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**The impact of Forest School within Secondary School  
Education: an exploratory case study of Key Stage  
Three pupils' views**

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Submitted in accordance with the requirements for the degree of  
Master of Science by Research

York St John University

School of Science, Technology & Health

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### **Abstract**

In the UK, teaching within secondary schools almost always takes place within classrooms. Forest School offers one notable exception. However, this established learning approach often stops after Key Stage Two. This non-continuation is problematic given fears that successive generations are growing increasingly disconnected from nature and when one evaluates evidence of the benefits of Forest School. This thesis offers a case study exploring the impact of Forest School on Key Stage Three pupils. Through interviews and weekly journaling, twelve pupils' views, perceptions, evaluations and reflections of a nine-week Forest School programme were collected and analysed. The Headteacher's aspirations for Forest School were partly met as pupils evidenced how these sessions helped build their independence, confidence, ability to assess and take risks, and become more informed about nature. Furthermore, pupils also reported learning survival, social and physical skills, as well as enhancing their pro-environmental attitudes. One recurring theme within pupils' reflections was how Forest School aided their mental and emotional wellbeing, a theme evident in the existing literature. This thesis is the first to assess the impact of Forest School through the experiences of Secondary School aged children. Given concerns regarding young people's physical, mental and emotional well-being, and their growing disconnect from nature, this thesis's exploratory findings suggest that Secondary School leaders may be missing an opportunity by omitting Forest School from curriculum enrichment activities. Whilst the Headteacher interview provides some explanation for this omission, future research could scope the will and capacity of secondary schools to facilitate Forest School. Moreover, researchers could test the impact of Forest School at Key Stage Four and/or undertake a longitudinal study following one cohort's engagement in Forest School through the Five Key Stages. To gain greater traction from curriculum decision makers, Forest School leaders should continue better embedding cross-curricular learning gains through activities.

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## Chapter One – Introduction

In the UK, the Covid-19 pandemic meant parents, teachers and young people had to swiftly adapt to home-schooling and daily one-hour outdoor physical activity restrictions. This adaptation proved alternative teaching pedagogies and ways of learning are possible, whilst (re)illustrating the benefits and privilege of outdoor opportunities. However, despite the government's 25-year environmental plan (DEFRA, 2018), manifestos outlining the importance of outdoor learning (DfES, 2006), and the National Curriculum identifying that from Key Stage Two to Key Stage Four children must participate in some form of outdoor education (DfE, 2013), a gradual return to schools resulted in a swift return to classroom-based lessons. This return to the norm is illustrative of secondary schools' conservative approach to outdoor learning, which is usually facilitated by trained professionals on one-off residential visits. This approach has contributed to children's growing disconnect from nature and the outdoor environment (McFarlane 2017).

Within the UK, over the past 20 years, there have been concerns about children's gradual and growing disconnect from nature and the outdoor environment (Harris 2017, McCree et al. 2018, Kemp & Pagden 2019, Kemp 2020, Harris 2021). This is not just referring to children's lack of access to the countryside (Gray, 2011), but also a decline in their outdoor play opportunities (Hunt et al. 2015). Compared with their parents, children's decline in outdoor play includes spending less time in small outdoor spaces such as playgrounds, gardens, woodlands or greenspaces (O'Brien & Weldon, 2007; Stone & Faulkner, 2014). This generational difference evokes fears of a cycle of socialized reproduction, which could contribute to a disconnect from broader pro-environmental behaviours such as combating climate change (Beery & Wolf-Watz, 2014; Fjørtoft, 2004; Thompson et al. 2004; Zylstra et al. 2014). There have also been concerns regarding the individual consequences of children's growing disconnect from nature, with Louv (2005) coining the phrase Nature Deficit Disorder to depict children's feelings of alienation from nature and more vulnerable to negative moods or reduced attention span.

Why children have become gradually disconnected from nature and the outdoor environment is multi-causal, interlinked and complex. Within the twenty-first century, the UK has become a more risk averse society which has an increasing focus on children's safety, leading many parents and teachers to opt for safer and more controlled indoor activities (Connolly & Haughton 2017; Gleave, 2008; Jenkins 2007; Savery et al. 2016; Waters & Begley 2007; Wooley et al. 2009). A more risk averse approach mitigates a prevailing blame culture, but also perpetuates perceptions of children as being vulnerable and in need of protecting, leading to overprotective parenting and teaching perpetuating children being less confident or able to take risks (Button & Wilde 2019; Connolly & Haughton 2017; Greenwood 2017; Malone 2007; McDowall-Clark, 2013). Many

schools have adopted such an approach and perception whereby eliminating risk and keeping children safe is considered best practice, contributing to some teachers underestimating what children can do in the outdoor world (Button & Wilde, 2019; Evetts, 2009; Lindon, 2011). These societal trends and prevailing attitudes partly explain why outdoor learning in secondary schools often involves irregular, formalised and infrequent optional residential trips (Dillon et al. 2006).

Aside from residential trips, many primary and secondary schools could opt for setting up a Forest School. Forest School is designed to offer a child-centred learning process aimed at inspiring holistic growth through regular outdoor activities (Maynard 2007). A Forest School pedagogical approach involves a long-term program that supports learner-centred play, hands-on exploration and supported risk taking in natural settings, such as woodlands, forests, grasslands, beaches and school grounds (FSA, 2020). The Forest School Association (2020) advocates seven key learning principles involving: regular sessions; learner-centred approaches; developing a lifelong relationship with the natural world; developing mental, physical and social skills; supported risk-taking; and self-evaluation and reflection (Waite & Goodenough 2018). Central to facilitating these learning principles are specialist Forest School Leaders who observe learners' interests and ensure elements of play and choice to provide stimulus for each learner (FSA, 2020). In the UK, to quality assure this learning process, Forest School sessions must be led by a Qualified Level Three Practitioner (FSA, 2020).

In the UK, Forest School emerged around 1993 after nursery school staff from Somerset had observed child-centred and play-based lessons in Denmark (Cree and McCree, 2013; Dean 2019, Forest School Association, 2018). Bridgewater College created the first BTEch for Forest School leaders, whilst the Forestry Commission's 'Forest Education' initiative and Open College Network qualification offers alternative training (McCree & Cree, 2013). In 2002, Forest School practitioners agreed on the definition of Forest School and developed key learning principles within a Forest School curriculum, with Wales playing a key role in standard setting (FSA, 2018). In 2008, England piloted a quality assurance scheme in Worcestershire, which led to the quality improvement tool being launched (FSA, 2018). By 2012, over 9000 practitioners had been trained, empowering local authorities to deliver Forest School (FSA, 2018). Also in this year, the Forest School Association was launched as a governing body to oversee all training and now has over 1000 members (FSA, 2018).

Given this growth, many academics have evaluated Forest School's impact on children's education, wellbeing, social skills and identity. Forest School can positively impact children's educational gains and pro-environmental behaviours (Assadourian & Mastny, 2017; Coates &

Pimlott-Wilson, 2019; Ingold, 2008; Leather 2018; Louv, 2008; Kahriman- Pamuk, 2019; Manner et al. 2021; McCree et al. 2018; Murray, 2003; O'Brian and Murray, 2007; Slade et al. 2013; Turtle et al. 2015). Forest School can also positively impact children's mental and emotional wellbeing (Bilton, 2010; Bingley & Milligan, 2004; Coates & Pimlott-Wilson, 2019; Gill, 2010; Manner et al. 2021; McCree et al. 2018; O'Brien & Murray 2007; Roe & Aspinall, 2001; Slade et al. 2013; Tiplady & Menter, 2021; Williams-Siegfried, 2012). Finally, Forest School can positively impact children's social skills and identity (Harris, 2021; Kemp & Pagden, 2019; Manner et al. 2021; McCree et al. 2018; Tiplady & Menter, 2021; O'Brien, 2005; Williams-Siegfried, 2012). Whilst these studies are revisited, explained and critiqued in Chapter Two, it seems that there are numerous benefits for children taking part in Forest School.

Yet, in the UK, the growing popularity of Forest School within primary schools has not (yet) been transferred to secondary schools. Whilst the reasons for this discontinuation are partly outlined above and school leaders are under immense pressure to achieve national standards and gain good academic results in SATS, GCSE's, A Levels or equivalent (Ball 2015; Coates, Pimlott-Wilson 2019; Maynard, 2007; van Oers, 2003), the absence of Forest School may be a missed opportunity. Indeed, Forest School could aid children's educational gains as well as go some way to combat growing concerns regarding 11-16-year old's physical, mental and emotional well-being (NHS, 2022). The evidence supporting Forest School's potential benefits are skewed towards primary school-aged pupils, illustrating a knowledge gap. Therefore, this study aims to answer the following research question, *what is the impact of Forest School on Key Stage Three pupils?* Here, the term impact refers to measuring the growth in pupils by comparing where they were at an earlier time with where they are now, and/or measuring the intent, implementation, and impact of curriculum design (Education and Training, 2020)

The following chapter provides a review of literature concerning evidence of the extent that Forest School impacts on children's education, wellbeing, social skills and identity. Chapter three outlines the research methodology undertaken, sample used, research methods adopted, and analytic approach taken, as well as ethical considerations made and met. The fourth chapter presents and discusses why Forest School emerged at this school and what pupils who elected it expected from this programme. Chapter five presents pupil's evaluations and reflections on the skills, qualities and affective dimensions of the programme. Chapter six provides a synthesis on pupils' end of programme reflections on their journal responses and their views on the impact of Forest School. Finally, chapter seven concludes this thesis by outlining how Forest School impacted 12 Key Stage Three pupils and discussing the implications of this thesis's findings for current secondary school provision and future research needed.

## **Chapter Two – The ‘impact’ of Forest schooling: An evidence-based review**

This chapter illustrates the breadth of empirical knowledge through detailing each impact-based dimension, leading to an evaluation of evidence gained. Relevant research papers were found using a systematic approach of searching the terms ‘Forest School’, ‘outdoor education’ and ‘outdoor learning’ into EBSCO discovery service database. This search located 335 results, which were then filtered based on English language, peer reviewed journal articles and articles published since 2000. Through these deductive means, 186 articles were left, enabling the abstract of each article to be read to ensure the content was fit for purpose and articles were not duplicated. This final process of elimination left 22 articles which were reviewed and are presented in the following key dimensions: a) the impact on children’s educational gains and pro-environmental behaviours, b) the impact children’s mental and emotional wellbeing, c) and the impact children’s social skills and identity.

### **2.1. Children’s educational gains and pro-environmental attitudes**

#### *Educational Impact*

Forest School can positively impact young people’s educational gains, either within sessions themselves or through transferable gains into classrooms (Department for Education 2006; Ingold, 2008). Through Forest School sessions, O’Brian and Murray (2007) found that becoming more familiar and comfortable with a woodland environment not only increased young people’s knowledge of nature and environmental literacy, but it also fostered greater academic and practical skills. In addition to this, it was noted that creativity, imagination, motivation and concentration also developed. These developments were found by completing a three-step process of: a) a storyboard workshop, b) teacher or Forest School leader observations, and c) a reflection session. The transference of educational gains was also examined by Coates and Pimlott-Wilson (2019) whose study involved 33 interviews with children who had completed a six-week Forest School programme. These children were based in two primary schools, the first school had a class of 18 Year Four pupils (Key Stage 2) and the second school had 15 Reception aged children (Early Years Foundation Stage). When asked if what they did in Forest School impacted their classroom behaviours, young people responded that the increase of activity choice and opportunity to play, that contrasted with their classroom settings, meant older pupils had more creativity and imagination for their writing through providing new material and ideas. A further finding involved a sense of de-routinization that Forest School offered in compared classroom lessons, which some pupils felt were more stressful and claustrophobic. This meant that some pupils considered the sense of play and exploration Forest School offered a novelty,

particularly amongst older children, leading them to be calmer, more settled and increasingly focused when returning to their classroom.

Focusing on similar transferable themes but offering a more empirical focus to educational gains, McCree et al. (2018) three-year longitudinal study involved 11 young people aged five to seven year (Key Stage 2), teachers, and parents from one primary school. These young people were defined as children who struggled to thrive, were disadvantaged in multiple ways and, therefore, attended weekly Forest School sessions over a three-year period. Data was collected via interviews with all parties and session evaluations, and then compared with participants' peers' results who had not taken part in Forest School. Findings suggest that young people who attended Forest School improved their attendance, school readiness and attainment. Improvements were tracked in writing skills (+18%), reading and math (+27%), as well as children and parental perception of significant role that Forest School played. One key difference between these learning environments highlighted was that in Forest School much of the nature discovery was child-led through the curiosity of the class. From peer-learning, practitioners expanded young people's education by facilitating a more guided discovery approach, enabling these learners to become socially confident learners. Similarly in terms of study design and child-perception of how Forest School impacts them, Manner et al. (2021) study explored eight adolescent girls, considered 'at risk' for mental health problems, Forest School experiences. Post-programme interviews found that Forest School helped develop confidence which transferred into the classroom environment, particularly in terms of speaking out loud or peer group work, making lessons more manageable and enjoyable, as well as identifying that the skills learnt in Forest School can be transferable.

### *Environmental Impact*

Whilst O'Brian and Murray (2007) found that educational gains were underpinned by greater nature/environment literacy, it is necessary to focus more specifically on how Forest School impacts young people's knowledge of the natural environment and pro-environment attitudes. For Louv (2005, 34), this focus is a key and much needed aim of Forest School given the "nature deficit disorder" and young people's inclinations towards indoor play, indoor exploration and indoor learning. Investigating this relationship, Turtle et al. (2015) present questionnaire data from 195 children aged eight to eleven who attended six schools in both urban and rural areas, whereby annual median incomes ranged from £17,700 to £20,700. These 195 children included those who had and had not participated in Forest School. Findings illustrate that a long-term engagement in Forest School increased young people's pro-environmental attitudes. Findings indicated that schools with Forest Schools scored a mean of 77 on environmental measures

compared with 73 for those without a Forest School. Turtle et al. (2015, 7) believed this illustrated that, “there is a significant difference between the environmental attitude of children who have taken part in schools and those that have not, with children who have taken part in Forest Schools displaying a more pro-environmental attitude”. Whilst presenting this difference, Turtle et al. (2015) did not explain how they felt this positive relationship was fostered.

One prevailing thought from leading scholars in this field is that by simply spending time in nature young people come to appreciate nature more, and thus to engage more with the outside world is a key outcome of Forest School (Harris, 2021; Tiple & Menter, 2021). As well as an alternative outdoor learning environment, Slade et al. (2013) found that some teachers identified how the lack of a strict structure to Forest School activities increased young people's environmental awareness. These activities are often performed in an explorative and guided-discover manner, leading Kahrman-Pamuk (2019) to suggest that the greater inquisitiveness developed often leads to becoming more empathetic towards nature. Further highlighting the relationship between knowledge attainment and emotional connection, via interviews, this study investigated 39 parents' perceptions of Forest School. In addition to Forest School helping children become more nature aware, parents also believed it enhanced self-confidence, motor development and the ability to take responsibility. In a Forest School evaluation project in Wales where Forest School Leaders and educational professionals from two pilot projects were involved, through a series of focus groups and workshops, Murray (2003) found that through improving young people's knowledge of how to look after the environment, a sense of pride is encouraged and developed.

## **2.2. Children's mental, emotional and physical wellbeing**

Forest School is often lauded for its ability to positively impact on young people's wellbeing (Coates & Pimlott-Wilson 2019; Knight, 2012; O'Brien & Murray 2007). The concept of wellbeing can be split into mental, physical, social and emotional (Borradaile 2006). These central components can be further split into a young person's confidence, resilience, social skills and interaction with others, motivation, concentration, physical strength, mental health, ability to handle stress, overcome fears and discover their talents (Abrams 2002; Lindon, 2011; Manner et al. 2021; Murray, 2003; Roe & Aspinall 2011; Slade et al. 2013). In this sub-section, evidence pertaining to Forest School's impact on children's mental, emotional and physical wellbeing is reviewed. For presentation purposes, these aspects of wellbeing are separated, but it is necessary to note from the outset their interrelated nature.

### *Mental Wellbeing*

Mental Wellbeing can be defined as, “a positive state of mind and body, feeling safe and able to cope with a sense of connection with people, communities and the wider community” (HM Government 2011, 90). Taking part in Forest School sessions over a long period of time can improve a young person’s mental wellbeing. Revisiting previously cited research, Coates and Pimlott-Wilson (2019) found that Forest School’s de-routinization, greater freedom and less constraints compared with classrooms improved children’s mental health. More specifically, Manner et al. (2021) intervention with eight girls considered at risk from mental health problems found that being in a nature-based environment helped them feel calmer, relieve stress and better overcome personal challenges, enabling them to better cope with the stresses of day-to-day life that they experienced in classrooms or at home. Similarly, in a report for the Outdoor Council, Gill (2010) identified that being outside can lower young people’s stress levels whilst simultaneously developing their creativity and imagination. Focusing on 16 young people aged between five and 13 who were currently unable to access mainstream education, Tiplady and Menter (2021) gathered data from fieldwork observations, student attendance, behavioural assessments, diaries, planning and evaluation, and interviews with parents and carers. They found that designing activities that were challenging but manageable through practice and support alongside regular reflection time positively impacted these young people’s confidence and resilience, enabling them to better identify their own potential.

### *Emotional Wellbeing*

Emotional wellbeing is the capacity to have positive moods and emotions and be adaptive when stressful situations arise (Blakwell, 2015; Goodenough & Waite 2018). Rose and Aspinall (2001) found that young people experienced positive changes in mood after taking part in Forest School, something Tiplady and Menter (2021) related to greater enjoyment and engagement compared with classroom settings. They found this during their comprehensive study that involved two schools and a mixed method approach including fieldwork observations, student attendance, behavioural data, the Forest School leaders planning and evaluation, diaries and interviews with parents. Findings indicated that in both schools some pupils who would show negative emotions towards classroom activities showed enjoyment to the Forest School activities. Furthermore, through semi-structured interviews with 33 children from the ages of four to nine years, Coates and Pimlott-Wilson (2019) noted that simply associating outside environments with play and being active evokes positive feelings among young people. Manner et al. (2021) also witnessed increases in young people’s feelings of happiness and calmness, both during and after lessons, and noticed improvements in their emotional intelligence which was partly fostered through

opportunities to better understand their feelings and, in turn, control them, particularly when dealing with peer conflict.

### *Physical Wellbeing*

Physical wellbeing is a young person's ability to complete their day-to-day activities without excessive physical stress or fatigue (Goodenough and Waite, 2010). Regularly taking part in Forest School sessions can positively affect young people's physical wellbeing due to the space offered, the fresh air available, and the physical adventure undertaken involving walking, running and climbing (Bilton, 2010; Bingley & Milligan, 2004; McCree et al. 2018). Indeed, being exposed to sunlight promotes motor development, whilst Forest School activities can develop fine and gross motor skills.

More specifically, O'Brian and Murray (2007) found that Forest School activities: a) developed young people's co-ordination and balance as they moved across the unpredictable terrain of the forest, b) improved their cardiovascular endurance, and c) increased their physical strength through climbing trees. In this study, observations of 24 children over eight months found that children were predominately physically active during the sessions and physical skills were developed by the change in terrain throughout the forest and engaging in activities. Activities such as using tools developed fine motor skills, whilst building dens with resources found in the woodland assisted gross motor skills. This almost unavoidable and inevitable increase in physical activity seemingly aligns with the broader discovery that simply spending time in an outdoor enriching environment can reduce obesity (Munoz, 2009; Williams-Siegfried, 2012).

## **2.3. Children's social skills and identity**

### *Social Skills*

Social wellbeing is a young person's sense of belonging within the community they are in, whilst social skills are what young people use daily to communicate with others in both a verbal and non-verbal manner (Williams-Siegfried, 2012). Forest School can positively impact young people's social wellbeing and social skills (Knight, 2009). Manner et al. (2021) found that through Forest School sessions, young people developed their social skills, which improved their ability and confidence to socialise with others. Through enhancing their social skills and socialising more, young people were more able to develop relationships within and outside of Forest School sessions and maintain these relationships through greater peer-conflict management. In effect, children were more capable to use their social skills in a more positive manner. A key part of this developmental process was how regular Forest School sessions made young people feel part of a group and part of a community. This potential was acknowledged by Tiplady and Menter (2021)

whose study highlighted how such was the success of embedding a sense of belonging with a school and peers, one school used Forest School as a strategy to integrate new students. Offering a more detailed insight into the social impact of Forest School, O'Brien (2009) conducted a study which involved teachers, Forest School leaders, children and parents from seven schools. After attending a Forest School workshop, data was collected by the practitioners who observed children taking part in Forest School. Questionnaires were given to teachers, parents and children before a final workshop facilitated reflection from the data collected. One clear finding was the impact that Forest School had on strengthening relationships through; a) encouraging young people to work and problem solve in a team, b) sharing resources and taking turns such as waiting to climb a tree, and c) encouraging young people to make decisions and work independently from adults, allowing young people to discover what they could achieve if they worked together.

### *Identity*

Chrysochoou (2003, 225) defines identity as, "a particular form of social representation that mediates the relationship between the individual and the social world". Through relationship building, creating a sense of belonging and fostering peer-based independency, Forest School can impact on young people's identity (Kemp & Pagden, 2019). Tiplady and Menter (2021) found that developing young people's sense of self was fostered through structured reflection activities whereby via introspective guided self-discovery young people could realise parts of their identity they were less aware of. For instance, because of Forest School sessions, one girl found that she was more creative than she realised. This type of discovery may be partly facilitated by the opportunities Forest School presents. For instance, McCree et al. (2018) discovered that through imaginative play children felt comfortable in expressing themselves. Similarly, Tiplady and Menter (2021) found that reflective sessions served to create a positive self-narrative and help build young people's confidence in themselves. Part of this process, as Harris (2021) declared, was young people recognising and then overcoming their fears, such as fearing the woodland site. Linked to the above, as well as confidence building and self-actualisation, this fear was overcome through children developing a sense of belonging within the woods and a sense of ownership to care for it.

## **2.4. Evaluating evidence of the impact of Forest School**

This final sub-section provides; a) a summary of the key messages taken from the above review, which also highlights upon where the knowledge derives from and how this was constructed, b) an introduction to key knowledge not directly relating to these dimensions of impact, but significant, and c) a critical reflection upon the knowledge gained and knowledge gaps relating to this thesis. This review illustrates how Forest School can positively impact young people's

educational gains and pro-environmental attitudes through offering a de-routinized environment centred on guided self-discovery and exploration, which leads to the development of key educational skills such as creativity, concentration and confidence, as well as improving their nature and environmental literacy. Forest School can also positively impact young people's mental, emotional and physical wellbeing through alleviating stress, enabling young people to realise their potential, fostering positive moods and physical activity. Finally, Forest School can positively impact young people's social skills and identity through self-actualisation and developing a sense of belonging within a community, both often realised through structured reflective exercises. These findings were derived from 22 studies which involved 34 academics across three countries (UK, USA and Turkey), who gained insights from senior leaders, teachers, Forest School practitioners, parents and children. 16 studies adopted qualitative methods, mainly focus groups, interviews and observational notes, whilst two were quantitatively adopted questionnaires or evaluative surveys. Before a critical reflection of how this knowledge was gained is offered, it is necessary to briefly visit key knowledge of Forest School that does not directly relate to impact but importantly focuses on the conditions necessary to foster impact.

Kemp and Pagden (2019) interviews with senior leaders identify the view that Forest School's impact will only be maximised if it is integrated properly within the curriculum. Similarly, Kemp's (2020) interviews with seven teachers within rural schools who had taken part in a funded Forest School programme found that impact varied depending on how much change was required of the Forest School ethos to fit the programme into the school. For instance, Harris (2021) observations of 71 children and interviews with 20 practitioners found that only through repeated visits over one-half term did young people reap the benefits of Forest School. For Bal and Kaya (2020), children's development of self-awareness is largely contingent on Forest School being a comprehensive learning environment. Indeed, Coates and Pimlott-Wilson (2019) suggest that play pedagogy can be highly effective, whilst Harris's (2017) authoritative work reveals that Forest School often incorporates kinaesthetic, experimental and sensory learning styles. From this, Tiplady and Menter (2021) discovered that each child gains a positive impact from Forest School, but this may be diverse as children "take what they need". In this sense, Leather (2018) argues that educators could and should learn from the ethos and pedagogy of Forest School, whilst some schools now pride themselves on this philosophy using it to gain competitive marketing edge over other schools (Connolly & Houghton, 2017). One further distinction to be made is that practitioners often see themselves as facilitators rather than teachers (Harris, 2017). This slight difference perhaps elucidates another issue identified when integrating Forest School into a school. Connolly and Houghton (2017) found that Forest School practitioners' key motivation of introducing the idea of risk-taking in the outdoors caused tensions with more risk

adverse classroom teachers. Contrastingly, Kahrman-Pamunk (2020) highlighted how parents viewed the ethos of Forest School positively, sometimes preferring it to a classroom environment. Clearly, for Forest School to have most impact it is contingent on the school culture and teacher/parental attitudes towards it, which if positive embraces its ethos.

Whilst the evidence presented in this chapter undoubtedly demonstrates that Forest School can positively impact young people, it is necessary to critically reflect upon how such knowledge is derived. As noted above, whilst the dominance of qualitative research provides rich accounts from people's lived experiences of Forest School, it is premised on subjective perceptions/observations and analysis from a small cohort of people, which can often be adolescents and case specific. Such means of attaining knowledge can be critiqued on the grounds of reliability and lack ecological validity, which therefore can question the transferability of knowledge gained. Conversely, more quantitative objective means of knowledge creation can also be critiqued in terms of their reliance of snap-shot self-report measures and issues concerning causality and strong enough correlations between variables given the complex variables involved in young people's learning process. Ultimately, whilst it is important to acknowledge these possibly flaws in the knowledge creation process, these flaws and critiques are representative of broader paradigm debates concerning research methodologies. One way some scholars, including some cited in this chapter, have sought to overcome such flaws is through adopting a mixed-methodology approach. However, even this dualistic approach does not completely alleviate issues highlighted. Therefore, it is necessary for scholars to reflect upon these caveats in their reflexive accounts and acknowledge them in their conclusive comments.

## **2.5 Conclusion**

This chapter provides a review and evaluation of the existing research concerning the impact of Forest School. One apparent lack of insight is the impact that Forest School has on Key Stage Three pupils. This is due to the vast omission of Forest School from secondary schools in the UK. A further trend in the research is to either ask primary school-aged children to discuss Forest School or ask them to complete self-report surveys. Perhaps due to the ages of children involved, what seems to be lacking is directly engaging young people in evaluating and reflecting on the learning process in order to assess the impact of Forest School on those that it is focused, children. Therefore, to plug this knowledge gap, the following chapter details how this thesis involves a case study of one independent school and uses a sample of 12 Key Stage Three pupils to journal, evaluate and reflect upon an elected nine-week Forest School programme.

## **Chapter Three - Research Methodology, Research Methods and Research Process**

Having reviewed the existing research, this chapter focuses on how new knowledge concerning the impact of Forest School was derived. The chapter starts by introducing the interpretivist paradigm and qualitative methodology adopted, offering a rationale for why these were chosen to answer the research question. After framing the case study, key information concerning the participants is outlined. This is followed by detailing the interview and learning journals used, alongside the ethical considerations and necessary procedures followed. From here, how data was collected through three stages is outlined for transparency and credibility purposes. For similar reasons, a reflexive account of the researcher's background, positioning/role and appraisal of the data collection process is provided. Finally, how thematic analysis was used to analyse data collected is presented.

### **3.1. Research Design**

To meet the aim of exploring the impact that Forest School has on Key Stage Three pupils an interpretivist paradigm was adopted. The interpretivist paradigm is centred on understanding social phenomena that form the subjective opinion of each participant involved (Thanh & Thanh, 2015). Researchers adopting this paradigm subscribe to the viewpoint that the social world and people are complex and fluid, therefore are difficult to categorize, predict or deduct down to few variables (Dean, 2018). To adopt this paradigm, researchers often take a qualitative approach. Qualitative is "an umbrella term for an array of attitudes towards and strategies for conducting inquiry that are aimed at discovering how human beings understand, experience, interpret, and produce the social world" (Sandelowski 2004, 893). Therefore, the focus when utilizing this approach is to produce rich data concerning the lived experiences of those involved in the study (Hennink et al. 2011). Adopting this approach, this study explores the attitudes, experiences, evaluations and reflections of twelve Key Stage Three who elected a nine-week Forest School programme. From this idiographic approach, collectively, these individualistic accounts help better ascertain the impact of Forest School.

Qualitative researchers have various design options. This study adopted a case study design which involved completing an in-depth study focusing on one group within one school (Creswell & Poth, 2016). This design enables researchers to capture different perspectives from different people over time (Yin 2009). In this study, the case study included interviews and individual weekly journals taken from a Forest School enrichment activity group at one school. The case was an independent school in the North-East of England, referred to here as Clockwood High School (pseudonym). Clockwood High School had approx. 350 pupils aging from three to 18. Within the Year Seven cohort there were 34 pupils, with 27 pupils in Year Eight. In its most recent inspection

report the school was judged as 'Excellent' in all areas. The school ethos strives for a community feel with traditional values and aims to nurture a sense of curiosity, creativity, morality and sense of justice, aiming to nurture well-rounded students to become well-balanced adults. The school is fortunate to be in 20 acres of land, which includes riverbanks and woodlands, enabling Forest School to take place on-site and within proximity of classroom and other learning locations. These facilities enabled the school to offer on-site Forest School as one of 40 weekly curriculum enrichment activities from Key Stage Three pupils choose three. Forest School had a capacity of 12 pupils in each group due to qualified staff, support staff availability and resources.

### **3.2. Research methods and participants**

This study involved two research methods, interviews and reflective journal dairies. The Headteacher took part in a structured online interview to ascertain her motivations, knowledge, and aspirations of implementing and investing in Forest School in the secondary school. This information provides necessary foundation for the case in terms of what the aim and role of Forest School was. Pupils took part in a nine-week programme (Figure 1.2) where each week they and completed a weekly reflective journal which asked them how they felt, what skills they developed, how much they enjoyed the session, what their favourite part of the session was and if they had any comments to add. The after this programme had finished each participant took part in a brief semi-structured interview to evaluate their personalised learning journals journey and reflect on the nine-week programme more broadly.

Qualitative researchers often use interviews because they are a way of gaining in-depth knowledge on a participant's viewpoint (Flick, 2018). Structured interviews are when the researcher has already selected the questions to be asked, whilst in semi-structured interviews an interviewer prepares key questions but offers follow up questions based upon the participants' answers (Kvale & Brinkman, 2018). Due to the opportunity to probe, elaborate and clarify, semi-structured interviews arguably lead to even more in-depth answers (Kvale & Brinkman, 2018). To facilitate this approach, the researcher must listen carefully to the participants response to be able to offer appropriate follow-up questions (Steinar, 2009).

Contrasting to interviews, learning journals are less transactional and can be useful for allowing participants to record their attitudes, experiences and reflections through a more informal, less intrusive means (Webster & Mertova, 2007). Participants can gain more ownership and autonomy over their responses, enabling them to feel more at ease within the research process. Reflective learning journals enable participants to express their learning experiences through their own words or self-evaluated scores (Webster & Mertova, 2007). As such, learning journals

can come in different forms, participants can be given a template to fill in or be given a notebook to detail their lived experiences. Younger participants often find reflection easier when they have a starting point or guide, such as a template, as these provide prompts for the participants to reflect upon (Thorpe, 2010).

The participants actively engaging in these research methods were the Headteacher and 12 Key Stage Three pupils. The Headteacher had been at Clockwood High School since 2005, becoming Deputy Head in 2011 and Head in 2018. From the 12 participants who had opted for Forest School, nine were in Year Seven (aged 11-12 years), making up 26% of the year cohort, whilst three were in Year Eight (aged 12-13 years), who were 11% of the year cohort. Ten pupils identified as boys and two as girls, and came from different ethnic backgrounds including White, Asian and Black African British, and all within a 25-mile radius of the school. Their MidYIS grades, a test designed to measure ability and aptitude for learning rather than achievement, revealed four in Band A, five in Band B, three in Band C and zero in Band D. Within the year group, there were only two equally split ability sets in Year 7 and Year 8. Below is a table outlining the participants. Some participants had experienced Forest School before, whilst some had had very little experience of it. Some participants had parents who were interested in nature and the outdoor environment so in turn were familiar with being in nature and others whose main experience of the outdoor world was going to the park.

*Figure 1.1 – Overview of Participants*

Participant	Pseudonym	Gender	Midyis (Band A-C)	Ability Set (First, second)	Year
1	Alice	Female	B	First	7
2	Henry	Male	B	First	7
3	Jack	Male	B	Second	7
4	Richard	Male	A	Second	7
5	Amber	Female	C	Second	7
6	Arthur	Male	A	First	8
7	Darwin	Male	A	First	7
8	Harry	Male	B	First	8
9	Ollie	Male	A	Second	8
10	Freddie	Male	B	First	7
11	Charlie	Male	C	Second	7
12	Nick	Male	C	Second	7

*Figure 1.2 – Forest School Programme*

<i>Week</i>	<i>Session that took place</i>
1	Maintaining our woodland - Using Secateurs and Loppers
2	Use of tools - Whittling using peelers and knives
3	Use of tools - Use of Hammer
4	Introduction to Navigation
5	Choice Week – Students could pick what they wanted to do
6	Use of Tools – Hand Drill
7	Introduction to knots
8	Introduction to Den building
9	Continuation of den building Note: This session was due to be using a campfire, however the students wanted to continue building their dens.

### **3.3. Ethical Considerations**

Gaining ethical approval for a research study is essential to ensure there are minimal risks for the participants within the study (BERA, 2018). Gaining ethical approval also gives participants, parents and school confidence in the rigour of the proposed study and that any unintended circumstances or conflicts of interests will be handled in a measured, professional and effective way (BERA, 2018). It is especially important when you are working with children to not only gain assent from them but to also gain consent from their parents to meet necessary right to participate measures (BERA, 2018). Before this study could be enacted it was necessary to complete a full ethical review of the intended study, submit this to York St John University's Ethical Committee, and gain approval (Appendix A). The proposed study was granted ethical approval on 22<sup>nd</sup> December 2021. Ethics was gained under the proviso that gatekeeper consent (Appendix B), adult consent (Appendix C), child assent (Appendix D) and parent consent (Appendix E) was obtained and the planned interview schedule (presented in Chapter Four) and journal template (presented in Figure 2.1 & 2.2 below) were used.

It was important that participants knew the study's focus, aims and objectives, and why they had been asked to take part (BERA, 2018). Therefore, accompanying assent/consent forms, each pupil and adult received a participant information sheet prior to starting the project (Appendix F & G). This sheet outlined how participation was voluntary and as participants they had a right to withdraw from the study at any time up until 30 days without giving a reason from the last point of data collection. One commitment made to participants was that their responses would be kept confidential and anonymised in line with YSJ and BERA (2018) suggestions. To ensure confidentiality, all data was stored on a university OneDrive account that was only accessible to researchers and supervisors. To ensure anonymity, participants were named using pseudonyms before the analysis, meaning their identity could only be traceable via the researcher. Likewise, all named places and people within interview responses were changed with pseudonym. The

only exception to confidentiality and anonymity was if the school's safeguarding policies and procedures had been breached. Due to the nature of the case study, this research project had minimal risk and did not induce harm on the participants as the study did not encourage conversations of a personal nature. However, should any safeguarding protocol be breached, they would be disclosed to the Gatekeeper (Creswell & Poth, 2017). As a full-time member of staff, the researcher was fully aware of the policies and procedures in place at the school.

### **3.4. Data Collection**

Convenience sampling involves gaining participants due to a prior connection with the researcher (Guest et al. 2013). The Headteacher and pupils were recruited via convenience sampling as the researcher had a direct link to the Headteacher due to being employed at the school, whilst participants were recruited after they had chosen Forest School at their enrichment fayre. The Headteacher signed a participant consent form after reading the participant information sheet and consented to act as Gatekeeper for the project. Once participants had verbally agreed to be part of the study, active parental consent forms were sent to each parent via email, meaning that participants could only take part once parents had given their approval. At the start of the first Forest School session, pupils read the participant information sheet, and had it read to them, and signed the participant assent form. This part of the research process was designed in collaboration with the Headteacher to ensure the most efficient and transparent approach was adopted to meet the school's approach to communication.

From here, the actual data collection was separated into three chronological stages. The first stage was the Headteacher interview, which was completed via email due to its structured nature and upon the Headteacher's wishes. The second stage involved 12 participants completing individual reflective journals every Friday afternoon at the beginning and end of their Forest School sessions. Reflective journals were kept over a nine-week period which started in January and ended in March – see Figure 2.1 and 2.2 below. Categories within the journal were based upon the themes found in chapter two and emojis were used to create a sense of familiarity for the participants. Participants rated their skills each time without seeing what they put the first time to ensure impartial scoring devoid of seeking improvements based on prior ratings. Furthermore, in week one, five and nine, participants were asked how confident they were in performing specific skills and presented with extended questions regarding the impact that Forest School had had on them. This part of the process was designed to allow each pupil a monthly take stock, moment of reflection and feedback opportunity.

Figure 2.1 – Example Reflective Journal

## Week 1

**Start**

- 😊 Happy
- 😞 Confused
- 😰 Anxious
- 😡 Angry
- 😡 Frustrated
- 😡 Annoyed
- 😄 Excited
- 😞 Sad
- 🤒 Sick
- 😜 Silly
- 😎 Confident
- 😡 Stressed
- 😞 Tired
- 😟 Worried
- 😄 Funny
- Other \_\_\_\_\_

Circle how you are feeling at the start and end:

→

**End**

- 😊 Happy
- 😞 Confused
- 😰 Anxious
- 😡 Angry
- 😡 Frustrated
- 😡 Annoyed
- 😄 Excited
- 😞 Sad
- 🤒 Sick
- 😜 Silly
- 😎 Confident
- 😡 Stressed
- 😞 Tired
- 😟 Worried
- 😄 Funny
- Other \_\_\_\_\_

**Any comments to add...**

Describe what was your favourite part of today's session was?

Circle how much you enjoyed the session....

1 2 3 4 5

1 = Did not enjoy  
5 = Loved It

**What Skills / Qualities did you learn or develop today?**

*Tick and explain how...*

- Communication \_\_\_\_\_
- Confidence \_\_\_\_\_
- Problem Solving \_\_\_\_\_
- Resilience \_\_\_\_\_
- Perseverance \_\_\_\_\_
- Team Work \_\_\_\_\_
- Coordination \_\_\_\_\_
- Independence \_\_\_\_\_
- Nature Awareness \_\_\_\_\_
- Social Skills \_\_\_\_\_
- Motivation \_\_\_\_\_
- Concentration \_\_\_\_\_
- Physical \_\_\_\_\_

Figure 2.2 Example of skills rating -

	1	2	3	4	5
I am confident with the rules and boundaries of THS Forest School					
I understand how to maintain our woodland environment.					
I know how to use loppers, secateurs, hammers and hand drills safely,					
I can demonstrate how to do a clove hitch, half hitch and timber hitch knot.					
I can build a taupaulin den					
I can safely use a flint and steel					
I can recall the points on a compass and have basic knowledge of map reading.					
I am confident in exploring the woods					
I can identify what lives in our woods					
I am good at working in a team					
I can communicate with peers successfully to solve problem					
I enjoy imaginative play whilst I am in the woods					

The third and final stage involved interviewing each participant after the nine-week programme had been completed. Some interviews were conducted in the Forest School, whilst some were completed in classrooms depending on convenience and participant preference. These semi-structured interviews offered pupils the chance to evaluate their personalised journal responses and reflect on their overall Forest School experience. Interviews lasted between three minutes and six minutes, were recorded using a school device, were uploaded to OneDrive and then transcribed verbatim.

### **3.5. Research Reflexivity and Credibility**

In qualitative research, the researcher is central to the process in terms of design, data collection, data analysis and write-up. Therefore, it is important that qualitative researchers engage in reflexivity. Research reflexivity is the researcher's awareness of themselves and their relationship with the research process (Gordon & Patterson, 2013). It is important that a researcher is reflective as it allows them to determine potential bias which could affect the data collection and analysis of data (Cairns-Lee et al. 2022). To start this process, it is necessary to detail my background, qualifications and role both in Forest School and at Clockwood High School. Since 2014, I have been heavily involved in Outdoor Education by assisting the running of the Duke of Edinburgh Award. This role continued whilst I completed my degree in Physical Education and Youth Sport in 2019. After my degree I took on a role within Clockwood High School's Physical Education department as a technician, as well as continuing to help with the Duke of Edinburgh Award.

My involvement in Outdoor Education progressed in 2020 when the Headteacher asked me to take over the Forest School programme and complete a Level Three Forest School Leader Training Course. In 2021, I progressed to being the Duke of Edinburgh Coordinator for the school. Since undertaking the role as Forest School Leader, I have expanded the provision to all pupils across the school and have helped to develop the Forest School area. Therefore, given its infancy, my main motivations for undertaking this study were to evaluate Forest School's impact on Key Stage Three pupils. This evaluation offers valuable insights into Forest School as a pedagogical tool and the outdoors as an effective learning space. As a reflective practitioner, studies of this nature are necessary to assess the impact of, and contribute to broader discussions concerning, alternative pedagogies, teaching styles and learning environments. However, I recognise that it is necessary to place my motivation alongside concerns regarding objectivity. Upon reflection, my current role within the school has both strengthened and potentially hindered aspects of the study. Strengths include my knowledge and direct involvement in Forest School practice, which allows me to use and understand the pertinent language and be central

within the learning environment. This knowledge and position as Forest School leader allowed me to provide the necessary level of trust to all involved such as the Headteacher, participants and parents. Possible hindrances include pupils being aware of my dual role as Forest School leader and researcher and trying to accommodate their ratings or responses accordingly, however it is important to note that within my role I never assess or grade the pupils. Therefore, a central part of meeting this evaluation was to ensure the study was completed in an organised, systematic and rigorous manner. This can be easy in theory but sometimes difficult in practice because, as Bloyce (2004) identifies, qualitative research is often a messy process. Below is an overview of my reflections from leading this research project.

The study started smoothly with allocated time alongside keen participants making planning and preparation for the sessions relatively easy. The research process became harder when the woodland area where Forest School sessions took place were vandalised repeatedly half-way through the programme, during February half-term. Resultantly, sessions had to be slightly adapted to ensure areas were accessible, but the adaptations were minor within the sessions themselves as it simply involved restricting small areas for a couple of weeks. Interviewing the Headteacher and participants towards the end of the term proved challenging at times due to time constraints within the timetable and with the Clockwood High School undergoing external inspection. The end of term is often busy, so organising pupil interviews proved challenging but achievable. Aside from common time-based constraints, balancing being dual researcher and Forest School leader proved more straightforward than expected. Pupils were comfortable completing reflective journals having done so before. This task logically fitted into the lesson plan nicely at the start and the end of the session. During interviews it became more apparent that pupils were more nervous about saying the wrong thing. In turn, I made it clear at the start of each interview and during any awkward moments during that there was no wrong answer, just an honest opinion and perceptions was what was desired. This simple reminder visually relaxed participants.

### **3.6. Data Analysis**

Given its structured nature, the Headteacher interview was analysed with the sole purpose of gaining knowledge of why Forest School was implemented at the school, what knowledge she had of Forest School, what her aims/hopes were for Forest School as an enrichment activity and what her future aspirations were. Therefore, responses to these key fundamental questions are paraphrased and presented in the following chapter. These responses provide necessary background context to the case, as well as demonstrating the aims, perceptions and expectations of the Headteacher, which can be evaluated against what pupils' self-reported. The Head Teachers

interview can be seen in full in Chapter 4. Reflective journals were analysed in two-ways. Firstly, the self-reported ranking measures were collated, typed up week-by-week and analysed accordingly. This analysis involved putting individual's data together on a double side of A3 paper, which allowed the researcher to easily read all individual responses, as well as ascertaining collective themes emerging. From here, a more cohort analysis of ranking scores, changes and developments in this respect, which are reported in Chapter Five.

Each pupils rating scores and reflections within their journals were then used to generate more bespoke questions for the end of programme interviews. Interview data was analysed collectively into patterns and themes using thematic analysis. Thematic analysis is a process that organises and describes the data by identifying, interpreting and finalising themes (Braun and Clark 2006). The researcher used Braun and Clark (2006) and Spark and Smith (2014) six stages to analyse the data by immersing themselves in the data, generating initial codes, searching for and identifying key themes, reviewing themes, then defining and naming themes within the results and discussion chapter.

### **3.7. Conclusion**

This chapter outlined how and why an interpretivist paradigm and qualitative methodology was used in this study, namely through interviews and journaling. The case study in question and central people involved were profiled and the process in which they were asked to take part in the research project was detailed. How data was collected and analysed, alongside researcher reflexivity, was explained. Data collected from this study is now presented in three results and discussion chapters. These chapters represent a chronology order to the data collection process and offers pre-during-post aims, ratings, reflections and evaluations.

## **Chapter 4 – Headteacher and pupils’ motivations, expectations and aspirations**

This chapter presents why Clockwood High School introduced Forest School given so few secondary schools facilitate it. The chapter also details why twelve Key Stage Three pupils elected Forest School as a curriculum enrichment activity. Therefore, data analysis from the Headteacher’s structured interview and pupils’ start of programme reflections focuses on motivations, perceptions and expectations. The extent this focus aligns with literature reviewed in Chapter Two is discussed, but it is necessary to note from the outset that little research directly explores pupils’ motivations for selecting Forest School. This is mainly because Forest School is a mandatory activity in primary schools.

### **4.1. Headteacher’s views and perceptions**

For transparency purposes and given its structured nature, the Headteacher’s full interview transcript is presented below.

*Q. When did Forest School officially start at your school?*

A. I can’t remember... Lorraine [pseudonym] was the staff member [the senior school Food and Nutrition teacher who had an interest in Forest School], but it was before our SIMS [online school database of staff and students] records started.

*Q. When did you first come across Forest School and what would you say your level of knowledge of Forest School is?*

A. We had dabbled in it in the prep school for some years with Forest School leaders coming and going. It was seen as an extracurricular activity rather than a commitment on the main timetable. It was also seen as an activity for our very youngest pupils in the nursery and pre-prep areas of the school. I had very little knowledge of curriculum development and support that Forest School could offer. I know we had responsibilities from a health and safety perspective and that the development and maintenance of the first was needed. I was also concerned about the amount of investment that would be needed to develop our Forest School provision.

*Q. What were your motives behind introducing Forest School to the senior school?*

A. Over recent years, even before Covid the mental health and wellbeing of our pupils was always a priority. Our pupils do not have the resilience and risk-taking skills we would like, and Forest School seemed like an ideal opportunity for those skills to be developed. The opportunity for students to be outside, in all weathers, working with nature and developing those teamwork, persistence and creative skills that are so desperately needed in other subjects was too good an opportunity to miss.

*Q. What was your aim when setting up Forest School?*

A. For KS3 pupils to have the opportunity to challenge themselves and take risks and ultimately be able to make decisions and become more independent and robust.

*Q. What resources were needed to set Forest School up?*

A. Manpower to clear paths, move logs, seating areas etc. Small budget for shelter, fire pit, storage of resources. Training for Forest school Leader- Forest School practitioner, First aid etc. Time within timetable and staffing costs.

*Q. What do you believe the role of Forest School to be?*

A. It is an opportunity for students to work with nature and explore and investigate. To plan and work together, to offer creative stimulus and to enable them to take risks and control risks in a safe setting.

*Q. What do you perceive the benefits of Forest School to be?*

Mental health and wellbeing. An appreciation for the environment. Improved skills in resilience, teamwork, risk assessment, self-regulation, independence. Spending time in the fresh air amongst nature.

*Q. Do you think it is important for children to be in nature?*

A. Absolutely.

*Q. Why do you think so few secondary schools offer Forest School?*

A. Resources. Curriculum constraints- time, staff, organisation. Exam performance pressures. An appetite from teaching to utilise/develop it.

*Q. What skills do you believe pupils to learn through Forest School?*

A. A love of being outside, to not fear the weather or drab days. To have the opportunity to role play, be creative and spend time in an imaginary world. To build resilience, independence and be brave- take risks, try new things. To explore-ignite that curiosity that leads to independent learning and passion.

*Q. What are your hopes and aspirations for Forest School in the future?*

I would like to see it develop as a teaching space. I would like to see it being used within our wider community. I would like to see (one day) a teaching classroom and toilet facilities to enable pupils to spend longer periods of time there.

From this transcript, it is clear that Clockwood High School had delivered Forest School in some way shape or form for several years but had experienced difficulties continuing this provision. There seemed to be a few reasons behind this, namely, staff turnover, differing opinions on what Forest School should entail, and a focus on Forest School at elementary levels. There is a broader trend of Forest School been embedded within nursery and primary schools (Davis & Waite, 2005; Kemp & Pagden, 2019; Manner et al. 2021). Furthermore, differing perceptions of the role of Forest School include, a) providing an inclusive platform for those with extra needs (Kraftl, 2018), b) to enhance the standard curriculum (Coates & Pimlott-Wilson, 2019), and c) to provide opportunities for learning which can apply to the real world (Waite, 2017). Therefore, Clockwood High School was no different in these respects. Given the possible fluidity of staff, there seems to be clear value of having at least one qualified Forest School leader within a school who is aware of and able to deliver a Forest School curriculum. This curriculum can then provide sustainable recorded content should staff leave.

Despite the training of a specialist staff undertaken at the school, the Headteacher also identified space, resources, finances, and health and safety measures as potential barriers for facilitating Forest School at Key Stage Three. The Forest School Association (2018) reiterate that a Level Three Forest School leader is required to set up a Forest school as well as insurance, site maintenance, continuous professional development and resources. This partly explains why Clockwood High School were unique in embedding Forest School at Key Stage Three. Here, such barriers were overcome partly through the vast on-site woodland area, the financing of staple Forest School resources, and the Headteacher's strong perception that pupils' mental health and wellbeing had declined over the Covid pandemic. The latter perception is shared by Roome and Soan (2019), and has been regularly broadcasted across media channels, adding to a prevailing narrative. The Headteacher's suggestion that Forest School can provide young people with much needed physical, mental and emotional well-being benefits concurs with Blackwell (2015) and O'Brien and Murray (2007).

More specifically, the Headteacher believed that Forest School offered young people opportunities to develop resilience, confidence and informed risk-taking, alongside fostering persistence, teamwork and creativity, which could be transferred to other curriculum subjects. Whilst not informed by lived experience per se, her views in this respect concur with the more

informed findings of Coates and Pimlott-Wilson (2019), Dillon et al. (2005), Harris (2021), Maynard (2007), O'Brian and Murray (2007) and Turtle et al. (2015). The Headteacher's references to risk-taking and resilience are perhaps less mentioned in literature concerning Forest School. Given the risk averse society with live in, Malone (2007) suggested that the school system overprotects young people to the extent they do not need to take any risks or risk assess. Only Gill (2010) and McCree et al. (2018) acknowledge Forest School's ability to help instil resilience, perhaps representing an area worthy of further investigation. Given the Headteacher's lack of knowledge concerning specific Forest School curricula activities, this perception was largely based on her intuitive stance that spending times outdoors in nature is something all young people can benefit from, and therefore need factoring into their curricula choice. This stance reflects wider concerns that Louv (2005) cites as a growing nature deficit that young people are experiencing.

Despite these strong beliefs, which are commonly shared, the lack of Forest School provision in secondary schools was partly explained through constraints within academic performance demands and staffs' ability and willingness to break teaching conventions. Whilst somewhat counter-intuitive given the recognised benefits and transferability of Forest School outlined in Chapter Two, this explanation represents broader challenges many secondary school leaders face in the UK's neo-liberal competitive schooling process (Ball, 2016). However, despite creating time to include Forest School as an enrichment activity, the Headteacher's aspirations illustrate both tendencies to align Forest School with traditional school learning environments and the pragmatics of outdoor learning. The hope for children, within and outside of Clockwood High School, to spend more time in a Forest School environment demonstrates a sustainable commitment and belief in its worth.

#### **4.2. Pupils' motivations, previous knowledge and expectations of Forest School**

To ascertain why 12 Key Stage Three pupils chose Forest School as an enrichment activity and what preconceived ideas and expectations of sessions they had, in week one participants were asked to record why they choose Forest School over 40 other enrichment activities and how much Forest School they had previously undertaken. Within the responses there were many different reasons for taking part. 10 out of the 12 participants recalled engaging in some sort of Forest School before, either at Clockwood High School (primary level n=7) or at another school or during holiday/summer camps (n=3). Previous exposure had provided positive experiences, which informed their decision making. Amber noted how, "*because I did it last term and I enjoyed it, so I did it again*", whilst for Freddie, "*it is fun*", and Alice claimed, "*because it's fun and exciting, because you get to explore the forest, play and build dens*". Five participants mentioned fun, enjoyment or

excitement when recording their motivations. Similarly, Tiplady and Menter (2021) found how pupils found Forest School enjoyable and exciting, which in turn is good for children's emotional wellbeing.

Clearly, nearly half the pupils entered the Forest School programme expecting to have fun. One particularly enjoyable experience cited was the opportunity to play, explore and interact with nature-based materials. These characteristics are arguably things that are less readily available to pupils in classroom-based lessons. For example, Henry cited, *"because I like climbing trees"* and Ollie indicated, *"I picked Forest School because I like going outside and in muddy parts of land"*. Despite having a high MidYIS academic profile, for Ollie, Forest School was a home from home as he confessed to spending lots of time outdoors. Charlie's preference towards Forest School was premised on the fact that, *"there were no sports activities"*. This response serves a reminder that just being outdoors does not automatically equate to enjoyment, but the learning environment and activities are significant influencers as well. Alternatively, for sporty children and lovers of the outdoors, Forest School provides a supplementary opportunity to break away from indoor classroom conventions. In this sense, Forest School can be viewed as an extension to playtime or physical activity. However, importantly for Charlie, Forest School is not a sport as it is designed to be individual with little competition, but it can still develop physical literacy and endurance (Coates & Pimlott-Wilson, 2019; Williams-Siegfried, 2012). Implicit with tree climbing is independence, freedom of expression, and risk assessing/taking (Maynard, 2007; Murray & O'Brien, 2005; McCree et al. 2018). Barring Forest School, such opportunities at school are only occasionally available to pupils during break and lunch times, if the school grounds contain climbable trees and pupils are allowed to climb them.

Another key motivator for opting for Forest School was to be out in and learn more about nature. For example, Harry identified, *"I want to learn what we do in the woods and how we can use basic tools and most importantly to explore and discover the wildlife and nature"*. Linked, Darwin reasoned, *"because I don't connect with nature enough"*, whilst Nick reflected, *"I decided to join this enrichment because I have a phobia of bugs and spiders and want to overcome that"*. When recording why they opted for Forest School, here, Darwin and Nick drew on perceived deficits, illustrating degrees of introspection young people engage in when determining their learning gains. This self-analysis also demonstrates the validity of centring young people's views, perceptions and experiences at the heart of the research process. Whilst only drawing on a small collective, these reflections somewhat imply that despite being part of a generation many believe to be disconnected from nature (for example, Louv, 2005), some young people like Darwin realise this and when given the opportunity may seek to address it. The final reason cited by pupils (n=4)

was the social opportunities Forest School offered. The more open, spacious and transitional nature of Forest School allows young people chance to frequently engage in task-oriented or informal dialogue. For example, Nick noted, *“also because my friends are doing it”*. The notion that Forest School being a social place was also recognised by Borradaile (2006).

These prior experiences meant that pupils entered Forest School sessions having been exposed to a range of activities and informed expectations for future sessions. *“We learnt how to use knives to sharpen sticks, how to build dens and we got to play hide and seek “* (Alice), *“Den building, arts and crafts (not a lot) treasure hunts, tree climbing”* (Nick). Despite the different learning opportunities, this data demonstrates that through varied tasks, children entered Key Stage Three with an understanding in what Forest School involves and skills that can be gained through it. The continuation of these children when Forest School became an elected activity suggests that they see value in it, they do not see it as being repetitive, and they enjoy it to opt in. These key motivation and influences of electing Forest School strongly informed participants expectations of the programme, which they were asked to record in week one. Understandably, pupils predominantly expected to be taught skills such as how to use tools, create fires and build shelters. *“How to make fire and put it out, how to use tools and make things”* (Harry) , *“I learn how to put out fire in the wild without a fire extinguisher* (Alice) and *“I expect to learn how to build dens, exploring hunts and more”* (Nick) As well as skill acquisition, some individuals (n=4) expected to learn more about the environment and how to survive in the great outdoors. *“The impact of human life on forests worldwide”* (Darwin), *“How to build dens and fires properly and take care of our forests + to clean up after us”* (Arthur) and *“If you were alone in the woods, you can survive outside* (Charlie) “. These responses show that the participants had a relatively accurate knowledge of what Forest School entailed (Knight, 2009; O’Brien, 2009). Therefore, in this sense, they were informed consumers.

### **4.3 Conclusion**

This chapter provided necessary context to why Clockwood High School is unique for offering Forest School as Key Stage Three enrichment activity, and why 12 pupils elected it. The Headteacher perceived Forest School as plugging a developmental gap and/or addressing a need in aiding greater resilience, confidence and informed risk-taking, alongside fostering persistence, teamwork and creativity. Participants’ decisions to elect Forest School were mainly motivated by their previous fun –based experiences and having the opportunity to play, explore and be social, and learning more about nature and necessary outdoor living skills. Previous experiences also influenced and enabled participants to have informed expectations of the programme.

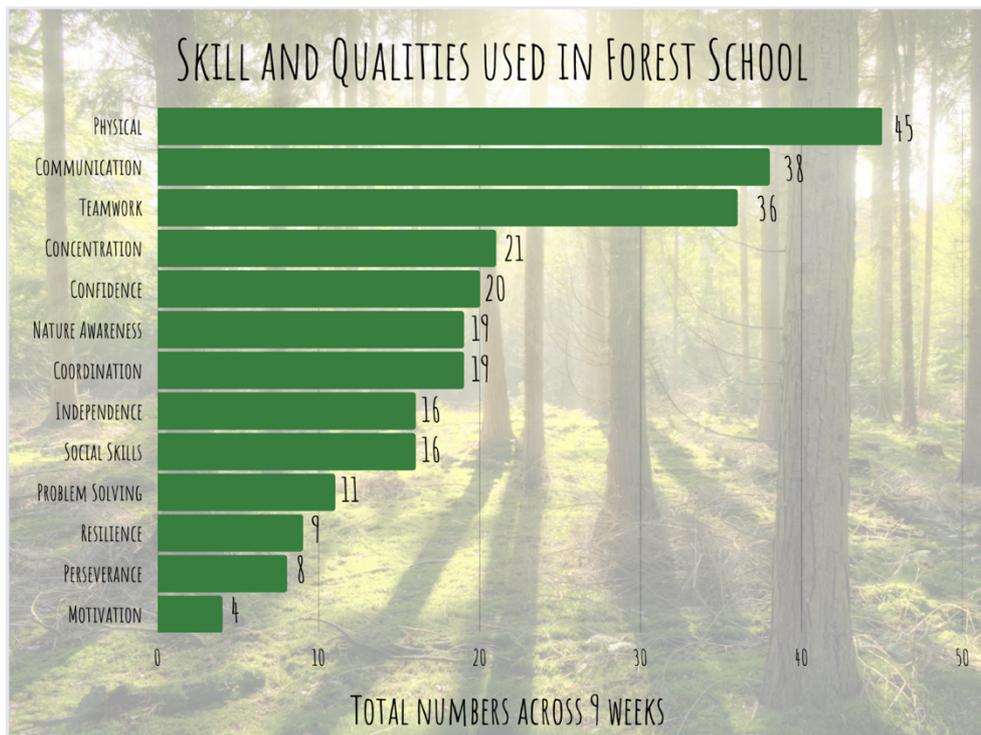
## **Chapter 5 – Skills and Qualities developed: self-evaluations and reflections**

This chapter builds upon the Headteacher and pupils' knowledge and expectations of Forest School by presenting data taken from pupils' journaling, self-report evaluations and narrative recordings completed during the programme. For structural purposes, discussions are separated into; a) the skills developed through Forest School, b) the values and qualities developed through Forest School, and c) the benefits and role of Forest School. Given the type of data retrieved, results are presented in a visual manner for presentation purposes and to better aid supporting discussions.

### **5.1. Skills and Qualities used over Forest School programme**

Within the weekly reflective journals, participants were also asked to self-evaluate their level of various skills and qualities before the session started. At the end of each session, participants would tick the skill or quality they felt they used and then be asked to explain why they thought they had used that skill or quality in an open space provided. Whilst completed individually, the figure below presents participants cumulative rating scores of 13 skills and qualities covered across the nine-week programme. Each week participants had the opportunity to tick each of the 13 qualities, but the session's focus influenced which skill was ticked. If all pupils ticked the same quality each week, the total aggregate score would be 108. The below figure represents the aggregate score for each skill and quality.

*Figure 3 – Skills and Qualities used in Forest School*



The most identified skill to be used was physical with co-ordination also featuring mid-range. Ollie attributed these to, *“hanging on a tree”*, Amber, *“running around and playing hide and seek”*, and Alice, *“throwing sticks for George [dog]”*, to name a few examples. This finding is significant when one considers how Borradaile (2006) explained that having a positive relationship with nature has a short-term positive effect on health. Identifying more long-term effects, Louv (2005) recognises the importance of providing children with opportunities to be outside and develop physical skills, which provides the foundations for prosperous health in later life by limiting possibilities of physical illness. Underneath physical, were the related skills of communication and teamwork, with examples including Harry’s recognition, *“by speaking with my partner”*, Freddie, *“I talked to George (dog)”*, and Charlie, *“creating our tribe call”*. Here, communication was presented in a collegiate way, although Manner et al. (2021) suggested that communication can also be developed due to resolving conflict during Forest School activities, the notion of a tribe also shows that the group developed their own identity. O’Brien & Murray (2007) found that parents also thought communication was one of the key impacts of taking part in Forest School. Collegiality and conflict resolution closely align to teamwork, which Harry identified with, *“bringing the tarpaulins to base camp”* and *“helping each other climbing”*. The notion that Forest School fostered teamwork was found by Dillon et al. (2005), who saw significant improvements in both teamwork via descriptive communication. This is arguably because they need to describe to each other what they need to do in order to maintain safety, as well as be effective in an ascribed task.

Being physical, communicative and working as a team could build confidence, along with skill acquisition. Arthur gained confidence from learning how, “to use a whittle a knife”, whilst Ollie found it in being, “up a tree”. Arthur’s point here is akin to Tiplady and Menter (2021) discovery that confidence was facilitated in Forest School through practitioners ensuring some success within planned activities. A key transferable learning skill identified by pupils was concentration, which they recognised but struggled to articulate. It seemed that through being out in the open doing task-orientated and explorative tasks they felt more engaged, and therefore more concentrated in the sessions. This approach can lead to more independent participants and more confident learners feel more able to approach problem solving activities, something identified by pupils here, but only recognised elsewhere by Swarbrick et al. (2004). Skills and qualities identified, but to a lesser extent, were resilience, perseverance and motivation. This exercise, from which the results are presented above, illustrates that participants identified Forest School as developing their softer skills more frequently than nature awareness, a central principle of Forest School (FSA, 2020).

As well being able to assess the cumulative frequency of skills and qualities covered across the nine weeks, the extent that these were developed throughout the programme could be monitored. At the end of the first, fifth and final Forest School session participants were asked to self-evaluate how confident they were at the following 12 skills, with 1 being least confident and 5 being most confident. Therefore, each participant entered 36 self-assessments ratings, making a total of 432 data points. The collective results for each skill and when they were ranked can be seen in the figure below.

Figure 4 – Pupils ratings of skills developed throughout the programme.

Skills	1 (Least confident)			2			3			4			5 (Most Confident)		
	Wk 1	Wk 5	Wk 10	Wk 1	Wk 5	Wk 10	Wk 1	Wk 5	Wk 10	Wk 1	Wk 5	Wk 10	Wk 1	Wk 5	Wk 10
I am confident with the rules and boundaries of THS Forest School	0	0	0	0	0	0	0	0	0	5	2	1	7	10	11
I understand how to maintain our woodland environment.	0	0	0	0	0	0	2	0	0	0	5	4	10	7	7
I know how to use loppers, secateurs, hammers and hand drills safely,	3	0	0	1	0	1	2	3	2	1	3	4	4	6	4
I can demonstrate how to do a clove	6	3	0	2	3	0	2	3	6	0	0	2	1	2	3

hitch, half hitch and timber hitch knot.																
I can build a tarpaulin den	3	2	0	0	0	0	2	1	1	4	4	6	3	3	4	
I can safely use flint and steel	1	0	0	1	0	0	1	2	1	2	1	4	8	9	6	
I can recall the points on a compass and have basic knowledge of map reading.	2	0	0	0	0	1	1	2	1	1	3	4	7	6	5	
I am confident in exploring the woods	0	0	0	0	0	0	0	0	0	1	0	2	11	12	9	
I can identify what lives in our woods	0	0	0	0	0	0	0	0	0	5	4	4	7	8	7	
I am good at working in a team	0	0	0	1	1	2	0	1	0	5	3	4	6	7	5	
I can communicate with peers successfully to solve problems	0	0	0	1	0	1	1	2	3	4	4	2	6	6	5	
I enjoy imaginative play whilst I am in the woods	0	0	0	0	0	0	1	3	0	2	0	1	9	9	10	

The results above are significant as they capture a before, during and after, which better allows an appraisal of the impact of these specific Forest School sessions on these specific skills. Pupils' self-evaluations over the course of the programme illustrate mixed results and outcomes. Despite all pupils being exposed to the same nine-week Forest School programme, there were few patterns or clear groups of pupils who self-reported consistent learning gains. This could be because of the time limitations each tool was only learnt once. In terms of progression, as some confidence went up, some down and some stayed the same. However, it is important to remember Coates and Pimlott-Wilson (2019) belief that pupils will gain from Forest School what they wish or need to gain, perhaps illustrating how learning may not be either tangible or linear. The pupils also noted within the interviews that they had forgotten what they had put for each week as they were not given previous journals. As noted in Chapter Three, this decision was deliberate by design to avoid pupils simply scoring up. However, it does perhaps expose the potential fragility of subjective self-report scoring mechanisms. One way this potential issue was abated was to offer more narrative recordings and reflections.

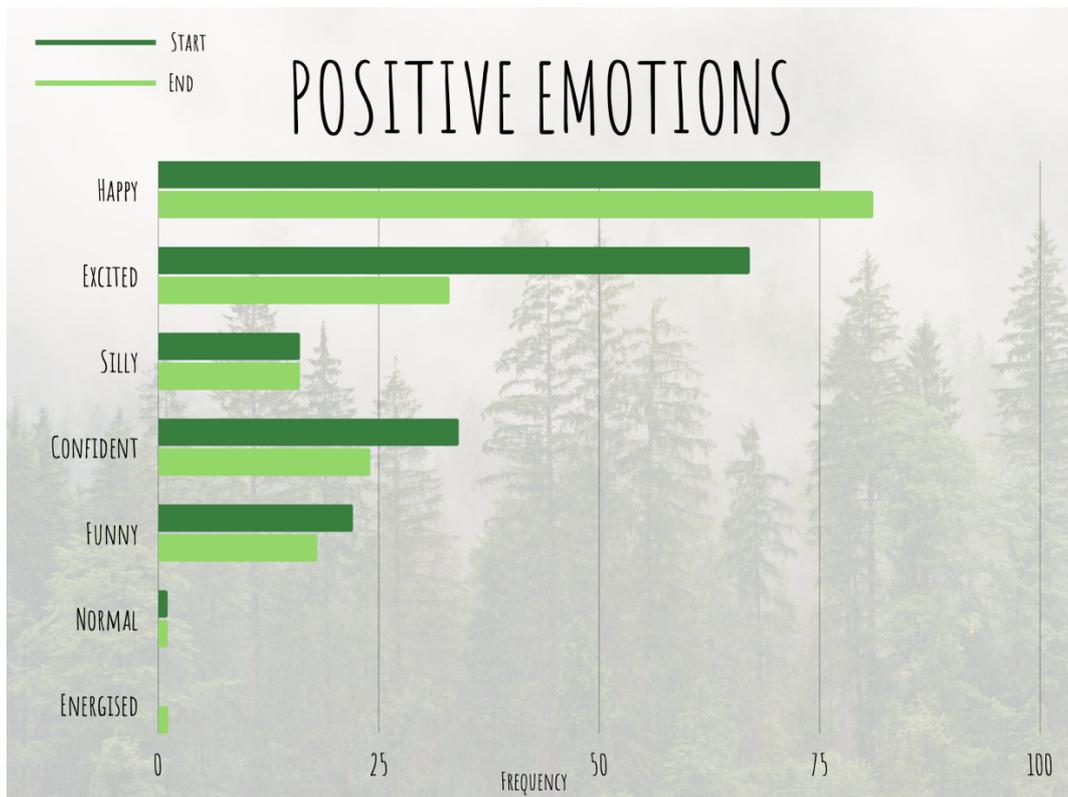
## 5.2. Emotional Well-being

Part of the recording and reflective process also included participants scoring their feelings whilst taking part in Forest School. These scores were ranked with one being the weakest feeling and five being the strongest. Emotions were presented through words and symbolised through emojis and covered a range of emotions often categorised as positive and negative. Within the reflective journal the pupils circled the emoji or emoji's they were feeling from the list of 16 emotions, they

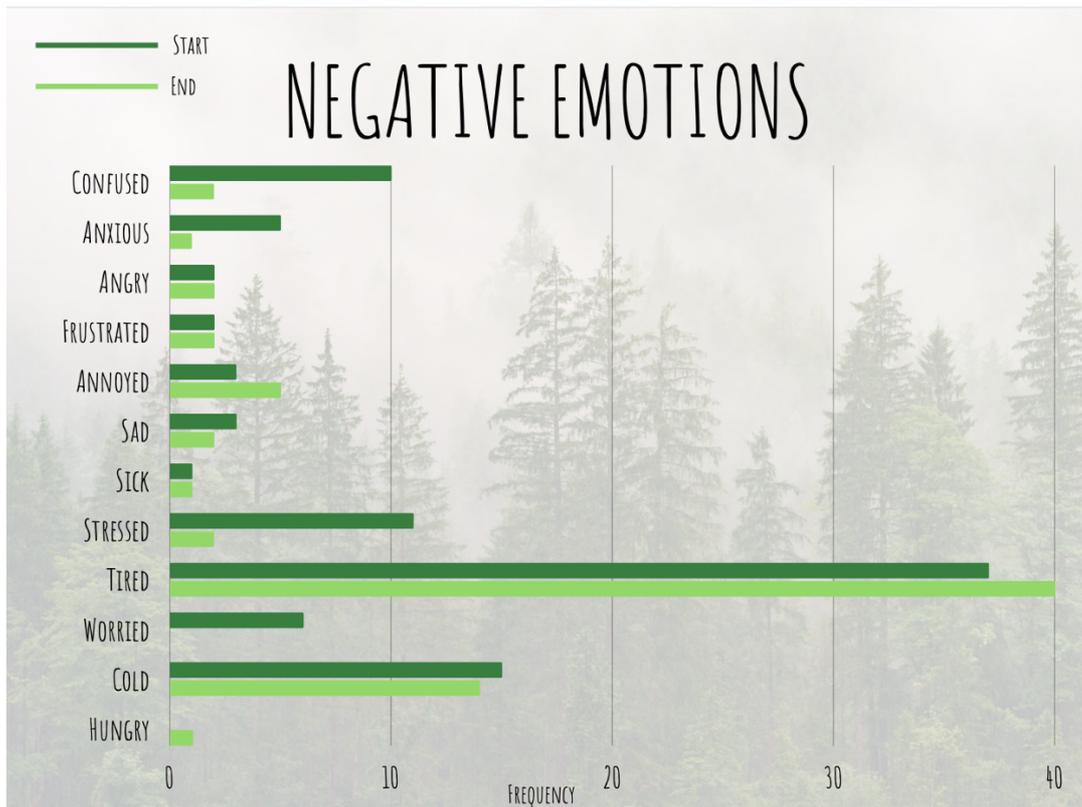
did this at the start and the end. They also had the option to add a feeling if it the option wasn't there. Such recordings help in some respects to ascertain the possible influence Forest School has on pupils' emotional wellbeing. From all sessions attended, 96% of sessions were either rated a four or five for enjoyment. This reiterates pupils' beliefs that a key part of Forest School's role and benefit is for sessions to be fun and enjoyable. As Tiplady and Menter (2021) noted, Forest School sessions are often designed to be enjoyable with a sense of challenge and adventure, making sessions different and exciting. For Manner et al. (2021), this sense of enjoyment could also be transferred into classroom lessons.

Figures 5 and 6 below demonstrate the frequency each emotion was identified by participants at the start and end of each Forest School session. There was no limit on how many emotions the participants could select.

*Figure 5 – Positive Emotions*



*Figure 6 – Negative Emotions*

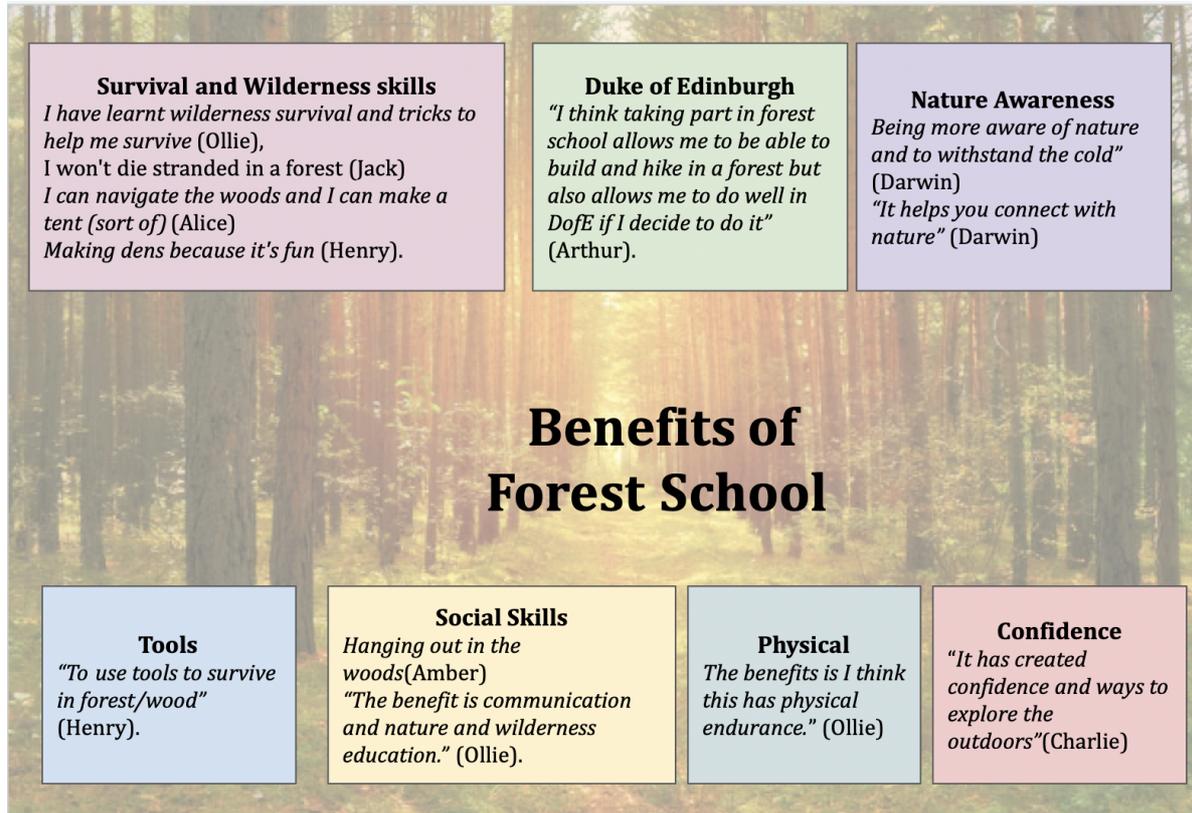


Blackwell (2015) noted that Forest School not only helps physical and mental wellbeing it also supports emotional wellbeing. Similarly, McCree, Cutting and Sherwin (2018) found that emotional wellbeing is improved through Forest School as Forest School provides the young people with an emotional space. These results above show that pupils were often happy and excited at the start of the sessions and remained happy right the way to the end of the session, but their excitement waned. Having taken part in Forest School, any participants that were worried, stressed or anxious bar one no longer felt this at the end of the session. This self-report data appears to align with that of Coates and Pimlott-Wilson (2019), who found that Forest School contributes to emotional development due to being in nature promoting anxiety and stress relief. This shows that Forest School has had a positive impact on the individual's mental health, especially as the stress and anxiety significantly declined at the end of the session. Participants' confidence was shown to go down over the session. Having investigated the context to this rating, this was recorded during the knots lesson, which pupils generally found challenging. Learning is and should be challenging, therefore feeling such emotions and overcoming them, or learning to process them is important and arguably part of resilience building. The individuals that show the negative emotions such as confused, angry and annoyed were all related to the vandalism of the woods, which will be discussed more within the next chapter. The data serves a useful reminder to the fact that ratings attributed to feelings are very much contextual.

### 5.3. The Benefits of Forest School

Having scored and explained various skills, qualities and emotions, participants were asked in weeks one, five and nine what they thought the benefit of the Forest School programme was. Pupils declared a myriad of thoughts, some themes which were closely aligned, as can be seen in the figure below.

Figure 7 – Benefits of Forest School



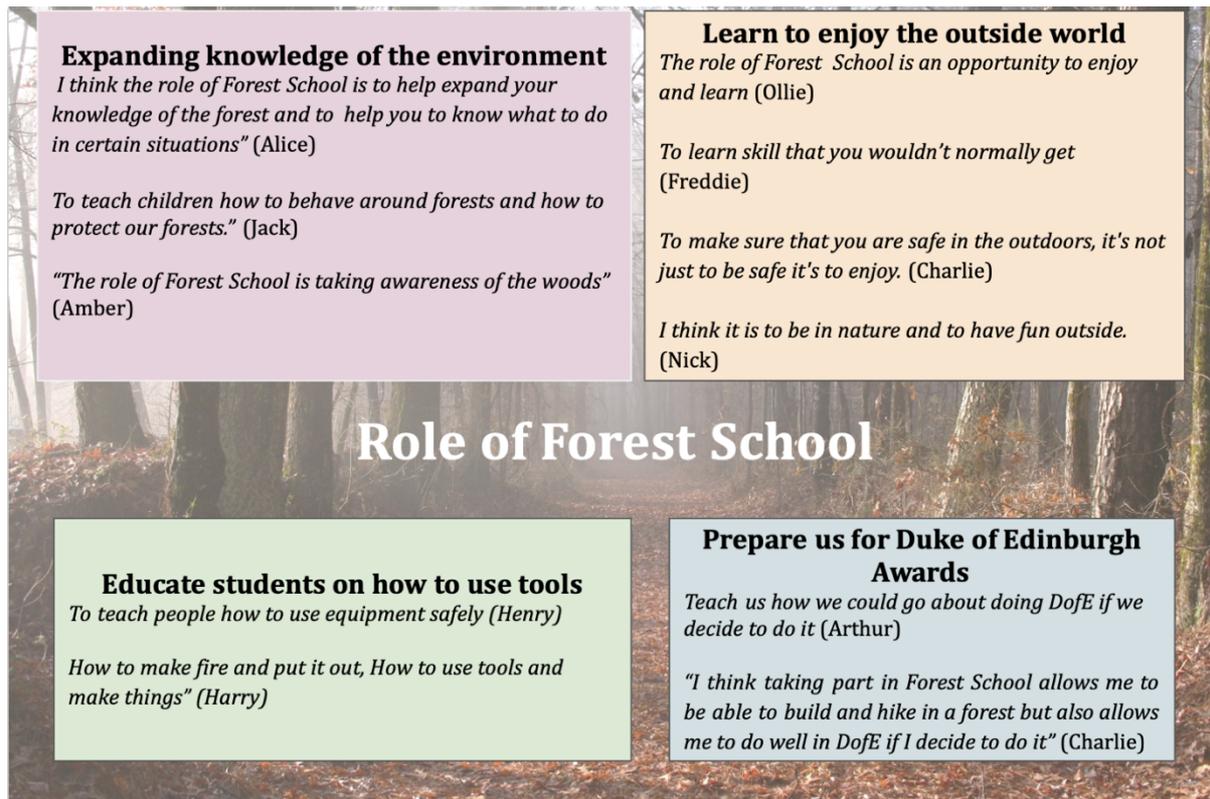
Understandably, participants identified benefits to them that closely aligned with their perceptions of the role of Forest School, namely nature awareness, survival and tool skills, and gains in preparation for Duke of Edinburgh Awards. For pupils, it seemed that nature awareness was something to be achieved through outdoor exploration, and possibly something less effectively honed when theoretically discussed in a classroom. This notion aligns to Coates and Pimlott-Wilson (2019) reference to the effectiveness of play pedagogy. Yet, the extent of this pedagogy for Key Stage Three pupils is less known. From the data above, pupils clearly understood the importance of being outdoors, something Hunt et al. (2015) suggest younger generations are losing. Pupils associated using tools with survival skills, which differs to O'Brien and Murray's (2007) study which affiliated using tools with developing fine motor skills. An expansion of these benefits was references made to the importance of navigation, something yet identified in research. Some pupils clearly saw the benefit of being able to navigate their way, find their place and be at one with the natural world, a benefit they felt Forest School aided. Of-course, with navigation as well as tree climbing and den building, pupils such as Ollie experienced the physical benefits of Forest School. Bingley and Milligan (2004) and McCree et al. (2018) also

found that Forest School provided these benefits. Personal benefits also included softer skills, such as socialising and confidence. Pupils associated Forest School with opportunities to socialise, something less readily available in classrooms settings. This socialising could be formal through task-orientated activities or informal through exploration and play opportunities. Whilst not explicitly cited, the previous literature of Kanat (2020) suggested that developing social skills and confidence were inextricably linked through empowering pupils to communicate more, something that was transferred back into their better integration and co-operation within classrooms. Here, pupils such as Charlie focused on confidence in terms of being able to be outdoors and find peace with it.

#### 5.4. The Role of Forest School

Given that periodically participants had been asked to journal their perceived benefits of Forest School, having completed a full-term programme, pupils were asked to evaluate what they thought the role of Forest School is. The below figure is a summary of the themed responses.

Figure 8 – Role of Forest School



The pupils’ perception of the Forest School’s role closely aligned to that of the Headteacher, as presented in Chapter Four. For participants, Forest School should expand pupils’ knowledge of the environment and serve to educate pupils in self-protection, as well as environmental protection. Pupils’ perceptions here largely mirror Maynard’s (2007) belief concerning the

central role Forest School plays in developing a pro-environmental attitude. Part of this process, it seems, is that Forest School inspires pupils to develop an affectionate bond with the outside world. These bonds and pupils' (re)connection with nature, as Fairclough (2016) calls for, is often conditional on sessions being fun and enjoyable, a trend Harris (2017) also found necessary despite limited resources or gadgets. It would therefore seem that to have fun pupils had to feel safe, and that both were prerequisites of Forest School's role. Interesting, fun does not feature in the FSA's seven principles, but clearly participants associated outdoor play and learning with enjoyment, despite the potential weather elements.

Furthermore, pupils such as Arthur also recognised the broader relevance and applicability of Forest School, with its connection to the Duke of Edinburgh Awards. This connection has not been made in previous literature, possibly due to the prevailing focus on primary school-aged children. These awards are not accessible to children in the UK until they reach fourteen years of age. At present, Arthur highlights a possible continuity gap as most young people stop Forest School at the end of Key Stage Two and then potentially start Duke of Edinburgh at Key Stage Four. This potential gap is perhaps only filled by activities such as Scouts, which not all children do and whose membership fell by nearly 25% in 2020/21. The connections made by pupils in this instance illustrate the transferability to real-world experiences identified by Waite (2017). From here, the below sub-sections focus more specifically on pupils' evaluations of different possible impactful areas Forest School can deliver.

## **5.5. Conclusion**

This chapter outlined how pupils considered Forest School as serving many benefits, such as learning new skills, enjoying the outside world and preparing them for the Duke of Edinburgh Award. Through pupils' self-evaluations, this chapter also demonstrated that skills were developed over the nine-week programme, but the extent that these developments could be tangibly mapped into weekly before and after recordings was minimal. More tangible before and after findings were apparent when pupils recorded their pre-post session emotions, which illustrated a continued enjoyment as well as stress relief and diminishing levels of anxiety levels. As such, the findings presented here provide a useful foreground from which to discuss the impact that Forest School had on pupils' education, attitudes and behaviours.

## **Chapter 6 – The impact on education, attitudes and behaviours**

Building on an analysis of data retrieved throughout the nine-week programme, this chapter concentrates on data collected during the end of programme interviews completed with each participant. Participants were presented with their individual journals and asked to discuss their ratings, narrated comments and more general reflections on the impact that the Forest School programme had on them. Given this specific focus, interviews were relatively short, lasting between three and six minutes, but yielded some key evaluative data.

### **6.1 Children’s educational gains and pro-environmental behaviours**

#### *Educational Impact*

Forest School has been found to impact pupils’ educational gains (Coates & Pimlott-Wilson, 2019; Ingold, 2008). Such gains were reported by pupils, who depicted how Forest School had helped them become curious independent learners, learn new skills and made them realise that they could learn in an outdoor environment and not just in a classroom environment.

*I think it's like, its a different way of learning, like normally when you think of learning its inside in classrooms with a teacher, boring, not really having fun but in Forest School it's not just about being in school learning it's about the creativity and imagination side which is still good to have that imagination you had when you were a child, like five or something*  
(Nick)

Similarly, Ollie noted how, *“because it's different from inside the classroom and there is a lot more freedom with it. So, you get to have a lot more fun and still learn at the same time”*, whilst Alice answered, *“I like exploring and learning about different wildlife”*. The idea that Forest School enables pupils to use their imagination and creativity in ways they could not normally in the classroom was acknowledged by the Headteacher and is reiterated in Coates and Pimlott-Wilson (2019) work in this field. In this sense, some pupils implied that there is a detachment between learning and play, which is perhaps understandable when one considers that 90% of their lessons are classroom-based. In classrooms, up to 30 seated pupils are mostly taught subjects theoretically within a confined four-wall room. Contrastingly, it seemed that Forest School offered some pupils their first realisation, or served as a timely reminder, that you can have fun and learn, or to rephrase this, learning can be fun and exploratory. Whilst this liberating effect was evident, Darwin details his need for some degree of structure and guided discovery, *“Because even though I have got a lot of imagination I need to have something to base it off, like I need like a baseline. Darwin’s yearning is understandable when one considers structured learning patterns*

in school, alongside the vastness of woodlands that could be overwhelming if any level of structure is removed.

Part of pupils' preference for Forest School was the opportunity to develop tangible practical skills, whereby learning gains were explicit. Such visibility gave pupils a sense of fulfilment, but also often a necessary structured activity to coincide with the more expansive independent play elements. Artur cited, *"I liked the bit when we got to go out and explore and I liked the bit where we stayed as we got to learn practical skills"*, whilst Harry explained, *"because I felt like every single lesson was a new skill that we developed and learnt and we also had a lot of fun doing it so half the time we were learning stuff and the other time we got to play around"*. More specifically, many pupils cited the mastery of tools, particularly for survival purposes, as both enjoyable and fulfilling.

*So that you can use tools and it's for exploring as well and you can learn a lot of things as I said earlier about learning tools, you can learn a lot of tactics of survival and how to use like wildlife stuff like wood and tree bark and everything to make stuff and how to use flint and steel to make fire and all that, and to make a fire and how to put it out and yeah. (Harry)*

Similarly, Alice reflected, *"I get to learn more about nature and if I was actually in other woods not the school ones then I would know what tools to use for what, yeah...Like stuff that I might need in the future"*. For Richard, this learning was needed, *"it's important we know different survival skills"*. The use and potential mastery of tools was something pupils found novel, fulfilling and applied. Being able to make something, be it a tent, den or fire, and realise its real-world applicability was particularly rewarding and empowering. Through challenging but achievable goal-orientated tasks, pupils were able to feel safe and become familiar within woodlands. When evaluating the confidence building aspect of this learning process, it is important to remember that many participants had previously engaged in Forest School in Key Stage One and Two. Ollie enjoyed being able to repeat or retry previous activities and did not see repetition as boring, *"it was good that it reinforced it and it was good memory just to learn it again"*. One notable difference between the delivery is that during Key Stage Three pupils are often unsupervised when exploring or undertaking set tasks.

### *Environmental Impact*

#### *Nature Awareness*

Within journals and during interviews, pupils regularly stressed how being aware of nature was important. When asked why, participants offered different reasons. Some participants identified

that being out in nature fostered their nature awareness, which they placed great importance on. For instance, Arthur noted, *“I do think being outside in nature is important as it teaches us how to look after nature around us and how to be safe while playing or walking through places with dense woodland”*, whilst Richard stressed that it is, *“important to care for nature”*. Part of this learning process involved, as Alice recognised, being able to, *“identify what grows and lives outside and, in the forest”*. Evaluating this learning gain, Harry reflected, *“Yes, so we have more nature awareness and know our environment”*. For some, this learning process addressed a deficit, as recognised by Louv (2005). For example, Darwin deeply reflected how,

*We have kind of been distant from nature and we need to reconnect with it, cause all we do now is, all we see now most of the time is massive concrete structures and nothing natural, but with forest school you can spend an hour just doing whatever you want in nature*

Here, nature awareness was based on exposure, knowledge gaining and need for preservation. Collectively, these aspects of awareness seemed to foster a deep affinity to nature, something Sobel (2008) found. At an existential level, such an affection is imperative in the development of pro-environmental attitudes. This also shows that children's current disconnect from nature can be easily rectified, simply by spending time outdoors (Louv, 2005; McFarlane, 2017).

#### *Critical Incident*

During the programme, participants developed not only an awareness of nature, but an emotional connection towards it. With this growing affinity came an increased desire to preserve and protect nature and the environment more broadly, as articulated in Harry's comment below.

*We need to know our environment and have to sustain it and manage it and to make sure that nothing bad happens to it because it can also affect us, which is not good for us, so I feel like it's calm because of how easy and good it is to actually, help it.*

Similarly, Jack was aware of his personal responsibility, *“I got to learn lots of things like err protecting the environment stuff, which I support and I love”*. These sentiments mirror those in Turtle et al. (2015) and Harris's (2021), which both suggested that long-term participation in Forest School leads to pro environmental attitudes as children become more nature aware and appreciative of their surroundings.

Participants growing accord with Forest School became explicit after an unfortunate incident whereby the space was vandalised over a weekend, by people who were not members of the

school community. These participants discovered some of the graffiti and damaged equipment, whilst realising that some resources had been stolen. At the time, participants were visibly shocked and annoyed, and verbalised their frustrations. When this incident was re-visited over a month later during interviews, participants feelings were still prevalent. Below is a flavour of some participants' responses.

*I was kind of shocked since like they were writing rude stuff and all the signs were spray painting rude images on the trees and then they had taken the firepit so we couldn't roast marshmallows over it. (Henry)*

*When I first saw what they did of vandalizing, I was a bit angry and I was also a bit, I was questioning why they would do that because we have never done something bad to somebody in Forest School or anything like that and I just don't know why they would do that. It feels like there was no base for doing it (Jack)*

Like Jack, Amber struggled to comprehend the actions of others, “not really sure but I don't know why they would vandalize the woods...It's like we have done nothing wrong”. Like Henry and Jack, participants expressed a range of emotions. Alice “felt really sad”, Harry felt “disappointed and upset”, Arthur, “just wasn't quite happy”, whilst for Darwin, “it felt weird because I like live next to nature, so I always thought that why would you want to vandalise it”. Participants had developed a clear ownership of the Forest School space and felt a shared responsibility to preserve it. Therefore, they struggled to morally comprehend why others would wish to deliberately harm the forest, with some taking the vandalism personally. As such, this experience evoked negative emotions which were strongly felt at the time and still present a month later. Participants passion and empathy towards ‘their’ Forest School is reminiscent of Kahrman-Pamuk's (2019) and Murray's (2003) findings that children gained empathy towards nature and a sense of pride in their environment.

## **6.2 The impact on children's physical, mental and emotional wellbeing**

### *Physical Wellbeing*

Physical Wellbeing was one of the smaller impacts identified during the literature review. However, physical skills and health benefits were regularly recorded during weekly reflections and mentioned during interviews. For Amber, “it is key to get fresh air”, whilst Charlie believed that, “you need to be outside instead of being inside because you can breathe better outside because of trees”. More specifically, Darwin recognised, “you get a lot of vitamin D”, whilst Jack acknowledged that it builds, “our immune system”. Participants were attuned to the health

benefits from being outside or had come to realise or remember them through their Forest School programme. This aspect of nature awareness reflects a key belief cited by the Headteacher and concur with Bilton's (2010) claim that Forest School provides young people with the benefits of sunlight and fresh air.

For participants, exploring and playing most often involved physical exercise. During interviews participants often mentioned 'running about'. For instance, Richard noted that, "*it's quite nice to take a break from lessons and run about*", whilst Darwin remembered how, *I had the biggest space to run around in*", and Arthur reflected on how, "*we were just allowed to run about and explore*". Running around expends energy and when done repeatedly improves cardiovascular endurance. For participants such as Ollie this was a needed opportunity, "*it released a lot of energy that I have*", whilst Darwin recognised how Forest School made him, "*tired because I have been running around like a crazy person*". Darwin's reflection here was widely felt when one considers the frequency that pupils recorded 'tiredness' in their weekly journals, as highlighted in the previous chapter. As well as explicit physical exercise, such as running, Forest School presented pupils with weekly physical challenges, such as climbing trees. In reference to if he felt climbing trees was challenging, Richard responded, "*there are bits that you do multiple times that you know you can do it's just fun to do and there are the other bits that are quite challenging and exciting because it's a bit new*".

Barring Physical Education classes, Forest School would have most likely represented the most physical curricular activity young people take part in. Therefore, it is understandable how participants recognised and enjoyed this opportunity. The expansive space, natural obstacles and opportunity to explore made physical exercise fun and self-driven. Despite this, pupils felt willing to push themselves to tiredness to fully embrace the opportunity afforded to them. O'Brien and Murray (2007) found that Forest School served to improve cardiovascular endurance amongst participants, whilst climbing improves coordination, balance and gross motor skills. Similarly, McCree (2018) identified that climbing has a positive effect on physical wellbeing. The more implicit and autonomous physical exertion strategy that Forest School fosters seems fruitful when one considers growing concerns regarding young people's physical health (NHS, 2022), alongside the inter-related benefits associated with physical exercise, such as mental wellbeing.

### *Mental Wellbeing*

Forest School has been found to impact pupils' mental wellbeing (Coates & Pimlott-Wilson, 2019; Gill, 2010; Manner et al. 2021). During interviews, participants were asked if taking part in Forest School had affected their mental health. 17% of pupils (n=2) stated that completed the

programme had not affected their mental health, with Amber reflecting, *“it has not really changed my mental health”*. However, 83% of participants (n=10) considered Forest School to have positively impacted on their mental health. When asked how, a range of reasons were provided. For some, being physically active in the woods was significant. For instance, Richard reflected, *“it helped because Fresh Air helps you feel better, get to run about and have fun”*, whilst Ollie expressed, *“I have been happier and in much more ease and have been more active”*. Some participants linked having fun and being active with taking their minds off potentially stressful or negative feelings. For example, Freddie cited, *“it’s a good way for forgetting things and you can do what you want to do”*. This notion of distraction also featured when participants compared the Forest School environment to that of their classrooms.

*I think that it's quite nice to take a break from being inside because in school for most of the day you are inside in quite warm classrooms and it's a bit stressful. You do get a break and lunch but it's just quite nice to be outside. (Alice)*

Similarly, for Darwin, the freedom being outside offered was liberating, *“being inside just makes me bored even if I am having a really interesting lesson, but like when I am outside, I can look at things apart from walls and other people”*, whilst for Charlie being in Forest School is, *“an adventure instead of staying inside”*. For Amber escaping the pull of technology was liberating, *“cause lots of people are like on their phones all the time and it's good to get fresh air to clear your mind”*. Participants reflections here are illuminating in many respects, serving to remind us how many Key Stage Three pupils experience daily stresses and anxieties, some of which are driven by academic conventions with schools, such as classroom-based theoretical lessons whereby intellectual performance is desired, judged and rewarded. It seems that, as Cotes and Pimlott-Wilson (2019) found, Forest School can be a useful antidote by offering less constraints, more freedom and sense of adventure. Part of this process facilitates a feeling of being ‘present’ which can foster feelings of escapism. From here, participants can experience momentary reduces in stress and anxiety, a finding acknowledged in Gill’s (2010) report for the Outdoor Council.

As implied so far, participants mental health could be based on how they were feeling, both outside and within Forest School. For Jack, the woods were, *“a harmonious place”*. In contrast, Forest School enabled Nick to conquer a fear, *“before I was horrified of the woods, however I am more confident going in the woods”*. For many, Forest School had made them feel happier, calmer and more relaxed. For instance, for Arthur, *“taking part in Forest School has had a positive effect on my mental health as it has allowed me to relax and enjoy the outdoors”*, whilst for Harry, *“I feel more calm and I feel I enjoy being outside a lot,”* and for Darwin, *“it made me feel better about myself”*.

*and if I was sad I would at the end be happier.*” Nick’s reflection serves a useful reminder that for some young people woodlands can be alien spaces and evoke fearful images, so often portrayed in children’s books. However, the guided structured opportunity Forest School offers enables such feelings to be combatted, developing feelings of safeness. With safeness can come serenity, calmness, and harmony. These findings relate to Louv’s (2008) suggestion that Forest School allows for experiential learning which lends itself to positive mental wellbeing. More specifically, Coates and Pimlott-Wilson (2019) claim that the play aspect of Forest School can protect young people against poor mental health. Whilst not directly linked in all cases, if one considers Nick’s narrative, Manner et al. (2021) finding that Forest School can build resilience, which in turn can improve young people’s mental health in the long run, seems applicable.

### *Emotional Wellbeing*

Forest school has been evidenced to positively impact children’s emotional wellbeing (Manner et al. 2021; Rose & Aspinall, 2001; Tiplady & Menter, 2021). Participants’ journal recordings revealed how they often start and ended sessions happy and excited, whilst for some pupils the session itself positively impacted on their immediate moods and emotions. During interviews, participants were asked to reflect on their recordings and offer a more collective reflection of the possible impact that the programme had on their emotional wellbeing. This yielded similar findings to those reported in the journals, with Alice stating, *“start happy and end happy,”* Henry, *“probably excited,”* Charlie, *“probably happy,”* and Ollie, *“probably excited and confident.”* Whilst the ‘probably’ qualifier does not imply certainty, it may also represent boys trying to articulate their emotions. Irrespectively, the summary reflections reveal positive emotions experienced through Forest School. However, some participants explained such feelings. Jack’s comment below reveals how being physical, able to explore and using his imagination made him happy.

*Well, I have always loved nature and stuff and just getting my hands dirty and so climbing trees, I love, I love being high up, which is weird because I am afraid of heights. I love just cooking fake things because I don't know how to cook and when I cook fake things and people go along with it and enjoy it, it just makes me happy.*

For Arthur, Forest School offered a sense of freedom, autonomy, and guiding learning in applied skills, *“I just thought they were quite fun because some of us got to go out and have a look round the forest and some of us got to stay and learn skills that if we do Duke of Edinburgh, we can put that to use.”* Finally, Charlie found pleasure in the social aspects of Forest School, *“Forest School has made me happy because of the friends around.”* This data illustrates that Forest School fostered positive emotions, which whilst the same emotions were experienced and expressed, they were derived

from different elements of the process. This reiterates Coates and Pimlott-Wilson (2019) notion that children can glean from Forest School what they wish and will inevitably like some aspects more or less than others. These findings also concur with Coates and Pimlott-Wilson (2019), Manner et al. (2021) and Rose and Aspinall (2001) that Forest School can offer greater levels of enjoyment than classroom lessons and increases children's feelings of happiness and calmness.

One trend to occur in the recordings was that Forest School was tiring or, to be more precise, they felt tired in Forest School. When asked to reflect on these journal entries, some participants referred to the physical aspects already discussed. However, others articulated how timing of the sessions contributed to this feeling. Forest School sessions always took place on a Friday 15:00 to 16:00. Having these sessions as the last ones of the week influenced pupils' recordings. For Arthur, *"I was happy because it was a good lesson and it's always good Forest School...also it was the end of the day,"* and Amber reflected, *"maybe happy but a tiny bit tired because it was like at the end of the day,"* whilst Darwin revealed, *"I have got sad and tired because I am sad it was ending and like I can't be bothered to sit on the bus for 40 minutes"*. Finally, Jack expanded,

*Well, I think at the start most of the time I would be happy happy, I know sometimes I put it down that I was a bit stressed and tired but at the end I always put that I came out happy and I always came out positive, I think it's just like a way to relax me and make me happy for when I go back home.*

There were other references to negative emotions recorded due to the vandalism discussed in the critical incident section. These insights offer useful qualifiers and context to pupils' weekly recordings, illustrate the situatedness and variance of their emotions pre-during-post Forest School sessions, and demonstrate the multiple variables at play. Given this, determining Forest School's direct impact on participants' overall emotional well-being is difficult. It is possible to ascertain that these 12–13-year-olds entered sessions feeling a range of emotions, some of which maintained, others in which changed, partly through the Forest School process.

### **6.3 The impact on children's social skills and identity**

#### *Social Impact*

Within the literature it was identified that communication and social skills were developed whilst taking part in Forest School (Knight, 2009). Whilst skills were recorded, tracked, and mapped in weekly journals, interviews revealed how participants gained much enjoyment from socialising with their friends. For Jack, this was an incentive to opt for this enrichment activity, *"a lot of my friends were taking part in Forest School, and I was recommended it and I thought Forest School*

*would be something good for me and I enjoy it.” Socialising could entail working and/or playing with others, as noted by Richard, “climbing, building dens and just playing games with other people.” Socialising most often entailed simply being able to talk openly with others either informally or formally as part of group work and peer learning, something Henry recognised, “you get to talk to people, and you learn to like do more stuff.” Both these opportunities were valued by Jack for different reasons.*

*Well sometimes on Fridays I have teachers that will give me homework and stuff and er Fridays is always the people go chaos mode because it's the last day of school for the weekend and I think Forest School just lets me have one last little bit with my friends, say goodbye to them and then I can just head off to home happy...I think Forest School is really really good for anyone that is new to the school or things like that because I think it lets you have more friends if you like things that other people like then that bonds and usually how people make friends and I think you learn a lot and you like you know prevail from that and I just really like it because I get to see my friends. (Jack)*

Participants entered Forest School expecting to be social and gained great enjoyment from this opportunity for a range of different reasons. Whilst break and lunchtimes offer informal socialising opportunities, classroom-based sessions may only offer more formal socialising opportunities where voice levels may have to be muted and discussions only centred on a specific topic. The opportunity to socialise in Forest School and the benefits of developing shared interests was found by William-Siegfried (2012), allowing children to develop a sense of belonging. Linked, Tiplady and Menter (2021) also discovered that Forest School served to integrate new pupils into the school, albeit at primary school level. Arguably, entering Key Stage Three and secondary school can prove more daunting and involve mixing with a much greater pool of diverse people at a key stage of children’s identity-formation. Therefore, this exploratory finding suggests that Forest School could provide a useful tool to fast-track new pupils' integration into new peer groups. Manner et al. (2021) also found that Forest school can help develop social bonds amongst young people through team-related activities and exploration.

### **Impact on Identity**

Forest School can impact on young people’s identity (Kemp & Pagden, 2019; McCree et al. 2018; Tiplady & Menter, 2021). Identity can be an all-encompassing term and therefore can be elusive concept to empirically as most responses could be arguably linked to participants’ identity in some way shape or form. Therefore, focusing on explicit examples, it is necessary to report that there were little obvious examples of this. One theme to emerge was how Forest School had

helped some participants conquer their fears, thus either finding out more about themselves or gaining self-realisation of their resilience and ability to overcome obstacles. Nick spoke to this point, *"I'm normally scared of wood and spiders and bugs and everything and still am but I'm beginning to get used to being in a nature surroundings and outside environments"*. Nick went on to reveal how his fear was partly overcome due to the support of his peers and the safety net and confidence that provided. Whilst not mentioning the role of peer support, Harris (2021) argues that Forest School ability to help young people combat fears is influenced by confidence building, self-realisation and an increasing ownership of woodland area. Button and Wild (2019) suggests that overcoming a fear should be seen to be taking a risk, both of which can lead to positive emotions, such as feelings of accomplishment.

As well as the potential to overcome fears, Forest School presented participants with the opportunity to take risks. When asked, exactly half the group felt that they had taken risks. Those who responded that they had not taken any risks appeared to perceive risk as reckless, dangerous and to be avoided. For instance, Harry responded, *"almost none since although I am very pre-cautious of things but sometimes my curiosity gets the better of me"*, whilst Amber noted, *"I took no risk in Forest School"*, but qualified that this was she was supervised by the Forest School leader. Similarly, Arthur highlighted the trained adult safety net, but recognised the occupational risks Forest School presents, *"I don't think there has been much risk taking as we have always been supervised while using any equipment but there has been risks with using the knives"*. When not supervised, some participants recognised risks when exploring or climbing independently. Jack noted, *"a lot because I have climbed very high trees"*, and Darwin recalled, *"the only slightly dangerous thing I have done was crawl in a holly bush"*, whilst Alice expressed, *"a little, because a tree could fall on you at any moment or an animal that lives there could jump out at you and attack. Or you could fall off a tree"*.

Whilst encouraging informed and guided risk-taking was one of the Headteacher's desirable aims of introducing Forest School, participants' reflections on risk-taking represent the risk averse society they are part of, particularly when it comes to children and schooling (Connolly & Haughton, 2017). This data implies that more conversations need to be had with young people regarding the notion of risk taking to help de-stigmatise it, avoid it been automatically viewed in negative terms, and to encourage children to take calculated risks after engaging in risk management strategies. Connolly and Haughton (2017), Maynard (2007) and Waters and Begley (2007) argue that Forest School challenges risk aversion as activities are designed to enable risk taking and allow young people to risk assess in a controlled setting.

#### **6.4 Conclusion**

This chapter outlined how participants gained educational benefits as Forest School helped them become more curious independent learners through illuminating their creativity and imagination in a fun and exploratory way. The learning of practical skills and mastery of tools were not only fulfilling but contributed to increasing participants nature awareness and affiliation with woodland areas. This affiliation fostered a sense of ownership and growing need to preserve and protect the environment more broadly. Forest School also impacted participants physically, mentally and emotionally. Physical gains were more implicit and self-driven, whilst mental and emotional well-being was aided by safety, social and skill acquisition aspects of Forest School, all which participants found pleasurable and made them feel happy. This chapter provides a useful foreground from which to revisit the central research question in the next chapter.

## Chapter 7 – Conclusion

In the UK, teaching within secondary schools almost always takes place indoors within classrooms. Coinciding with this, there are fears that successive generations of children are growing increasingly disconnected from nature, which can detrimentally impact their wellbeing. Secondary schools perpetuate this concern by adopting broader trends of risk aversity in order to always protect children from any harm. This partly explains why secondary schools fail to continue primary school's growing use of Forest School learning. Over the last 30 years, Forest School has become an established and increasingly professionalised learning approach. Researchers have evidenced how this learning environment can positively impact on young people's education, well-being, and social skills. However, due to the lack of secondary schools adopting this approach, this evidence is based entirely on the effects of Forest School on Key Stage One and Two pupils.

Therefore, this thesis sought to partially fill this knowledge void by completing a case study based on Forest School adopted in one Independent Secondary School in the North-East of England. Clockwood High School had adopted Forest School for two years as an enrichment activity. This thesis is based on data taken from Key Stage Three pupils' engagement with a nine-week period of Forest School. There were three stages to this research study. The first was an interview with the Headteacher on her views of Forest School, the second stage involved the Key Stage Three participants completing weekly reflective journals. After this the third stage took place after the 9-week Forest School programme. This was where the participants completed a short interview based upon the answers given within the journals. The reflective journals were analysed by the researcher individually looking for key themes and questions to inform bespoke interview questions. The interviews were thematically analysed. The researcher had a close connection to Clockwood High School due having many roles at the school including being the Forest School Leader.

This study found that the Headteacher's decision to implement Forest School at Key Stage Three was driven by her wish to address a perceived developmental gap. Forest School was considered a viable means to develop greater resilience, confidence and informed risk-taking, alongside fostering persistence, teamwork and creativity. Having previously experienced Forest School, Key Stage Three pupils' decision to select this enrichment activity was driven by the opportunity to play, explore, be social, learn more about nature and learn necessary outdoor living skills. During this opportunity and learning process, participants expected to have fun. These perceptions and lived realities formed participants' views on the benefits and role of Forest School which they described as applying new skills in real-world situations and preparing them for Duke of

Edinburgh activities. The level of skill acquisition and mastery was difficult to ascertain in pupils' weekly recordings but were frequently discussed as gains during their end of programme reflections. The top skills developed included physical, communication, teamwork, concentration, and confidence. More broadly, Forest School positively impacted participants education through fostering curious more independent learners who were willing to engage in creative and imaginative practices, whilst developing a pro-environmental attitude based on shared ownership and responsibility. Whilst impacting participants physically and mentally, arguably the largest impact Forest School had was on participants emotional well-being. Due to reasons outlined in this paragraph, having regularly engaged in Forest School sessions, participants reported feeling more confident, safer and happier, and less stressed, anxious and fearful.

As noted during Chapters Four, Five and Six, the key findings of this study concur with much of the existing research. Therefore, this study provided a much-needed empirical illustration that the impact of Forest Schools is transferable and applicable to secondary school pupils. The transferability of Forest School to these Key Stage Three pupils' classroom-based subjects was not explored explicitly. However, one could make inferences from the impacts outlined above that this Forest School programme had inevitable effects given participants reflections of their knowledge, confidence and emotional well-being. Given the applicable impact of Forest School and its potential transferability across subjects, this exploratory study could be used to make the case for more secondary schools to implement Forest Schools, especially given the reported levels of physical inactivity, mental health issues and emotional distress amongst many Key Stage Three and Four pupils. As found here, Forest School could prove a popular enrichment activity and one whereby young people develop much needed knowledge of nature and pro-environmental attitudes. Off-course, this programme was only nine weeks and therefore impact and learning gains need to be considered in the perspective of moderation. However, through reflecting on this exploration, it seems that Forest School has even more impactful capacity if strategic leadership is provided and research is undertaken.

Before discussing what this may look like, it is important to critically reflect on the scope, capacity and generalisability of this exploratory study. All participants had already experienced some form of Forest School before, therefore a distinctive before and after effect needs to be conscious of this fact. Ten of the 12 participants were male, therefore there is a potential that these findings may be somewhat gendered and/or gender skewed. Whilst evidence of impact was found, learning gains were not entirely consistent across the participants. Instead, despite all participants being exposed to the same nine-week Forest School programme, they recorded different learning gains and experiences. Interviews clarified some of these inconsistencies in some respects but also

cemented their randomness in others. This triangulation of data was needed as participants acknowledged potential flaws in self-report mechanism i.e. pupils thinking what they reported in previous week should influence their reporting in their current week. This bias was avoided by not sharing previous week's journal entries but demonstrates how children view learning gains as linear and sequential instead of messy and flux. Whilst measures were put in place (i.e. triangulated data) to minimise the fact that I had a dual role as research and Forest School Leader, this fact needs consideration when interpreting the significance of gains reported.

To build upon this explorative study, future research should focus on each impactful area in more depth and detail. For instance, skill acquisition could be delivered more consecutively and evaluated in a more subtle form of assessment. Furthermore, nature, environment and woodland-based knowledge acquired could be assessed through more specific schemes of work. Finally, more sophisticated validated psychometric and emotional well-being centred questionnaires could be used to better report the impacts in these respective areas. As these participants had engaged in Forest School across multiple levels, either an ambitious longitudinal study could be completed with one cohort or exploring if the impact of Forest School is still evident in Key Stage Four, when pupils may experience even greater levels of stress and anxiety. At a pragmatic level, Forest School leaders should focus on evidencing the potential to better embed cross-curricular learning gains through Forest School activities. This could gain greater traction from curriculum decision makers and justify the financial, resource and time investment needed to facilitate such enrichment activities.

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## Appendix

### Appendix A - Ethics Approval Letter

Est  
1841 | YORK  
ST JOHN  
UNIVERSITY

York St John University,  
Lord Mayors Walk,  
York,  
YO31 7EX

22/12/2021

#### School of Science, Technology, and Health Research Ethics Committee

Dear Julia,

**Title of study:** A case study critically examining the 'value' of forest schooling within secondary school education.  
**Ethics reference:** STHEC0050  
**Date of submission:** 07/12/2021

I am pleased to inform you that the above application for ethical review has been reviewed by the School of Science, Technology, and Health Research Ethics Committee and I can confirm a favourable ethical opinion on the basis of the information provided in the following documents:

Document	Date
Application for ethical approval form and attached appendices (Appendix A-F)	22/12/2021

Please notify the committee if you intend to make any amendments to the original research as submitted at date of this approval, including changes to recruitment methodology or accompanying documentation. All changes must receive ethical approval prior to commencing your study. You are now free to begin data recruitment and collection for the above approved study.

Yours sincerely,



Dr Sophie Carter  
Chair of the School of Science, Technology, and Health Research Ethics Committee

## Appendix B – Gate Keeper

### Appendix B – Gatekeeper Consent Form and Participant Information Sheet

#### Gatekeeper Consent Form

Julia Hopkins  
 Masters by Research  
 York St. John University  
 School of Science, Technology and Health  
 Lord Mayor's Walk  
 York  
 YO31 7EX  
[julia.hopkins1@yorks.ac.uk](mailto:julia.hopkins1@yorks.ac.uk)

Dear Mrs Mackenzie

As part of my masters by research, I am completing a research project examining the 'impact' of forest schooling within secondary school education. I request your permission to use your school to help me complete my research study.

#### **What does the study involve?**

The study will involve asking children for their views and experiences of Forest School. This will involve asking pupils to complete a weekly journal whilst taking part in their Forest School enrichment sessions, this will then be followed up with one-to-one follow up interviews with each pupil. This study also involves a one-to-one interview with yourself at a time, date, and place convenient for you. I have included further information about the study in the accompanying Participant Information Sheet that will be provided to the children and yourself and states your role as gatekeeper.

#### **What happens with the study findings?**

Only myself and my thesis supervisors will have access to the information from this investigation. All information will be stored in line with the requirements of the General Data Protection Regulation (GDPR). Pseudonyms will also be used to protect the anonymity of all participants, people and organisations who take part in the study. The study should not encourage conversations of a personal nature and participants' answers will only be disclosed to you as the Gatekeeper if they refer to potential breaches in child protection or safeguarding issues.

#### **Who can I contact if I have any questions?**

My details are at the top of the page. Alternatively, you can contact my supervisor:

**Mark Mierzwinski** [m.mierzwinski@yorks.ac.uk](mailto:m.mierzwinski@yorks.ac.uk)

If you have any concerns, queries or complaints regarding the research project please contact Dr Sophie Carter (Chair of the Ethics committee for the School of Science, Technology and Health. [s.carter@yorks.ac.uk](mailto:s.carter@yorks.ac.uk))

Thank you for taking the time to read this information.

Yours faithfully

Julia Hopkins  
 Masters by Research, York St John University.

Please sign below if you are happy for me to complete my research in your School.

I have read and understand the above information and **do give my consent** to this study taking place.

Print Name: ..... Date: .....  
 Signature: .....

Appendix C - Participant Informed Consent Form**Name of researcher: Julia Hopkins****Title of study:** A case study critically examining the 'impact' of forest schooling within secondary school education

Please read and complete this form carefully. If you are willing to participate in this study, please circle the appropriate responses and sign and date the declaration at the end. If there is anything that you do not understand and you would like more information, please ask.

I have had the research satisfactorily explained to me in verbal and / or written form by the researcher. **YES / NO**

I understand that the research will involve a structured interview **YES / NO**

I understand that I may withdraw from this study at any time without having to give an explanation and this will not affect my future care or treatment. I understand that I should contact you via email if I wish to withdraw from the study and that I can request for the information that I have provided to be removed from your investigation for a period of four weeks (28 days) after the date that I took part in your study. **YES / NO**

I understand that all information about me will be treated in strict confidence and that I will not be named in any written work arising from this study. **YES / NO**

I understand that my electronic responses will be used solely for research purposes and will be destroyed on completion of your research. **YES / NO**

I understand that you will be discussing the progress of your research with your supervisors at York St John University. **YES / NO**

I consent to being a participant in the project. **YES / NO**

Print Name:	Date:
Signature of Participant:	

## Appendix D - Participant Informed Assent Form

**Name of researcher: Julia Hopkins**

**Title of study:** A case study critically examining the 'impact' of forest schooling within secondary school education

Please read and complete this form carefully. If you are willing to participate in this study, please circle the appropriate responses and sign and date the declaration at the end. If there is anything that you do not understand and you would like more information, please ask.

I have had the research satisfactorily explained to me in verbal and / or written form by the researcher. **YES / NO**

I understand that the research will involve filling out a reflective during each forest school session and a one-to-one interview which will last around 15-20 minutes and recorded for transcription purposes **YES / NO**

I understand that I may withdraw from this study at any time without having to give an explanation and this will not affect my future care or treatment. I understand that I should contact you via email if I wish to withdraw from the study and that I can request for the information that I have provided to be removed from your investigation for a period of four weeks (28 days) after the date that I took part in your study. **YES / NO**

I understand that all information about me will be treated in strict confidence and that I will not be named in any written work arising from this study. **YES / NO**

I understand that any audiotape material of me will be used solely for research purposes and will be destroyed on completion of your research. **YES / NO**

I understand that you will be discussing the progress of your research with your dissertation supervisor at York St John University. **YES / NO**

I consent to being a participant in the project. **YES / NO**

Print Name:	Date:
Signature of Participant:	

## Appendix E - Parental Consent Form

Julia Hopkins  
 Masters by Research  
 York St. John University  
 School of Sport  
 Lord Mayor's Walk  
 York  
 YO31 7EX  
[julia.hopkins1@yorks.ac.uk](mailto:julia.hopkins1@yorks.ac.uk)

Dear Parent or Guardian,

I am completing a research project examining the 'impact' of forest schooling within secondary school education as part of completing my masters by research project. The school is aware of the project and has agreed to allow me to conduct my research with them, but I request permission for your child to take part in this study.

### What does the study involve?

The study will involve asking your child for their views and experiences of forest schooling. This will involve asking pupils to complete a journal whilst taking part in their forest schooling enrichment sessions, this will then be followed up with one-to-one follow up discussion via an interview. The follow-up interviews are voluntary and will last between 15-30 minutes where children will be asked a series of questions based about their journal, this audio will be recorded on a school iPad. I have included further information about the study in the accompanying Participant Information Sheet that will be provided to your child if they wish to participate, and you give your consent.

### What happens with the study findings?

Only myself and my supervisors will have access to the information from this investigation. All information will be stored in line with the requirements of the General Data Protection Regulation (GDPR). Pseudonyms will also be used to protect the anonymity of all participants, people and organisations who take part in the study. The study should not encourage conversations of a personal nature and participants' answers will only be disclosed the Gatekeeper if they refer to potential breaches in child protection or safeguarding issues.

You have a right to withdraw your child from the study at any point during data collection. Your child will still be able to take part in the Forest School enrichment activity.

### Who can I contact if I have any questions?

If you have any questions about this project, my contact details are included at the top of this page. Alternatively, you can contact my supervisor: **Mark Mierzwinski** [m.mierzwinski@yorks.ac.uk](mailto:m.mierzwinski@yorks.ac.uk)

If you have any concerns, queries or complaints regarding the research project please contact Dr Sophie Carter (Chair of the Ethics committee for the School of Science, Technology and Health).  
[s.carter@yorks.ac.uk](mailto:s.carter@yorks.ac.uk)

Thank you for taking the time to read this information.

Yours sincerely,

Miss J Hopkins

Please sign below if you consent to your child taking part in the research described above.

Please return this form to Miss Hopkins by Friday 7<sup>th</sup> January 2022

Print Name: ..... Date: .....

Signature: .....

**Appendix F – Adult Participation Sheet**  
**Participant Information Sheet**

**Title of study:** A case study critically examining the ‘impact’ of forest schooling within secondary school education

**Introduction**

You have been invited to take part in a research project examining the ‘impact’ of forest school at Key Stage Three. Before you decide whether to take part, it is important that you understand why this research is being done and what it will involve. Please take time to read this information carefully and discuss it with others if you wish. If there is anything that is unclear or if you would like more information, please contact me Julia Hopkins, postgraduate student in the School of Science, Technology and Health, York St John University or my supervisor Mark Mierzwinski in the School of Science, Technology and Health York St John University using the contact details on the following page.

**What is the purpose of this investigation?**

The aim of this investigation is to examine the ‘impact’ of forest schooling within secondary school education. In conducting this investigation, I am trying to develop a greater understanding of the impact of forest school within young people at Key Stage Three.

**What will you do in the project?**

This study involves a structured one-to-one interview whereby you will be asked to reply to 10 predetermined questions regarding why and how forest schooling was introduced as an enrichment activity, what the aims and expectations are for forest schooling, and what your plans are for forest schooling moving forward. This approach means that you can complete your answers to these questions in your own time, electronically and you can check that the responses are true reflections on your thoughts and experiences.

**Do you have to take part?**

No. this is a voluntary study and it is up to you to decide whether you would like to take part, but your contribution would be greatly appreciated. You will not be treated any differently, whether you choose to take part, or decide not to do so.

**Why have you been invited to take part?**

You have been invited to take part in this project because you the head teacher of a school that offers Forest School to secondary school aged students.

**What are the potential risks to you in taking part?**

Given the nature of this research project there are no identifiable risks involved. However, if you feel distressed during the interview process, the interview will be stopped and I will reference sources of support such as Mind <https://www.mind.org.uk>. No coercion or incentive will be used for recruitment purposes and participation will be voluntary. You do have the right to withdraw from this project at any point, without giving a reason. You can withdraw from the project by informing me (the researcher) via email that you wish to do so. If you withdraw from the research, any words used by you will be removed from the data that has been collected. You may request that the information you have provided is removed from the study at any point until the data has started to be analysed. This means that you can request that your data be removed from the investigation until four weeks (28 days) after the date that you took part in the study.

**What happens to the information in the project?**

As this is a structured interview, your electronic responses will be stored securely on the password protected OneDrive storage system and password protected computer account, which are used for the storage of research data at York St John University, in line with the requirements of the General Data Protection Regulation. The information collected whilst conducting this project will be stored for a minimum of 6 months. Pseudonyms (i.e. fictitious names) will be used for you and any people, places, or organisations that you mention in order to maintain anonymity Thank you for reading this information – please ask any questions if you are unsure about what is written in this form.

**What happens next?**

If you are happy to take part in this project, you will be asked to sign an informed consent form in order to confirm this. It is possible that the results of this research project will subsequently be published. If this is the case, appropriate steps will be taken to ensure that all participants remain anonymous. If you do not want to be involved in the project, I would like to take this opportunity to thank you for reading the information above. This investigation was granted ethical approval by York St John University.

**Researcher contact details:**

**Julia Hopkins**

School of Science, Technology and Health  
York St John University,  
Lord Mayor's Walk,  
York,  
YO31 7EX.

Email: [julia.hopkins1@yorks.ac.uk](mailto:julia.hopkins1@yorks.ac.uk)

**Mark Mierzwinski**

School of Science, Technology and Health  
York St John University,  
Lord Mayor's Walk,  
York,  
YO31 7EX.

Email: [m.mierzwinski@yorks.ac.uk](mailto:m.mierzwinski@yorks.ac.uk)

If you have any questions/concerns, during or after the investigation, or wish to contact an independent person to whom any questions may be directed or further information may be sought, please contact:

**Dr Sophie Carter**

Chair of Ethics for Research Ethics Committee for Science, Technology & Health  
York St John University,  
Lord Mayors Walk,  
York,  
YO31 7EX.

Email: [s.carter@yorks.ac.uk](mailto:s.carter@yorks.ac.uk)

## Appendix G- Participant Information Sheet

**Title of study:** A case study critically examining the ‘impact’ of forest schooling within secondary school education

### Introduction

I have asked you to take part in a research project examining the ‘impact’ of forest schooling. Before you decide whether to take part, it is important that you understand why this research is being done and what it will involve. Please take time to read this information carefully and discuss it with others if you wish. If there is anything that is unclear or if you would like more information, please contact me Julia Hopkins, postgraduate student in the School of Science, Technology and Health, York St John University or my supervisor Mark Mierzwinski in the School of Science, Technology and Health York St John University using the contact details on the following page.

### What is the purpose of this investigation?

The plan is to examine the ‘impact’ of forest schooling within secondary school education. I am trying to develop a greater understanding of the impact of forest school within young people.

### What will you do in the project?

As you have opted to do forest schooling as an enrichment activity, you are asked to complete a weekly learning and reflective journal. This is one sheet of paperwork which should take between 2-5 minutes to complete. After your 10 weeks of forest schooling, you will be asked to take part in a one-to-one interview with me. Here, I will ask you questions based on your journal. This interview will take place in a classroom and will last no more than 15-20 minutes, the audio will be recorded on a school iPad.

### Do you have to take part?

No. this is a voluntary study and it is up to you to decide whether you would like to take part, but your contribution would be greatly appreciated. You will not be treated any differently, whether you choose to take part, or decide not to do so.

### Why have you been invited to take part?

You have been invited to take part in this project because you have selected to do forest schooling as an enrichment activity.

### What are the potential risks to you in taking part?

There are no identifiable risks involved. The head teacher and your parents have agreed for you to be part of this study. However, if you do feel upset or do not want to continue you can stop doing the project at any point by telling me, your head teacher, or your parent. I will then not use any of the information that you have provided. If you do feel upset about this project, we will make sure that the school well-being and support team help you.

### What happens to the information in the project?

All journals that are completed and the responses to the interview questions are kept in a safe location, stored in a locked cabinet and password protected computer. Any names given in the journals or interview will be changed to false names so you, your friends or school will not be recognised. This information is kept for a minimum of 6 months. Thank you for reading this information – please ask any questions if you are unsure about what is written in this form.

### What happens next?

If you are happy to take part in this project, you will be asked to sign an informed assent form in order to confirm this. It is possible that the results of this research project will subsequently be published. If this is the case, appropriate steps will be taken to ensure that all participants remain anonymous. If you do not want to be involved in the project, I would like to take this opportunity to thank you for reading the information above. This investigation was granted ethical approval by York St John University.

### Researcher contact details:

**Julia Hopkins**

School of Science, Technology and Health,  
York St John University,  
Lord Mayor's Walk,  
York,  
YO31 7EX.

Email: [julia.hopkins1@yorks.ac.uk](mailto:julia.hopkins1@yorks.ac.uk)

**Mark Mierzwinski**

School of Science, Technology and Health,  
York St John University,  
Lord Mayor's Walk,  
York,  
YO31 7EX.

Email: [m.mierzwinski@yorks.ac.uk](mailto:m.mierzwinski@yorks.ac.uk)

If you have any questions/concerns, during or after the investigation, or wish to contact an independent person to whom any questions may be directed or further information may be sought, please contact:

**Dr Sophie Carter**

Chair of Ethics for Research Ethics Committee for Science, Technology & Health  
York St John University,  
Lord Mayors Walk,  
York,  
YO31 7EX.

Email: [s.carter@yorks.ac.uk](mailto:s.carter@yorks.ac.uk)