach helped lay the foundation for my young participants’ future work as part of the illuminate Rotherhithe project (Illuminate Rotherhithe, n.d.), while also allowing myself and the groups usual educator to further develop our understanding of the young people we were working with.

As an educator something that jumped out at me from this project was the valuable learning skills that could be developed through encouraging children to pay attention to the details. For example the sound mapping activity didn’t just talk to children about the importance of listening but instead helped develop an ‘awareness of why having good listening skills could be important,’ (PM group, first session, write up of educator feedback). Through encouraging children to focus on their senses and the new details this focus brings it might also assist to enhance their focus on these throughout their wider learning.

Creating names

Children’s’ created names for places, plants and animals were apparent throughout the project. Creating a farm glossary assisted us as adults to gather an understanding of the breadth and variety of these different names, while also encouraging children to share and record their personal vocabulary in a form that could be shared with others. Through creating personal names for the local children could be seen as furthering their emotional attachment and making the area ‘theirs’ (Jagger, 2009). As Knapp (2005) explains, empathizing with and personifying nature is a creative way of identifying with living and non-living parts of the environment and can play an important part in developing a relationship with a place.
This feeling of ownership and connection to the locality, that was present within my participants during the project, can go on to develop into stewardship of the area and its ecosystems (Beisner et al, 2006). It is also representative of Sobel’s (1996) first two stages of place-based environmental education, as children could be seen developing empathy with the natural world and also exploring the nearby. Sobel believes these are crucial precursors to later place-related actions and social inquiries, further emphasising the important part that community mapping can play as a pedagogical tool.

Children sharing

Throughout the project children shared their thoughts, feelings and personal experiences in planned for and spontaneous ways. Planned activities provided an opportunity for children to share their favourite places, knowledge and feelings about the area, as well as their opinions on the project and pedagogical process. Reflecting on the project I wondered whether these planned opportunities for sharing had an impact on children’s spontaneous activities of sharing or whether other factors, such as personalities, personal relationships and habit, had more of an impact. Students come to any learning environment or activity with their own sense of place and it is important that this is acknowledge and utilized by both educators and the curriculum (Zandvliet, 2010, p310). Through the collaborative process of community mapping I made an attempt to acknowledge and record my young participants’ sense of place and utilize it within the project. The children became experts of their local area and presented their lived experiences in a way that could be shared with others. It was an attempt to provide more opportunities for children to share and in doing so provide more opportunities for an educator to listen. As well as attempting to show children that their personal experiences were valued it was also an attempt at contextualising learning. This happened through building an understanding of what the children already knew, what mattered to them and learning about their lives outside the classroom. In this way community mapping projects based in children’s local areas may not only assist in contextualising children’s’ learning but also in contextualising learning for educators. By learning about children and their lives outside the classroom educators may then be able to provide a more relevant and context specific education in the future.

Making connections

The making of connections was a clear theme that emerged from the project; connections to physical locations, to wider knowledge, to personal experiences, as individuals. In preparing to write this section I read back over all the literature I’d previously reviewed, looking for any new connections that I might utilize in these written reflections. Lydon (2003) describes community mapping as the ‘recovery and discovery of the connection and common ground that all communities share,’ (Lydon, 2003, p1) which seemed a particularly powerful statement in relation to this project. Through contextualizing learning within familiar
local areas and allowing students to make connections to their personal experiences this process could also provide inspiration for educators. It provides opportunities to link later class-based learning to children’s interests and experiences. ‘The focus of community mapping is learning’ (Lydon, 2003, p20) and as connections made within this project exemplify this can happen on a number of different levels, both for educators and the young people they work with.

The UK primary curriculum states that during key stage 2 children should broaden their scientific view of the world around them ‘through exploring, talking about, testing and developing ideas about everyday phenomena and the relationships between living things and familiar environments, and by beginning to develop their ideas about functions, relationships and interactions,’ (Department for Education and Skills, 2014, p154). Through making connections to wider knowledge children and adults in this project could be seen developing ideas about living things and familiar environments, looking at the relationships between prior class-based knowledge and authentic experiences. An example of this was seen in the child who shared his understanding of light refraction creating rainbows and then, after prompting from me, went on to experiment by mixing multiple coloured plasticine to see what colours it made. The space for experimentation and the opportunities to make these connections, between everyday phenomena and classroom based learning, is something that community mapping facilitated. It providing an open space for children and educators to explore, co-creating their understanding.

Questions

Throughout the process of the community mapping project many new questions seemed to spring to the minds of those involved. Children were seen asking questions, showing they were thinking about their learning experiences and attempting to make connections with what they already knew and their personal experiences. Many of the children’s questions could also be seen as looking for further knowledge, attempting to develop their understanding. Asking questions shows that children were engaging with the process and could also be seen as a sign that interest was being sparked. This process of raising and answering questions based on observations of animals and plants also meets aims of the UK primary science curriculum (Department for Education and Skills, 2014, p161).

The process of educators asking questions is reflective of teacher action research, where action provides new questions and experiences (Mills, 2014). In this sense the mapwork process was a learning experience for me as an educators, exemplifying Mills’ idea that ‘as we travel we see many things that we did not know were there,’ (Mills, 2014, p5). Through the project I learnt new things about my young participants and how they learn while also learning more about my own personal pedagogy, things I do well and areas on which I can improve. Through children’s questions I learnt to look at the area in a new way, seeing the similarities between a tulip and a human pupil as well as questioning how I would approach the task of drawing the scent of rust onto a smell map. The process of community mapping, like the process of teacher action
research, provided opportunities to question the local, to puzzle and muse over our interactions with the places we reside in and how we can assist young people in developing critical relations with place.
Findings and conclusions on the community mapping process

I set out to discover how community mapping could be used as a pedagogical tool. I wanted to find out if it could be a way to approach environmental education in an urban environment while helping educators learn more about young peoples’ understanding of their locality. I found that the process of community mapping opened spaces for young people to share their thoughts, personal experiences and feelings about the place they inhabited. They made verbal connections between what happened during activities and their wider knowledge and experience. The child-focused approach to learning provided opportunities for me, as an educator and facilitator of the project, to have time to step back and listen to the voices of those I was educating. Young people actively engaged with the process through constant questioning as well as through suggesting what they wanted to learn and reflecting on how they learnt best. Like Jagger, who studied this approach before me, I found that community mapping allowed me to take a meta-disciplinary approach to environmental education, by addressing aims and goals across multiple subjects within the UK primary curriculum (Jagger, 2009, p151-152). It provided an opportunity for the urban children I was working with to deepen their knowledge of their local environment and the plants and animals in it. They did this through using all their senses to observe, by noticing the small details they had previously been missing.

I discovered that community mapping could be used to meet specific aims within the UK primary curriculum as well as the wider aim of UK primary education which asks educators to prepare the young people they work with ‘for the opportunities, responsibilities and experiences of later life,’ (Department for Education and Skills, 2014, p5). My young participants met literacy aims by writing for a real purpose in an authentic setting (Department for Education and Skills, 2014, p39). They met science aims through observing, questioning and recording information about the plants, animals and human impact in their local environment (Department for Education and Skills, 2014, p161). They met geography aims through observing human and physical features of their local area, as well as setting the groundwork for a comparative study of a further afield location (Department for Education and Skills, 2014, p186-187). They also met art aims, using creative work to explore their ideas and record their experiences (Department for Education and Skills, 2014, p176). They had opportunities to develop their spoken language, through authentic experiences in the immediate world, requiring them to discuss their thoughts, feelings and experiences (Department for Education and Skills, 2014, p17/18). Educators also exposed students to new vocabulary throughout the sessions, talking about plant and animal names as well as providing new adjectives to help describe new sensory experiences. Through deepening their understanding of their local urban environment this community mapping project could be seen as helping my young participants develop their connections with the social and ecological place they inhabit, helping prepare them for the opportunities, responsibilities and experiences that living in this place might bring.
Sobel advocated using mapping as a learning activity due to the way it not only helps learners develop multiple perspectives but also broadens their view of the world (Sobel, 1996). In my research this was seen through my young participants developing a clearer understanding of their locality and their relationship to it. Geography educators Catling and Willy emphasise that ‘it needs to be remembered that a locality is not simply a physical entity; its human, community and neighbourhood dimensions are central,’ (Catling and Willy, 2009, p 114). The community mapping project that was central to this research focused also on the more-than-human parts, such as the local animals and plants, therefore further broadening the view of the local and continuing to develop a multiplicity of perspectives. In urban settings providing this connection to the more-than-human is something that educators have previously found problematic (Chillman, 2003; Rickinson et al, 2004; Hunt et al, 2016). Although my project took place on a farm, and therefore provided access to plants and animals that might not usually be seen within a city, it was also in a highly urbanized area. City farms, parks and allotments are prevalent within cities across the UK and, although this study didn’t take place within a school grounds or schools wider community, I think it provides an example of how community mapping can be a tool for exploring outdoor environmental education within an urban setting.

Community mapping provided me with new learning opportunities as an educator. I wanted to know if it could further develop my understanding of how young people understand their locality, and what the value might be in this. This project provided spaces for me to listen to the young people I was working with and reflect on our co-creation of knowledge and curriculum. Through the child-centered approach of community mapping the project allowed me to learn about what mattered to my young participants, about their experiences, thoughts feelings and wider knowledge. I listened to discussions unearthing their misconceptions, providing me with new teaching opportunities and ideas for future learning. As a researcher this project also gave me an insight into the usefulness of teacher action research. I saw the relevance of actively using the teaching cycle of reflection, implementation, evaluation and improvement to constantly review my own pedagogical practices and this will continue to play a part in my future career, beyond the doors of academia.

This research provided insight into how community mapping could be used as a pedagogical tool. It provided examples of different activities that could be used, such as sensory exploration, 3D mapping and child-led photography. It also exemplified how these activities could be utilized to connect outdoor and class-based learning, through providing authentic outdoor experiences and photo records to stimulate later writing, art and geographical activities. As a child-focused method of outdoor education community mapping provides spaces for urban educators to learn more about how the young people they are working with understand the world around them. It gives young people the opportunity to share their thoughts, feelings and personal experiences about their lived experiences in local areas and communities which can be an important starting point for future planning and designing engaging and contextualized learning activities.
Future research

This research only provided a tiny insight into the wide possibilities that community mapping could provide within educational settings. Changes in environmental attitudes are measurable from about three months after the pedagogy (Jagger, 2009, p148) and therefore carrying out longer term studies is an important way that future researchers could investigate the impact of community mapping. This would provide opportunities to do quantitative analysis as well as to discover lasting effects. Researchers could see which factors most impacted students and educators and develop a deeper understanding of the most important aspects within a community mapping project. This project was unable to explore the cultural elements of the locality or involve members of the wider community, two more aspects that could bring new and inspiring elements to a community mapping project. I was also limited by the time constraints and requirements of this thesis and therefore unable to explore the wide possibilities that ABER could bring to the subject of community mapping. I hope that future researchers and educators will be inspired to delve into the creative possibilities that community mapping, and further research into it, could bring for us all.

Recommendations and implications for educators and their practice

Community mapping projects can provide a useful starting point for cross-curricular learning. Instead of educators worrying what they might not know, community mapping projects are a way for both students and educators to map what they already know about their local area, what they want to learn and what action projects they might want to be involved in. This child-centered approach to learning could help combat the common barrier of teacher confidence through allowing students to be experts of their area and work alongside educators to co-create their understanding. Embedding learning in the culture of the community could also open up new and unexpected opportunities. Authentic experiences within local areas and communities can be brought back into the classroom and used as inspiration for writing, experimenting and contextualising classroom learning. Other advantages, such as the low cost and reduced perception of risk within visits to an educational settings locality, could make this an accessible project and in doing so help combat some of the barriers faced by educators wanting to engage in outdoor education.
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Appendix A: Research consent form
Research into community mapping as a pedagogical tool
Approved by: University of Linköping

Researchers are required to abide by ethical guidelines when working with young people. These cover topics such as gaining appropriate consent, permitting children to withdraw from the study, and keeping data confidential.

I would be grateful if you could check and sign the following sheet to show that you approve of the research procedures for this study.

Names of visiting researcher: Kirsty Q. Green
Supervisor name, telephone number and email address: [removed for confidentiality]
Period of visits: Sunday 8th of April and Sunday 22nd of April
Groups visited: [removed for confidentiality]

**Brief description of procedure:** Parents/carers will be sent an information letter with details of the study and a permission slip to be signed and returned in order for their child(ren) to participate in the study. Parents/carers will be given at least two weeks to read and respond to this letter. An information letter will also be provided for children prior to the sessions to inform them about the project. Children will be asked if they would like to take part in the study, and given the option to withdraw from the study at any point without feeling obligated to provide any explanation or excuse.

Before beginning any data collection I will stress to the children that there are no right or wrong answers; rather, that I am just interested in their views.

The research will take place with morning and afternoon groups on Sunday 8th of April and Sunday 22nd of April, as agreed with [removed for confidentiality], Youth Coordinator. On these days the children will be involved in a creative mapping project and asked to provide brief written feedback at the end of each session. For any children less confident at writing it will also be possible for them to provide spoken feedback to any of the adults present and for that adult to transcribe for them. Photos will be taken of children’s work and I will write up observations of the session, children’s activities and their comments.

**Consent procedure:** Parents will be sent an information letter about the study with a permission form that they must return in order for their child to be asked to participate in the study. Children will also be asked for written consent to participate in the study after receiving an initial briefing on the nature of the study and the procedures involved.
Please sign below to confirm that you:
- understand the requirements of children who take part in the research
- have received detailed descriptions of the methods and materials to be used
- give approval for the research to take place

Name: __________________________
Name of organisation: __________________________
Signature: __________________________
Date: __________________________
Appendix B: Consent from for parents and guardians

Dear parents/carers,

I wanted to write to introduce myself and tell you a bit about an upcoming project I am going to be doing with [removed for confidentiality] in April.

My name is Kirsty and I am currently studying for my masters in ‘Outdoor Environmental Education’ at the University of Linköping in Sweden. Last year I was working at the farm assisting with educational visits, running projects for young people with Special Educational Needs and helping to run the youth group on Saturdays.

On Sunday the 8th of April and Sunday 22nd of April I will be coming to the farm to do a project with members of [removed for confidentiality] during their usual morning or afternoon session. During these sessions we will be working together to create artwork inspired by the farm – this will include making maps, taking photos and writing poems or short stories – and then putting our work together to create an alternative map of the farm. This map will then be shared with families and the wider farm community.

I am doing this project as part of my thesis in which I am doing research into environmental education in urban environments. I want to find out more about how young people can be encouraged to develop connections with their local environment and am looking into how creative mapping projects can be used to do this. I really loved my time spent working on the farm last year and wanted to share what I’ve been learning with the farm and the young people who visit.

As part of my research I will be:
- collecting feedback at the end of sessions about what participants liked and disliked
- writing up observations about the process including children’s actions and comments during the sessions
- taking photos of children’s work

All children who are involved in the project will remain anonymous. Their names won’t be used in either notes or the final write up, and photos including children’s faces will not be included. The final research project will be shared with any parents or guardians who are interested and a child-friendly version will also be shared with all young people involved.

If you have any further questions about my project or your child’s involvement please feel free to email me at [removed for confidentiality]

I look forward to hearing back from you.

Yours faithfully,

Kirsty Green
If you would like your child to take part in the project please fill out the form below.
You can print it and pass the completed form to [removed for confidentiality] at your child’s usual session or email a completed copy to me

I, ___________________________________, (name of the parent/carer) give permission for ___________________________________ (child name) to take part in the creative mapping projects at [removed for confidentiality] on Sunday 8th of April and Sunday 22nd of April, during their usual [removed for confidentiality] session. I understand that they will be observed during this project and photos will be taken of their work in order to create data for a thesis project on environmental education in urban environments.

Signature of the parent or guardian: __________________________
Date : __________________________
Appendix C: Consent form for participants
A creative map-making project about [removed for confidentiality]

You are being invited to take part in a research project. Before you decide whether or not to take part, it is important for you to understand why the research is being done and what it will involve.

Who is doing this project?
My name is Kirsty Green and I am studying at the University of Linköping in Sweden. I am doing a course called ‘Outdoor Environmental Education and Outdoor Life’ where I am learning about teaching outdoors and helping young people learn about the environment. Last year I worked at the farm, helping with visiting schools and youth groups.

Why have I been invited to take part in this project?
You have been chosen to take part in the study because you are a member of [removed for confidentiality]. I know you have spent time learning about the farm and working with the plants and animals there.

Do I have to take part?
It is up to you to decide whether or not to take part in the project. If you decide to take part you are still free to change your mind at any time, without giving a reason.

What will happen to me if I take part?
If you choose to take part you will be involved in a creative map-making project. This will happen on two different Sundays during your usual sessions.

During this project you will:
- talk about your favourite places on the farm
- take part in activities where you will use all your sense to explore the farm
- make artwork about your experiences on the farm (This might mean taking photos, writing poems or stories or making sculptures)

At the end of sessions you will have the chance to share what you liked and any ideas you have for making the sessions even better. There will be no right or wrong answers; I am just interested in your opinions. At the end of the second session we will put all our artwork together to make a creative map of the farm. This can be shared with your families and the wider farm community. I will then be writing about the project as part of my university study.
Who will see what I say/do?
I will be taking photos of your work and writing about what we do but you will remain anonymous in my study. This means when I write about you I won’t use your name or other personal information. I also won’t use any photos that have your face in.

When I have finished writing my study it will be read by other people at my university. It will also be available on the internet for people from other universities to read. It will be about 50 pages long but I will write up a shorter version which I will share with you.

What should I do if I want to take part?
If you want to take part in the project please answer the questions below. You should put a circle around your answers and sign your name at the bottom.

Do you understand what you will be asked to do? yes / no

Do you have any questions about what will happen or why? yes / no

Do you want to take part in the activities I have described? yes / no

Name: ________________________________________________________________

Date: ____________________________

If you have any questions about the project or taking part in it please speak to [removed for confidentiality]. She will be able to pass your questions on to me and I will get back to you with more information.
Appendix D: Lesson plan for the first day of the project

<table>
<thead>
<tr>
<th>Learning Objectives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>To talk about what is special about the plants and animals on the farm</td>
</tr>
<tr>
<td>To record different sensory experiences of the farm</td>
</tr>
<tr>
<td><strong>WALT:</strong> Talk about and record our experiences of [removed for confidentiality]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Previous assessment/context:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children were provided with preliminary information about what they’ll be doing. They have been learning about migration.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Success Criteria (WILF)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can use my different senses to explore the farm</td>
</tr>
<tr>
<td>I can make a sound map</td>
</tr>
<tr>
<td>I can make a scent map</td>
</tr>
<tr>
<td>I can talk about my favourite place on the farm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Introduction:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Explain project:</strong> We are going to be making an Atlas of the farm. What is an Atlas? Look at an example Atlas and how it is made up of lots of different maps and information.</td>
</tr>
<tr>
<td><strong>Discuss migration:</strong> Brief link to pilgrims going to the new world. Our Atlas is going to be for new migrants and visitors to the area.</td>
</tr>
<tr>
<td><strong>Gather info about the farm:</strong> What do you like/dislike about the farm? Can you think of a scary/happy/friendly/smelly/calm/dangerous place on the farm? Adult to write list of places they connected to these words.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What parts of the farm would you like to show a migrant who has just arrived in the area?</strong> What might you tell them about this place? Children discuss ideas in pairs and then share with the group. In small groups children choose an area of the farm to work on for the project. Talk about sounds and smells that are distinctive to the farm.</td>
</tr>
<tr>
<td><strong>Sound mapping:</strong> Model starting to draw a soundmap on a large piece of paper. What direction are the sounds coming from? How could I show a sound is loud? (e.g. draw a bigger/bolder symbol) Children chose an area on the farm to sit. They close their eyes and listen to all the sounds around them. They then open their eyes and draw pictures or symbols to show the different sounds they can hear.</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Break</th>
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</thead>
<tbody>
<tr>
<td><strong>Exploratory smell activity:</strong> Children explore farm in small groups and find as many different smells as possible. How could we record the different smells on a map? Children to work in groups to create their scent map.</td>
</tr>
<tr>
<td>Children each take photo or draw picture of their place</td>
</tr>
<tr>
<td>In this place I feel…</td>
</tr>
<tr>
<td>In this place I want to…</td>
</tr>
<tr>
<td>In this place I wonder….</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Differentiation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult to transcribe child’s comments</td>
</tr>
<tr>
<td>Child has a sand timer to help them know how long to focus on sound map. Supporting adult stays close to assist focus, modelling doing activity too.</td>
</tr>
<tr>
<td>Child independently choose a place to sit alone on the farm and create their soundmap. Child could add adjectives to the symbols on their map to make it more descriptive.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Plenary:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Share reflections/creations from the session</strong></td>
</tr>
<tr>
<td><strong>Introduce idea of glossary so children can start thinking about words for next week</strong></td>
</tr>
<tr>
<td><strong>2 stars and a wish activity:</strong> on a post-it note young people write 2 positive things from the session and one thing that could have been better</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Key Questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is a glossary?</td>
</tr>
<tr>
<td>What words do you use when talking about the farm?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Resources:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devices for taking photos, post-its, sound map worksheet, blank paper for scent map, clipboards, pencils, examples of Atlases, sand timer</td>
</tr>
</tbody>
</table>
### Appendix E: Lesson plan for the second day of the project

<table>
<thead>
<tr>
<th>Learning Objectives:</th>
<th>Previous assessment/context:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• To record our experiences and knowledge of the farm to be shared with others</td>
<td></td>
</tr>
<tr>
<td><strong>WALT:</strong> make an Atlas to share our experiences of [removed for confidentiality] with a new migrant to the area</td>
<td></td>
</tr>
<tr>
<td>Children have used their senses to explore the farm. They have recorded photos of favourite/memorable places and have started thinking about farm vocab.</td>
<td></td>
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<table>
<thead>
<tr>
<th>Success Criteria (WILF)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>• I can talk about farm vocabulary</td>
<td></td>
</tr>
<tr>
<td>• I can talk about how a place makes me feel</td>
<td></td>
</tr>
<tr>
<td>• I can write about a place on the farm</td>
<td></td>
</tr>
<tr>
<td>• I can help make a group map of the farm</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Introduction:</th>
<th>Key Questions/Vocabulary/sentence structures:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Look at everyone's photos and maps from last week. Recap what information we would like to share about the farm with a new migrant.</td>
<td></td>
</tr>
<tr>
<td><strong>Glossary words</strong> - In pairs children think of a word they would like to add to a farm glossary and write it on a post-it. How could you explain this to a new person to the area? Take turns describing their word to their partner. How could you make the description even better? When they have agreed on a description write it on another post-it</td>
<td></td>
</tr>
<tr>
<td>• Glossary</td>
<td></td>
</tr>
<tr>
<td>• migration, migrant</td>
<td></td>
</tr>
<tr>
<td>• Environment</td>
<td></td>
</tr>
<tr>
<td>• atlas</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Other Adults' Role in Introduction:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assisting to facilitate discussion</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Activity:</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>3D Map - Children to collaboratively explore the architects 3D map of the farm. Where are we on this map? Where is your favourite place on this map? Can you find the goats/pigs/allotments?</td>
<td></td>
</tr>
<tr>
<td><strong>Plasticine places</strong> - Children to have their photos of their favourite places infront of them. Children to make plasticine sculptures of their favourite places. What do you think is important to include? What animals might you make? What plants might you make?</td>
<td></td>
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</tbody>
</table>

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<thead>
<tr>
<th>Break</th>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>My favourite place</strong> - Children to look at their photos from last week. Does the picture remind you of something that happened in this place? Does it make you think about something funny/sad/happy? Do you have your own name for this place? Children have quiet time to think about their pictures and why they like this place. Children share ideas with partner. Share example of my favourite place photo and short description. Children write story/poem/caption to go with theirs - write rough version first and then carefully copy it out for Atlas.</td>
<td></td>
</tr>
</tbody>
</table>

| Making the map - Process of bringing different photos/artwork together to create farm map. Have large piece of paper and children work collaboratively to arrange their photos/artwork on the paper to create a large group map. Have pieces of paper for children to cut out and draw scents/sounds on and place on map in response to their suggestion in the last session |

<table>
<thead>
<tr>
<th>Differentiation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Children use speaking frame to describe their favourite places (adult to transcribe child's comments onto their work)</td>
<td></td>
</tr>
<tr>
<td><strong>In this place I feel...</strong></td>
<td></td>
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<tr>
<td><strong>In this place I want to...</strong></td>
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<tr>
<td><strong>In this place I think about...</strong></td>
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<table>
<thead>
<tr>
<th>Differentiation</th>
<th></th>
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<tbody>
<tr>
<td>Children use writing frame to write about their favourite places</td>
<td></td>
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<tr>
<th>Plenary:</th>
<th>Key Questions:</th>
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<tbody>
<tr>
<td>• Share reflections/creations from the session</td>
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<tr>
<td>• Decide which maps are for putting in the Atlas and which were just for inspiration</td>
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<tr>
<td>• 2 stars and a wish activity - on a post-it note young people write 2 positive things from the session and one thing that could have been better</td>
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<td>• What went well?</td>
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<td>• What could be even better next time?</td>
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<tbody>
<tr>
<td>Post-its, pencils, tablet, printed photos of favourite places, large paper/board for creating map, example of my favourite place with photo and short story, example of poem about favourite place, scissors, plain paper, architects map, aerial map of the farm</td>
</tr>
</tbody>
</table>