AN ACTION RESEARCH INVESTIGATION INTO THE NATURAL ENVIRONMENT AS A CONTEXT AND SETTING FOR EARLY LEARNING.

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CHAPTER 1: INTRODUCTION:

This Action Research project is about a programme of practical activities based in the natural environment, designed to augment achieving the objectives of the Primary School Curriculum (1999), carried out with junior/senior infants from three different schools during early spring of 2008.

1.1 THE RESEARCH SETTING:

The setting comprises an Old Rectory house which is surrounded by a range of mini-environments. There is a walled garden with some fruit-trees and vegetables. This is beside a large lawn area with play-structures and a tennis-court. Nearby, there are woods with stone tracks running through them so the children are safe and able to negotiate the area competently. Between the woods, is a large field interspersed with trees. Down the back is a gravelled farm-yard area with sheds and pens housing various animals. There are two grassy mounds, like small hillocks, over to the side surrounded by 'muddy flatlands' and more trees. Situated in various nooks and corners is a little old-style 'story-tale' cottage, a huge sandpit and a converted barn for children's use in bad weather. At the very back is a big, long field, ideal for expeditions - to find frogspawn for example. Finally, indoors, there is a large living-room set up as a pre-school-cum science-cum art and activities room and a kitchen used for baking and cooking using natural ingredients and produce from the garden.

1.2 THE ACTIVITY PROGRAMMES PRIOR TO THE ACTION RESEARCH:

Over the last few years, the Researcher has developed various programmes which include a small pre-school, summer camps, school and group outings and birthday parties. All are centred on practical or fun activities in the natural environment. It appears that many children today have very little exposure to the natural environment; for those who come during the year, it is a novelty to participate in an activity based around or in nature. The Researcher has experimented with various activities which might appeal to young children and has tried out some simple but linked nature activities which include finding conkers and feathers, flying 'helicopter' sycamore seeds, picking and cooking apples, making jam and sauce, baking bread, decorating home-made goodies with fruit from the

garden, having 'leaf-fights' in a heap of leaves, caring for animals and participating in scavenger hunts. The children enjoyed whatever activities were thought up, so the idea of expanding these activities into a school-based programme grew.

1.3 RATIONALE BEHIND THE PROJECT:

The Researcher was very interested to see if a programme of activities based in the natural environment and all it encompasses could successfully be incorporated into a learning experience for young children, embedded within the Primary School Curriculum (1999) (also referred to herein as the 'Curriculum') and enhancing some aspects of its objectives. A school based programme gives all children an opportunity to participate. The Researcher also wondered if exposure to the natural environment would increase the children's learning and understanding of nature and related concepts. With guidance from the Curriculum, Towards a Framework for Early Learning (2004) and other relevant policy publications, the Researcher decided to devise a programme of activities to examine these issues.

1.4 THE RESEARCH QUESTION:

The core question examined in this Research project was:

Can a programme of practical activities be devised, based in and around the natural environment, which augments achieving elements of the Primary School Curriculum (1999) for junior/senior infants?

1.5 OVERVIEW OF THE PLANNED RESEARCH PROGRAMME:

While the research programme was based on practical activities, a lot of thought and planning went into the types of activities used in order to comply with all aspects of quality early childhood learning and development as recognised in Ireland today. Since the United Nations Convention of Children's Rights (1989) was ratified in Ireland in 1992, there has been a responsibility on governing bodies to promote the Rights of the Child, particularly in relation to participation, choice and consideration of the children's best interests and their views. The policy documents involving young children that are

most relevant to this research programme are noted here and discussed in more detail in the next chapter.

The Researcher closely followed the Curriculum, and obtained a working knowledge of the most recent policy developments concerning early childhood. By adhering to the principles of the National Children's Strategy (2000), Towards a Framework for Early Learning (2004) and Síolta, National Quality Framework for Early Childhood Education (2006), the programme of activities was designed to uphold and embrace their aims and objectives, based on the active, participating child.

The importance of play as the vehicle for active learning is discussed and was used throughout this programme. Play is described in the Curriculum as particularly suited to the learning needs of young children (DES, 1999:30), and in Towards a Framework for Early Learning as a 'powerful context for learning' (NCCA, 2004:38).

Acknowledging the reality of constraint in the classroom setting and a limit to the degree of spontaneity and exploration possible, the Researcher decided to do an action-research project comprising a programme of activities covering curricular objectives, based in the Rectory setting described, using the natural environment to augment aspects of the Curriculum. The purpose was to see if various themes could be delivered in a natural setting, using a practical, playful approach, to enhance the children's understanding of topics currently delivered in the classroom. The project comprised five steps as follows:

1. Devise a programme of structured and unstructured activities based in the natural environment.
2. Analyse these activities by deconstructing them weighed against the Primary School Curriculum (1999). This was done through participant observation by the Researcher and through surveys and informal interviews with the teachers.
3. Analyse these activities by deconstructing the pedagogical concepts involved. This was done through participant observation by the Researcher and through surveys and informal interviews with the teachers.

4. Analyse these activities by deconstructing the principles embraced by Towards a Framework for Early Learning (2004). This was done through participant observation by the Researcher.
5. Obtain feedback and comments from the parents and children. This was done through surveys completed at the end of the programme.

The programme, summarised in Appendix A, comprised eight sessions over a ten week period for each school between February and April 2008, covering multiple activities, five of which are documented in detail in this research. Participant observation was used throughout the programme. The teacher interviews and surveys, as well as the parents' and children's surveys, were carried out at the end of the programme (See Appendix B). Video recording and photography were used when possible to provide an extra dimension for recall purposes only.

1.6 EMBEDDED QUESTIONS:

Embedded questions included:

1. Could the programme be devised in line with the Primary School Curriculum (1999) while also adhering to the principles and objectives of Towards a Framework for Early Learning (2004) and Síolta (2006)?
2. How could learning be demonstrated through these practical activities?
3. Could learning also be demonstrated through play activities?
4. How could the natural environment augment the Primary School Curriculum (1999)?

CHAPTER 2: LITERATURE REVIEW:

2.1 THE BENEFITS OF NATURE:

The Researcher has a particular interest in the natural environment and many happy, indelible memories from a childhood in the country-side. She has a growing concern that perhaps children today have much less exposure to nature whereas a lot of research is emerging showing how exposure to and contact with the natural environment is both beneficial for children and important for healthy child development. (Titman, 1994; Rivkin, 1995, 2000; Moore and Wong, 1997; Clements, 2004; Louv, 2006:87,102,105).

Nature-settings can vary from wilderness and wide open spaces, massive expanses of mountains, rivers, seas and deserts, to much smaller eco-systems of fields, gardens, parks and backyards. Research carried out in all types of nature settings shows, universally and cross-culturally, that nature experiences are desirable and healthy (Rivkin, 1997; Clements, 2004). The research also supports the value of increasing contact with nature for children and adults (Davis, 2004:1).

Louv describes the benefits of nature for children as coming in many forms. Newborn animals, pets living and dying, paths in the woods, to name a few. Nature makes us use our senses, heals, provides fantasies, inspires creativity or even fear. It is in nature that a child can find 'freedom, fantasy and privacy: a place distant from the adult world, a separate peace' (Louv, 2006:7). He also describes how, on a deeper level: 'Nature provokes humility…it is a place of archetypal power, teaching, and challenge…Most of all, nature is reflected in our capacity for wonder' (Louv, 2006:8-9).

The power and importance of nature has been recognised for hundreds of years. From the time of Jean Jacques Rousseau (1712-1778), whose philosophical writings have endured as some of the most influential ideas on children's development, there have been debates over the power and lure of nature, its incumbent benefits and advantages. He wished for a society in which human beings retained freedom like that found in nature. Between the ages of two and twelve he claimed children possess an intuitive reasoning

that is directly tied to body movement and the senses. 'They develop best cognitively through useful tasks such as farming, carpentry and map-making…they enjoy physical things and learning from nature' (Crain, 2005:14). Rousseau's book on education, 'Emile', was really the beginning of 'progressive education'. His ideas were further explored by Pestalozzi who incorporated his philosophy into his teaching methods in Switzerland. Froebel, who was educated under such philosophies, continued in the same vein and further developed the importance of play which he saw as the means by which the child maintains the wholeness of their experiences. 'Play is a unifying mechanism and, for this reason, it was for Froebel the most spiritual activity of the child. For him, no single aspect of development was more important than any other' (Bruce, 2005:16). Francis Douglas, in his lecture on 'Young Children and Self-Esteem', describes how the exploration of nature as advocated by Rousseau (1762) and Froebel (1837) is a practical way for children to improve their inner development and self-esteem (Douglas, 2003:30-31).

Dewey (1859-1952) maintained the importance of experience, to learn by doing, as a central part of his educational philosophy. He 'considered the outdoors as a given and valued it immensely' (Rivkin, 1998:199).

Steiner (1864-1925) likewise tried to develop consciousness of self and the surrounding world. He developed schools that encouraged creativity, free-thinking, creative play and using natural materials (Steiner-Australia Homepage, 2008).

In relation to Ireland specifically, Duffy writes that 'play and the outdoors naturally complement each other…The outdoors has been our playground and classroom for hundreds of thousands of years' (Duffy, 2007:217). While she endorses the view that outdoor play and interaction has provided humans with knowledge and skills through the ages, she argues that for this to occur, the value and importance of the outdoor learning environment has to gain greater recognition and acceptance: 'outdoor play has become devalued and under threat from societal and attitudinal changes' (Duffy, 2007:217). She

concludes that there is an urgent need for the early childhood sector to examine and improve the current outdoor provision for young children (Duffy, 2007:222).

Karby (2004) writes how the Norwegian Ministry of the Environment 'focuses on *friluftsliv* as a recommended educational way of working in barnehager and schools' (Parliament report nr. 39, 2000-2001) (Karby, 2004:121). These are outdoor activities where the philosophy is to experience nature and take care of the environment to benefit children's health, activeness and ecological awareness. They apply the curriculum using mainly outdoor activities throughout the whole year. She notes that Hoyland (1999) evaluated the quality of these outdoor classes and her results show that 'wild environments and outdoor life are positive arenas for learning' (Karby, 2004:122). She also comments on research by Fjortoft (2001) that 'children develop better physical skills when they are given opportunity for outdoor activities from an early age' (Karby, 2004:122). Karby describes how the children she observed spent many hours involved in physical activity play, role-play, exploring and expeditions, and traditional play (games-related). The environment and its seasonal changes influenced the children's play. She concludes that

> *practical experiences from different situations give children fundamental knowledge, and in the barnehage they have the opportunity to share the experience linguistically and to interact based on these shared experiences (Karby, 2004:127).*

The Researcher was influenced by these accounts of practical experiences in the natural environment and felt that there was an opportunity to produce a programme of activities based in the natural environment, using ideas relevant to the Irish location and education context.

Paralleling this, is the theory of the 'Active Child' as the dominant, holistic developmental model for children today, which is widely accepted in Ireland and internationally. All recent policies in Ireland relating to children's learning and development espouse this model where the child is an active, constructive participant in his/her own life. There is also strong evidence that play is a crucial context for children's

learning (NCCA, 2004:44-47). Thus grew the idea of a research project based on activities in the natural environment for young active children. The objective would be to see if enabling fun, play and learning to take place simultaneously would enhance aspects of the Primary School Curriculum (1999), while also combining the principles set out in Towards a Framework for Early Learning (2004). The available literature was therefore considered under the following four headings:

- Policy
- Curriculum
- Play
- Natural environment.

2.2 POLICY:

This section focuses on the notion of the Active Child with regard to legislative demands. The programme had to fit within the confines of current Irish policies for young children; who are seen as active and constructive, wanting to participate in their own learning. Therefore, it needed to follow the principles and objectives of the UN Convention of Children's Rights (1989), the Primary School Curriculum (1999), The National Children's Strategy (2000), Towards a Framework for Early Learning (2004) and Síolta, the National Quality Framework (2006) as these pertain to early childhood education in Ireland today.

THE UNITED NATIONS CONVENTION ON THE RIGHTS OF THE CHILD (1989):

The United Nations Convention on the Rights of the Child (1989), ratified by Ireland in 1992, details special participatory rights of children which previously had been largely ignored or unknown. Article 3 states that the 'best interests of the child must be of paramount consideration in all actions concerning children' and Article 12 outlines how 'the child's views must be considered and taken into account in all matters affecting her/him' (United Nations General Assembly, 1989, in Síolta Research Digests CECDE, 2007:6).

This Convention reflects modern conceptions of childhood, and emphasises the widely accepted understanding of childhood as active, participatory and social. The child is able to construct their own learning and interact actively with adults in matters relating to their development, with due regard to their age and maturity. Thus, it was now incumbent on practitioners to actively promote children's rights (CECDE, 2007:6). The Convention was the first affirmation of the active child with a voice of her own in Ireland. Subsequently, all ensuing policy documents relating to children reflect its charter.

PRIMARY SCHOOL CURRICULUM (1999):

The Primary School Curriculum (1999) was used throughout as the main point of reference. Published by the Department of Education and Science (DES), it reflects the thinking and aspirations of the National Convention on Education (1994), the White Paper on Education, 'Charting our Education Future' (1995) and the Education Act (1998). It also embodies recommendations from the Review Body of the Primary Curriculum (1990) and the philosophy of *Buraclam na Scoile* (1971) (DES, 1999:2).

The Primary School Curriculum (1999) is a visionary document, 'designed to cater for the needs of children in the modern world and its introduction is an exciting opportunity for change and renewal in primary schools' (DES, 1999:3). It recognises that there are a variety of approaches, contexts and environments for optimal learning. It points out how the curriculum for the infant classes takes into account that each child is unique and has individual needs at this stage of development. Therefore the learning experience is informal, with emphasis on the element of play, language development and manipulative skills for enhancing motor and sensory development (DES, 1999:30). The curriculum accepts that children learn in different ways and that the process is more important than the product. It also specifies how environmental learning in context can be a rich addition to the children's experiences and development (DES, 1999:15).

THE NATIONAL CHILDREN'S STRATEGY: OUR CHILDREN – THEIR LIVES (2000):

The National Children's Strategy (2000) was drawn up by the Department of Health and Children (DHC) as a means to progress further the charter mandated by the United Nations Convention on the Rights of the Child (1989). It provides a 'coherent policy statement which reflects the aspirations and concerns of children themselves and those who care about them' (DHC, 2000:4). The strategy conceives a vision where

> *children are respected as young citizens with a valued contribution to make and a voice of their own; where all children are cherished and supported by family and the wider society; where they enjoy a fulfilling childhood and realise their potential (DHC, 2000:5).*

Importantly, it sought to establish the concept of the 'Whole Child Perspective' as the view of childhood at the centre of developing policies and services. The 'Whole Child Perspective' focuses on the active developing child with the 'capacity to shape their own lives as they grow, while also being shaped and supported by the world around them' (DHC, 2000:9). This perspective identifies nine developmental dimensions: physical and mental well-being, emotional and behavioural well-being, intellectual capacity, spiritual and moral well-being, identity, self-care, family relationships, social and peer relationships and social presentation (DHC, 2000:9). They are seen as separate but intertwined stages, each developing throughout childhood to enable the child to cope with adulthood.

The goals of the National Children's Strategy (2000) resulting from acknowledging this stance were:

- *Children will have a voice in matters which affect them and their views will be given due weight in accordance with their age and maturity.*
- *Children lives will be better understood; their lives will benefit from evaluation, research and information on their needs, rights and effectiveness of services.*
- *Children will receive quality supports and services to promote all aspects of their development (DHC, 2000:6).*

This strategy is the national policy framework within which a quality early years learning framework can be developed.

TOWARDS A FRAMEWORK FOR EARLY LEARNING (2004):

Towards a Framework for Early Learning (2004) was developed by the NCCA to support learning for all children from birth to six years of age. It explains the benefits of early learning in an informed and purposeful way as setting the 'foundation for all subsequent learning…Early childhood is a time of tremendous opportunity for learning' (NCCA, 2004:11).

Its vision is to promote early learning for all children in Ireland where they can 'develop as learners within the context of trusting and loving relationships with others and through meaningful engagement with their environment' (NCCA, 2004:13). They will be supported in their holistic development and in realising their potential, reflecting both individuality and diversity.

The purpose of this document is to develop a national framework for all children to experience 'appropriately enriching, challenging and enjoyable learning opportunities from birth through six years. It also has the role of ensuring that learning is progressing and that all areas 'are guided, supported and nurtured' (NCCA, 2004:14). It aims to encompass all different types of early learning experiences by complementing existing curriculum guidance and creating more 'coherence and connectedness across learning throughout early childhood' (NCCA, 2004:15).

Towards a Framework for Early Learning (2004) has many links with the Primary School Curriculum (1999). It is important that the two combine to ensure continuity in children's learning and the approaches used. They share many similar principles and can be mutually beneficial to each other (NCCA, 2004:16). Going forward then, it appears that a single framework from birth to six years should ensure that the earliest learning is not undervalued or fragmented; that it treats learning as moving along a continuum of ability; reflects diversity and informs and promotes multi-disciplinary practices (NCCA, 2004:16-17). Ideally, it would move smoothly and continuously into the Primary School Curriculum (1999) for all children.

SÍOLTA, THE NATIONAL QUALITY FRAMEWORK (2006):

Síolta, The National Quality Framework (2006), was developed to provide a common set of quality standards across a diverse range of settings for children from birth to six years of age. It is designed to assist everyone concerned with providing quality early education in Ireland to 'participate in a developmental journey towards the improvement and enrichment of young children's early life experiences' (Síolta Research Digests, CECDE, 2007:3). Schonfeld (2006: Internet) writes that Síolta acknowledges care and education as inextricably linked and is committed to aiming for a quality environment which will benefit all children in Ireland. It draws on international research discussing how the quality of early childhood programmes impacts their effectiveness for children.

The principles and standards recognised and embraced by Síolta include: children's rights, the active child who is a competent learner from birth; the importance of parents, followed by other significant relationships in the early years; equality of provision; respect for diversity; environments and promotion of child well-being; the role of the adult and teamwork; pedagogical concepts supporting the development of the 'whole child' and play as a core component of the well-being, learning and development of the young child (CECDE, 2006:4-7).

Thus, all recent policies have many common factors incorporating aspects of the active participating child, the importance of listening to their needs and of being child-centred; and the need to make provision for play and contextual learning environments. In devising the Action Research process, the Researcher endeavoured to keep these principles as the core of the programme.

This review continues with a closer examination of the Curriculum and how these policies are infused into national curricular objectives.

2.3 CURRICULUM:

The Researcher needed to have a good working knowledge of both the Primary School Curriculum (1999) for junior and senior infants and Towards a Framework for Early Learning (2004) to establish how 'activeness', or the notion of the active child, permeates national curricular objectives and to define the most successful environments and meaningful contexts for learning. A clear understanding of this was essential to the design of the programme of activities.

THE PRIMARY SCHOOL CURRICULUM (1999):

The Primary School Curriculum (1999) is ambitiously focussed on the principle of the child at the centre of the issue, as an active agent and co-constructor of his/her own learning. It uses many ideas from the latest theories and research surrounding the development of the whole child and incorporates the most advanced educational theory and practice. It celebrates each child as a unique being and is designed to 'nurture the child in all dimensions of his/her life – spiritual, moral, cognitive, emotional, imaginative, aesthetic, social and physical' (DES, 1999:6). Its aim is to develop every child to their full potential, to be achieved by using activity and discovery methods in an integrated curriculum and environment-based learning. The defining features of the Curriculum, as espoused in the document, are that it:

> *accords equal importance to what the child learns and to the process by which he or she learns it. One of its essential features is a recognition of the principle that there are different kinds of learning and that individual children learn in different ways.* [It stresses that there are a] *wide range of approaches to learning*, [and that] *it aims to enhance the enjoyment of learning and the motivation to learn (DES, 1999:10).*

With this in mind, the Curriculum gives flexibility to individual schools to:

> *plan a programme that is appropriate to the individual school's circumstances and to the needs, aptitudes and interests of the children.* [The schools will] *adapt and interpret the curriculum where necessary to meet their own requirements (DES, 1999:11).*

Thus, it can be seen that the Curriculum encompasses different ways of learning that are deemed beneficial to the children involved and it allows for schools to try a new idea to enhance their existing programmes and expand the learning experience for the students.

The Curriculum also specifically states that 'A rich experience of different aspects of the curriculum outside the classroom adds enormously to the relevance and effectiveness of the child's learning' (DES, 1999:15). This is entirely consistent with the pedagogical concepts of children learning by discovery, wonder and curiosity, using methods of guided activity and integrated, collaborative and collective learning; particularly bearing in mind the concept of contextual learning, whereby children learn best when the context has meaning for them (DES, 1999:14-17).

PEDAGOGICAL CONCEPTS:

Understanding the pedagogical concepts embedded in the Primary School Curriculum (1999) would make for a more meaningful programme of activities based on extending the children's knowledge, creating relevant contexts and opportunities for learning. In principle, Ireland has moved closer to the widely accepted position of how childhood development is conceptualised. The three major models that provide the basis for practice are: Piagetian constructivist theory, Vygotskian socio-cultural interactive theory and information-processing theory, or brain research (Fallon, 2007:17). This involves a move from individualistic developmental theories of understanding how learning and development take place to theories that emphasise the culturally and socially constructed nature of learning.

French discusses findings from a combination of many theorists such as Piaget, Dewey, Vygotsky, Donaldson, Bronfenbrenner, Bruner and most recently Rogoff, Canella, Prout and James in her paper, 'Children's early learning and development – a background paper' (2007). Key points from this are:

1. The child is an active learner, co-constructor of knowledge, full of wonder, with an intrinsic desire to master the environment, full of potential to explore, experiment, discover and interact with other people in a shared environment.
2. Learning and development are inextricably intertwined and embedded in the context of social relationships.
3. The adult plays a crucial role by:
   (a) planning the environment
   (b) supporting and enriching the activity through guided discovery and learning
   (c) using the spiral curriculum to reintroduce a theme in more detail to extend learning
   (d) eliciting first-hand experiences and self-directed problem-solving
   all of which are very important for the child's learning and development.
4. The social context plays a major role encompassing interaction between both adults and children. Children thrive on collectivity and collaboration. The zone of proximal development and scaffolding techniques are particularly useful social tools.
5. There is considerable democracy now between adult and child. (French, 2007:18-32).

TOWARDS A FRAMEWORK FOR EARLY LEARNING (2004):

Towards a Framework for Early Learning (2004) aims to integrate learning domains into a number of themes which incorporate all areas of holistic development (NCCA, 2004:22). Holistic learning and development, as developed by the NCCA in this document comprise the following four themes:

- Well-being
- Identity and belonging
- Communication
- Exploring and thinking' (NCCA, 2004: 22).

These themes interweave with the discrete development strands including cognitive, physical, social and emotional, creative and spiritual development into a more integrated system whereby the *process* of learning and development is more significant for each individual child, as opposed to prioritising achieving particular (measurable) educational outcomes. 'Consequently, the thematic framework supports development in a way which is more natural and enjoyable for young children' (French, 2007:12).

These themes can be defined further:

1. Well-being is the condition of being content, healthy and well-adapted to the environment. A child's well-being is an essential foundation for early learning and all subsequent learning.
2. Identity and belonging is a complex combination of characteristics, traits and behaviours.
3. Communication is the exchange of thoughts, information or feelings. The ability to communicate is at the very heart of early learning and development.
4. Exploring and thinking involves cognitive thinking, communication, sensory-motor skill and physical development in order to investigate and make sense of the environment (NCCA, 2004:23-32).

The pedagogical concepts embedded in this document embrace and complement those of the Curriculum which recommends that the children in the infant classes learn their subjects and strands in a 'highly integrated manner through the use of topics and themes' (NCCA, 2004:22). It supports and complements curriculum practices already in use while also taking on board the features endorsed by the National Children's Strategy (2000), encouraging children to have a voice and to participate fully in their lives, to enjoy varied experiences and have opportunities to learn and develop in all areas (NCCA, 2004:22).

It was a complex and challenging task to design a programme which would:

1. Enable the children to be active and constructive, while also developing their overall well-being and development as espoused by the National Children's Strategy (2000).
2. Augment aspects of the Primary School Curriculum (1999).
3. Simultaneously adhere to the vision of Towards a Framework for Early Learning (2004).

The Researcher decided to start with a theme such as a nature walk and cover a number of strand units in various subjects as the theme was explored and experienced by the children. The activity would be delivered using both the pedagogical concepts embedded in the Curriculum and the holistic learning themes developed by the NCCA. The objective of this was to see how children learn when in an experiential, contextual environment. The results of some of these activities and how they worked are detailed extensively in chapter 4.

2.4 PLAY:

> *In play, children develop and demonstrate exploration, creativity, spirituality, imagination, experimentation, manipulation, expression of ideas, social and interaction skills, divergent and abstract thinking and problem-solving capacities (Bruce, 2001). These skills are essential for the consolidation of learning and the construction of meaning and knowledge' (Síolta Research Digests CECDE, 2007:45).*

Play had long been seen as an inconsequential activity of children, not to be taken seriously, but recent work in this area sees play as a process, fundamental to children's enjoyment and facilitating their learning and development. Play is seen as the 'natural vehicle for holistic learning and development by young children' (French, 2007:41). It is emphasised in the Primary School Curriculum (1999) with reference to the infant classes that the element of play and informal learning experiences are particularly suited to the learning needs of young children (DES, 1999:30). Play is described in Towards a Framework for Early Learning as a crucial context for learning and as able to embrace all

areas of a child's learning and development (NCCA, 2004:44). Therefore, play, as an effective learning mechanism and the key to 'activeness' creating learning in the child, is discussed below as it could be used advantageously in the programme.

PLAY AS AN EFFECTIVE LEARNING MECHANISM:

Moyles (1994) describes a continuum of play, moving from pure play to non-play. Rubin developed the play observation scale (1989) and Hutt (1979) analysed play by using three main types:

1. Epistemic play, referring to exploratory, problem-solving and productive modes of play.
2. Ludic play, involving imaginative, fantasy, and socio-dramatic play.
3. Games-with-rules, including made-up and conventional games (NCCA, 2004:45).

Mercogliano (2007) discusses 'Real Play' as the kind that

> *arises out of children's spontaneous urge to experience excitement, wonder and meaning, is the best friend of inner wildness and, without a doubt, its greatest ally. The freely chosen and pleasurable imagining, exploring, manipulating, experimenting, relating, learning, laughing and risk-taking that constitute real play enable kids to integrate their minds and bodies into a unified, coherent and undomesticated whole (Mercogliano, 2007:57)*

He agrees with Piaget who, he says, defined real play as the 'linchpin of the knowledge - construction process…actions that are an end in themselves and do not form part of any series of actions imposed by someone else or from outside' (Mercogliano, 2007:58).

PLAY AND PRACTICAL ACTIVITIES:

Likewise, play incorporating practical activities has a major role in brain development and recent brain-research and information processing theory back this up. Wilson (1998) maintains that:

> *Knowledge really is the whole behaviour of the whole organism. And the mistake we've made, I think, isn't focusing on education. It's thinking that you can educate the mind by itself (Wilson, 1998:1 Internet)*

Wilson, a neurologist, made this comment in relation to his book where he strongly pursues the point that the hand and the brain evolved together over millions of years to their current sophisticated stage. He claims that the overuse of computers and lack of manual handling and manipulation by children today in many cultures has meant that their hands are not being used as they should be, with detrimental effects showing in their overall development of spatial relations and an inability to understand how things really work (Wilson, 1998:1-3 Internet).

In a similar vein, recent brain research upholds the view that for young children, manipulation and creating with messy materials help 'refine and organise sensory intake systems' rather than concentrating on higher level tasks the brain is not yet ready for (Healy, 2004:55). Healy describes how measuring different substances enables mental patterns to emerge, incorporating visual and motor learning concepts such as texture and volume. Handling materials, integrating creativity and fine motor skills, descriptive and discursive language, making judgments, predictions and plans, all influence healthy brain development which in turn improves social interaction (Healy, 2004:77-78). Thus, it is seen that play incorporating practical activities has re-established itself as a vital context for learning and development.

PLAY WITHIN THE CURRICULUM FOR YOUNG CHILDREN:

Towards a Framework For Early Learning (2004) is explicit in its expression of play being a critical context for learning and that it can 'support all aspects of the child's learning and development' (NCCA, 2004:44). Síolta (2006) endorses this view. One of its principles is that play is:

> *central to the well-being, development and learning of the young child…Play is an important medium through which the child interacts with, explores and makes sense of the world around her/him…play will be a primary focus of quality early childhood settings (CECDE, 2006:4 Internet).*

The Curriculum endorses the same pedagogical principles and emphasises the importance of play in the infant curriculum and the informality of the children's learning experience, as well as the importance of language and manipulative skills (DES, 1999:30). It also gives individual schools flexibility to adjust the curriculum to suit their particular planning needs, so there is clear scope for a play-based programme.

The emphasis in Ireland is largely on play within a structured environment, either suitable indoors, or in small, secure, outdoor spaces. As a result, some types of play are very restricted or neglected. Fallon writes that

> *Physical activity in a child's early years of development enhances overall socio-emotional, cognitive and physical development and forms the basis for future activity patterns. A child should have access to both structured and unstructured physical environments (Fallon, 2007:18).*

One of the challenges in the project was to design the planned activities using the medium of play as much as possible, incorporating different types of play into structured activities, such as the nature walk, farmyard visit, frogspawn expedition and cooking while also showing how unstructured free outdoor play contributes an identifiable learning experience for the children. This is described in detail in chapters 4 and 5.

2.5 THE NATURAL ENVIRONMENT:

Having begun the literature review by discussing the benefits of the natural environment, this final section reiterates the important part that nature plays in children's lives and the serious consequences of too little access to nature. Recent publications such as Richard Louv's 'Last Child in the Woods, Saving Our Children from Nature- Deficit Disorder' (2006), and Chris Mercogliano's 'In Defense of Childhood, Protecting Kids' Inner Wildness' (2007) raise many interesting and worrying points about children's lives as related to the natural environment today. Both discuss how much children used to play in nature and the benefits arising, compared to children today who spend so little time outdoors and so much time inside or in structured outdoor activities. They also both point

out the restorative effect of nature when children do get the opportunity to experience the natural environment.

Articles are appearing that suggest unstructured outdoor play needs to be restored to children's lives, (Rivkin, 1997; Clements, 2004; Burdette and Whitaker, 2005) and that outdoor play in natural environments stimulates all aspects of children's development more readily than indoor environments, (Moore and Wong, 1997). These examples all support the notion that the natural environment is an important context for learning. This research programme was based in and around the natural environment. Thus an exploration of literature surrounding this topic was carried out to determine the influence of the environment in devising an effective programme, and to look briefly at what recent research shows concerning exposure, or lack thereof, to the natural environment.

THE ACTIVE CHILD AND THE NATURAL ENVIRONMENT:

Fallon discusses how physical contexts should reflect the activity needs of the child and provide opportunities for engaging with the environment, exploring it, discovering, experimenting, appreciating wonder, cooperating with others and being involved in small-group collaboration. An environment successfully structured to meet the child's needs will be safe, secure and yet have an appropriate degree of risk. This offers challenge, stimulates curiosity, choice and interests. The natural world can stimulate the senses and inspire creativity (Fallon, 2007:19). The natural environment provides many sources of wonder, curiosity, adventure and discovery for the active child. It is an integral part of participation discourse for young children, but has often had to battle the protective discourse whereby it is seen as dangerous, risky, not worth the cuts and bruises that may emanate. Child-centred practice under the auspices of the active, participating child should provide a balance between the discovery approach to learning and an acceptable level of risk. 'Safe Risk is challenging for the child and supports the development of autonomy and self-reliance, and provides a positive sense of control' (CECDE, 2005 in Síolta Research Digests, 2007:17).

Ouvry (2003) suggests five reasons why children should experience outdoor play:

- *Movement allows children to relive their experiences.*
- *Children need daily outdoor access as a right (given the potential health benefits in later life).*
- *There is a need for 'risky freedom'.*
- *Unique opportunities for learning take place, such as change in weather, finding beetles under a stone, space to undertake large scale constructions.*
- *Behaviour improves outdoors.*

> *The most effective learning comes from simple, versatile and abundant materials. Children gain significant play value from elements within the natural environment, such as slopes, trees, bushes, sand, long grass and water. Natural features such as these should be retained or provided in play facilities (CECDE, 2006), (CECDE, 2007:17).*

This more recent thinking manifestly leans more towards participation and away from the protective discourse that has been so prevalent for many years.

LACK OF ACCESS TO THE NATURAL ENVIRONMENT:

There is a burgeoning amount of emerging literature displaying increased concern about the lack of natural environmental space available for children to play in, the inability of children to use time outside in creative, imaginative, free play due to an overload of structured play time and the pervasive use of technology. 'I like inside better, cos that's where the electrical outlets are' (Louv, 2006:10).

White (2004) writes in his article 'Young Children's relationship with Nature: Its importance to Children's Development and the Earth's Future' that:

> *'The culture of childhood that played outside is gone and children's everyday life has shifted to the indoors (Hart 1999, Moore 2004). As a result, children's opportunity for direct and spontaneous contact with nature is a vanishing experience of childhood' (Chawla 1994, Kellert 2002, Kuo 2003, Malone 2004, Pyle 2002, Rivkin 1990, Wilson 1996)' (White, 2004: 2 Internet).*

Sobel (1999) stresses the importance of giving children time in the natural environment, to connect with nature and to understand it. This is supporting children's biological tendency to bond with the natural world. Otherwise, we resort to teaching it in the

classroom by abstract methods which is not understood properly by children and leads to ecophobia, rather than fostering environmental awareness.

There is growing evidence of dissatisfaction with school systems based largely on controlling the children. Mercogliano (2007), writing and teaching in the US claims 'conventional schools wave a rhetoric baton at learning, but the overwhelming majority of them in this country are organized around a single fundamental principle: control' (Mercogliano, 2007:21). Large class size and over-active insurance procedures mean that children in many Irish primary schools are not allowed to run in the playground, which in many instances is made only of tarmacadam. In some US States, recess has been abandoned in favour of squeezing in another class (Jarrett, 2002).

Burdette and Whitaker (2005) suggest that today a lot of play is structured and in an 'educational' environment. As a result, very little play is unstructured, active and outdoors (Burdette and Whitaker, 2005:2). They argue that this sort of play is fast disappearing and for health, attention and emotional reasons, urgently needs to be restored to children's lives.

Similarly, Fjortoft and Sageie (2000) have done a study researching the growing concern in Norway about children spending too much time indoors instead of playing outdoors. Their conclusions were that playing and activities in the natural environment improved children's motor fitness and afforded 'possibilities and challenges for the children to explore their own abilities' (Fjortoft and Sageie, 2000:2).

Pellegrini and Smith (1998) feel that physical activity play is a particularly neglected aspect of play research. This includes play involving symbolic activity, or games with rules, social or solitary games, activities such as running, climbing, chasing and play-fighting (rough and tumble play) (Pellegrini and Smith, 1998:577-578).

Louv (2006) has written persuasively on the subject of 'nature-deficit disorder' which describes 'the human costs of alienation from nature, among them: diminished use of the

senses, attention difficulties and higher rates of physical and emotional illness'. But, on a more positive note, he identifies the opposite as 'natural abundance' whereby time in nature reaps many gains (Louv, 2006:34). Research is showing concrete evidence of nature's biological, cognitive and spiritual benefits. New studies by Kaplan and Kaplan (1998), and Taylor, Kuo and Sullivan (2001, 2002) assert that increasing time in nature actually helps various attention difficulties, ADHD sufferers and other concentration problems.

Holmquist (2008) wrote about the rise in obesity levels and how it is becoming epidemic in Ireland, with 1 in 4 children overweight. Irish girls aged 13-15 have some of the highest obesity rates in the world, 30% of 9 year old girls and 12% of 7 year old girls in Ireland are now pre-obese. She also describes a weight-loss boarding school in the US where

> *it is strangely moving to see teenage girls running around like little kids playing hide-and-seek in the fields. They are enjoying their new energy, they are finally being allowed to be children in a natural environment (Holmquist, Irish Times, 05/01/08, Weekend review).*

THE NATURAL ENVIRONMENT WITHIN THE CURRICULUM:

The Primary School Curriculum (1999) incorporates provision for outdoor learning by agreeing that learning outside the classroom can add 'enormously to the relevance and effectiveness of the child's learning' (DES, 1999:15). However, the natural environment as a learning experience is in its infancy in Ireland, particularly as part of a curriculum programme. This Action Research project was carefully designed to incorporate the natural environment as much as possible into all the activities. The children were exposed to many aspects of the outdoors in the setting described in chapter 1, a lot of which was an entirely novel experience for them. The challenge was to devise activities sustainable in varying weather conditions and, at the same time, to reshape these in response to the unpredictable actual weather of the day. Often it was frosty, wet, windy and even snowy. These were all learning experiences to harness for the children's benefit. It was a major task in the research to provide opportunities in the natural environment in all these weathers and then to deconstruct how successful they were against the Primary School Curriculum (1999), Towards a Framework for Early Learning

(2004) and pedagogical concepts. The findings are discussed throughout chapters 4 and 5.

2.6 SUMMARY:

This chapter began with a synopsis on the benefits of the natural environment in general, and some relevant studies that have observed children involved in the natural environment. This was followed by a review of the Irish position on early childhood education in relation to a wide range of literature on the subject. It has found that recent advances made in the theoretical aspect of early childhood education have been reflected in Irish educational public policy, starting with the UN Convention of Children's Rights (1989), continuing with the new Primary School Curriculum (1999), The National Children's Strategy (2000), the publication of Towards a Framework for Early Learning by the NCCA (2004) and Síolta, the National Quality Framework (2006). These all recommend a high standard of holistic development policies for the active, constructive child, who should have a voice that is listened to and the right to participate in matters concerning them.

These policies aim to attain holistic development, through integrated and connecting themes, using the curriculum mechanism. Play is widely accepted as an effective vehicle to inspire learning for young children. Exposure, both structured and unstructured, to the natural environment is also regarded as highly beneficial. The chapters that follow will discuss the programme that was devised, based on these conclusions, to see if practical activities based in the natural environment could augment the topics learnt in the classroom and provide an extra learning dimension in achieving the objectives of the Primary School Curriculum (1999).

CHAPTER 3: METHODOLOGY:

3.1 EDUCATIONAL RESEARCH PARADIGMS:

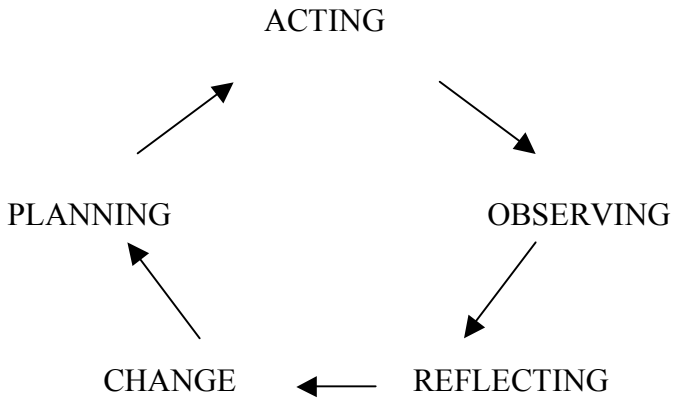
The educational research paradigm used in this Research Project is known as 'The Critical Theoretic Approach' as described by Hitchcock and Hughes in their book Research and the Teacher: A Qualitative Introduction to School-based Research (1995).

This is primarily Action Research which involves identifying a problem, gathering information, analysing, planning action/intervention and implementing outcomes. An integral component is that it involves both the active aspect and an examination of the underlying theory (Hitchcock and Hughes, 1995:28). It was an action research project, but the Researcher believes it was strengthened by some quantitative data collected; hence the plan to carry out the programme with a relatively large number of children. Hitchcock and Hughes describe action research as a strategy of educational research in the 'Teacher as Researcher' movement headed by Lawrence Stenhouse. The main points are that it is action involving a change in order to try and improve a situation, with collaboration between the researcher and the participants (Hitchcock and Hughes, 1995:27).

ACTION RESEARCH PROJECT:

Kemmis and McTaggert (1982) point out that the action research project includes 'trying out particular ideas in practice as a means of improvement and increasing our knowledge of the curriculum as both form and content' (Hitchcock and Hughes, 1995:28). By embarking on a project such as the one envisaged, the Researcher had the responsibility for planning the changes, carrying them out in collaboration with the teachers and, through appropriate data collection and analysis, evaluating what happened. Very importantly, the process of reflection is an integral part of the success of this method. Essentially, it is a 'grass roots practice' (Hitchcock and Hughes, 1995:28).

This can be represented diagrammatically as follows



Hitchcock and Hughes (1995:29):

Action Research can use a variety of both qualitative and quantitative techniques. The purpose is to 'improve practice, rather than to find truths, universal or particular' (Griffith and Davies, 1993:45, in Hitchcock and Hughes, 1995:28).

3.2 DETAILED RESEARCH METHODOLOGY:

PARTICIPANTS: (all names have been changed to preserve confidentiality)

The plan for the research was based on three different groups of children participating, each group having a three hour session weekly for eight weeks.

1. Eighteen children from Junior/Senior-Infants in the surrounding area who have chosen to participate on a Saturday morning. (Identified as school C).
2. Class of twenty-three Junior Infants from a disadvantaged school in the city. (Identified as school K).
3. Class of 16 Senior Infants from another disadvantaged school in the city. (Identified as school M).

It should be noted that sampling decisions were affected by the local school being unable to organise for the children to come as a class during school hours due to the unavailability of bus transport as a result of funding limitations. However, the principal and teacher gave the project as much backing as they could by taking in letters of permission through the school, receiving them back from the families, sending out the parent surveys at the end and ensuring most of them came back.

Also, the disadvantaged schools were the only schools with funding to contemplate buses for a project such as this. Ideally, it was envisaged that the research would also have a middle-income school involved from the city to provide some comparative data, but this was not possible due to funding constraints.

The setting, while very child-friendly, needs to be well supervised. To this end, the Researcher was helped by the teachers who came out with their class and by Transition Year students, fulfilling the Gaisce Awards criteria for volunteering in the community. They assisted the Researcher with the activities each day, helped to supervise, used the video and camera to record the activities in action when possible and filled out the children's surveys with them on the last day.

Permission was sought by:

1. Approaching the principals of the schools to discuss the proposal with them.
2. Writing a letter to the principal of each school describing what was involved (see Appendix C).
3. Writing a letter to the families explaining what the research project was about, asking for their cooperation in allowing their child to participate, to wear old warm clothes and, if possible, wellington boots. Permission was requested for photographs to be taken while the children were busy at their activities to use as an aid to recording data only and for any comments they made to be written down anonymously. Real names would not be used in the research write-up. They were also requested to fill out a short survey at the end. Parents were always welcome to

come and observe the activities. Signed permission sheets needed to be returned before the research started (see Appendix C).

THE ACTIVITY PROGRAMME:

The activity programme comprised three main elements:

1. Planning a variety of practical activities pertinent to the Primary School Curriculum (1999), based in the natural environment which included both outdoor and indoor areas.
2. Carrying out the activities which aimed to cover some units of various subject strands and incorporate the pedagogical principles inherent in the Curriculum. The activities were also planned to incorporate the principles of Towards a Framework for Early Learning (2004).
3. Observing, collaborating with others, collecting and analysing data to determine if learning and development emerged for the children from a very practical-based programme in a natural environment.

An overview of the entire programme is set out in Appendix A.

Dewey (1938) noted many years ago:

> *the plan, in other words, is a cooperative enterprise not a dictation. The teacher's suggestion is not a mold for a cast-iron result, but is a starting point to be developed into a plan through contributions from the experience of all engaged in the learning process. The essential point is that the purpose grow and take shape through the process of social intelligence (in Hubbard and Power, Living the Questions, 1999:52).*

Cohen, Manion and Morrison (2007) note that this type of educational research should not be seen as quantitative versus qualitative tension, but that by using data from both disciplines, one can gain the 'most valuable features of each' (Cohen et al, 2007:297). In this regard, the Researcher hoped to gain some quantitative data to underpin and improve what emerged from the qualitative data.

3.3 DATA COLLECTION:

In qualitative inquiry, data analysis is intertwined with data collection and ideally should be part of the research from the beginning of the project. Data collection was in triangulation form. This was essentially gathering data by a number of means so that cross-comparison of the results could help paint a more accurate picture of the results of the research. The types of data collected and documented were:

- Observation
- Survey questions
- Informal interviews
- Photography and video, included for memory and recall purposes only.

OBSERVATIONS:

1. Researcher's observations: This provided the opportunity to gather live data throughout the programme; to look directly at what was taking place rather than rely on second hand accounts. As a participant-observer, the Researcher had to try and juggle the role of teaching and researching concurrently. Observation was documented by the Researcher keeping a journal and writing it up after each session.

2. Teachers' observations: These were documented at the end of the programme through completion of a survey and informal interviews. The teachers were very helpful with their observations of the process and acted as a validity check for the Researcher. The teacher interviews and surveys carried out at the end of the programme were most valuable as they evaluated whether they felt the activities had achieved the aims and objectives of some of the strands of the Curriculum and compared the value of the practical, hands on, outdoor approach with the classroom environment.

SURVEY QUESTIONS:

The teachers filled out a detailed survey at the end of the programme. This gave a lot of feedback about how the activities linked in with their curricular plans in school (see Appendix B).

The parents were asked to complete a short survey which the schools distributed to, and collected from, the parents (see Appendix B).

The volunteer students wrote up a short survey with each child on their last day. This was a form of mini-conferencing as they transcribed what the children said (see Appendix B).

INFORMAL INTERVIEWS:

At the end of the activity programme, the Researcher carried out informal interviews with the teachers. Their observations and comments were particularly useful as they had been intimately involved and were in the classroom with the children for the rest of the year. They had the most objective and knowledge-based information for the research. These interviews, along with their surveys, gave the Researcher substantial feedback about the programme itself, the children's attitudes towards it and what they remembered when back in the classroom. The Researcher did a final follow-up informal interview with two of the schools a few months later, (the other teacher was away on maternity leave), for a more reflective view of what they thought the programme had achieved.

PHOTOGRAPHY AND VIDEO:

Photography and video captured living moments of action, interaction and involvement of the children in the activities. The programme was run over a ten week period and it provided helpful recall for all the participants. However, as it was not done systematically all the time, it was not used in a more analytical way in this project.

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3.4 DATA ANALYSIS:

Analysis is 'a move from the description of what appears to be the case to an explanation of why what appears to be the case is the case' (Hitchcock and Hughes, 1995:96). It takes place when the researcher tries to organise, categorise and index data into some sort of sense and to identify emerging themes. This helps to find a reason for events and leads to developments about the causes and processes of certain behaviours. Evaluating and examining the implications for practice and policy should be linked in with analysis of the data (Hitchcock and Hughes, 1995:97). Throughout this process, the importance of reflexivity, of description rather than opinion and the balancing of description and interpretation cannot be over-estimated. Quality research is about discovery (Hitchcock and Hughes, 1995:296).

It was useful to start analysing data as the research was in action. It enabled the Researcher to assess material collected early on and see if some areas were heavily documented and others less so. Themes and patterns began to emerge and needed to be noted as systematically and methodically as possible.

In chapter 4, where the Findings are documented in detail, the Researcher has deconstructed the activities carried out to see how they weighed up against the objectives of the Primary School Curriculum (1999), Towards a Framework for Early Learning (2004) and their inherent pedagogical concepts. The results of all the collated data from the planned activities and the observations are tabulated for easier reading and comprehension. The teachers' perceptions from their surveys and interviews are presented after each activity. They are also discussed in greater depth in chapter 5 as they evaluated the overall effect of the programme. The parents' and children's evaluations of the programme from the surveys they completed are presented in chapter 4 with graphs and comments explaining the data compiled. Finally, the data collected by photography and video is also discussed.

3.5 LIMITATIONS:

Funding limitations meant that only children from the nearby school, coming by their own choice on a Saturday morning, or children from disadvantaged schools with funding available could realistically be considered as a sample. While this showed many interesting features in its own right, it would have been desirable to have included a middle-income suburban school in the sample also. This could have made an interesting cross-comparison.

The timing of the research was not at the prime choice of seasons. It was disappointing to miss the Autumn weeks. The weather was a distinguishing factor between February and April. The winter was long and cold, which curtailed the amount of time spent outside. However, on the other hand, weather is a factor to be worked around and to work with rather than against, as it is a constant reality and the children saw aspects of winter previously not experienced (such as playing in the barn while watching a violent storm rage outside).

3.6 THE ETHICAL ROLE OF THE RESEARCHER:

In this type of research, one was operating within the 'moral sphere' of education. The nature of education involves 'judgements, assumptions, values and beliefs held about what is right and wrong, good and bad, appropriate and inappropriate' (Hitchcock and Hughes, 1995: 44). Thus, the role of ethics took on great significance, as it refers to questions of value and how one deals with the 'beliefs, judgements and personal viewpoints' wrapped up in all that is entailed in the educational world, with its myriads of varying interests, including teachers, students, parents, boards of management and government policies (Hitchcock and Hughes, 1995:44).

A central issue was the question of responsibility. In this project one of the main ethical questions posed was the Researcher's responsibilities towards the subjects, in this case, her responsibilities towards the children, their teachers and their parents. The purpose of the project was clearly explained to the schools and the parents in various covering letters

(see appendix A). Permission was sought and granted to engage with the children, to take photos and video and ask the teachers, parents and children to fill out short surveys at the end (see Appendix B).

Qualitative research, by its nature, involves 'ideas, which entail values, and values involve assumptions about right and wrong, good and bad' (Hitchcock and Hughes 1995:44). The Researcher herself, who is central to the project, finds that she is not value-free and is in a difficult position when trying to maintain ethical neutrality. 'The question is not whether we should take sides, since we inevitably will, but rather whose side are we on?' (Becker 1967:239, in Hitchcock and Hughes, 1995:52).

The natural environment is personally highly valued by the Researcher and regarded by her as very important in everyone's lives. But from the research perspective, the prime objective was to deliver a programme to the children and observe as objectively as possible their response to it. The ethical tension was to provide the opportunities for the children to experience the various activities and then to be able to become the 'outsider' and describe what was happening. While the Researcher had detailed observations and notes to use, the interviews with the teachers and surveys completed by the teachers, children and parents all enabled cross-analysis, providing feedback and information which would either corroborate and validate the conclusions or provide conflicting perspectives.

The methodology applied thus had a number of checks to achieve objectivity and to counter any subjective bias, which met the Researcher's ethical responsibility to carry out this research as objectively as possible.

The other main responsibility issue with this project was providing as safe a natural environment as possible, as the children's health, safety and well-being were at the core of this programme. The primary safety features could be controlled satisfactorily, for example: gates shut, fences maintained, animals shut into pens/sheds, appropriate hand-washing facilities. The children were spoken to about the secondary safety issues such as

watching for bumps, lumps, wood on the ground, muddy areas, the possibility of slipping and that they must respond immediately to the whistle. To an extent, they had to learn what they could negotiate and self-regulate themselves. This was a life-learning situation. They were negotiating 'risky freedom', as Ouvry (2003) describes it (Síolta Research Digests, CECDE, 2007:17).

3.7 SUMMARY:

The core question being examined throughout this Action Research project was: can a programme of practical activities be devised, based in and around the natural environment, that enhances achieving aspects of the Primary School Curriculum (1999) for young children? Applying the methodology discussed in this chapter, the activities consisted of topics designed to cover objectives in the Curriculum, particularly involving strand units in the subjects of Science, PE, Geography, SPHE, Visual Arts, and also incorporating Maths, English and History. The programme was hands on and experiential. Data was collected and analysed throughout. The programme included four different activities each day. In order to distil the results, the Researcher has chosen five activities (from the twenty-six used in the programme, ref Appendix C) to deconstruct in detail and discuss. These are good examples of the programme in general and they give a genuine flavour of the project overall. The following chapter discusses these findings.

CHAPTER 4: FINDINGS:

4.1 OVERVIEW:

In this chapter, five of the activities that were covered in the programme are described and then deconstructed in detail. The first three are outdoor, structured activities which cover distinctly different areas. The first focuses on a nature walk in the woods, the second is set in the farm yard with the animals and the third is a frogspawn expedition down the back-field. The fourth activity is located in the kitchen using natural ingredients as much as possible, such as flour, milk, seeds, raisins, vegetables and water. Due to wintry weather conditions a lot of the time, the kitchen became even more of a useful haven. As will be seen, the kitchen activities covered a huge amount of practical learning and manipulative skills. The fifth activity is unstructured, outdoor free play, which is a synopsis of all the outdoor free play the children participated in. This entailed a wide variety of physical activity.

The activities are first described ethnographically. The intention is to construct a vivid picture of the activity so the reader can better understand the real-life situation involved. Participant observation to gather data in the naturalistic setting was used extensively (Cohen et al, 2007:167-168). This description is followed by a detailed deconstruction of the activity weighed against:

a) The Primary School Curriculum (1999)
b) Towards a Framework for Early Learning (2004) and pedagogical concepts.

Each component part of the activity is separately documented and shows, in table format, which unit of the specific curricular subject it covered and how.

The tables are accompanied by the Researcher's comments as a participant-observer and empirical data from the children relating to the specific activity. At times this is supported by observations from the students, or description of video and photographs taken. This is followed by the teachers' perceptions of that activity, documented in the teacher surveys and interviews. The children's and parents' perceptions of all the activities are summarised in section 4.7, based on the surveys they filled out and

comments from the children during the programme. The chapter concludes with a short section on the part played by photography and video in the project. Chapter 5 following is a detailed discussion of the teachers' overall perceptions of the programme on a deeper level and what effect it had on a longer term basis.

4.2 ACTIVITY 1: STRUCTURED OUTDOOR ACTIVITY ~ NATURE WALK, TREES IN EARLY SPRING:

ETHNOGRAPHIC DESCRIPTION:

The children went out into the field where there are a number of large trees. I told them we had King Pine who was the tallest tree and still had greenish leaves and asked which one did they think he was? Then there was Queen Walnut, the next biggest, Prince Ash, and Princess Sycamore. There was also Baby Birch who had been eaten by the cows and was just recovering! The children ran around the field finding the right tree and climbing up a bit of the trunk if they were able. They discovered that King Pine had pine-cones around its base, and even on the branches, and that Queen Walnut had empty walnut shells around her base, which had been eaten by the birds. They picked up sticks, pine-cones and conkers along the way, and we went through the 'forest' (woods) and through the tunnel of bare lime trees. We looked at the black buds on Prince Ash's twigs, and found some ash saplings which we could recognise from the black buds… 'They're like toe-nails, - dinosaur toe-nails!' (Jackie).

We discovered that King Pine had 4 little pine trees around the field, as they also had pine-cones, so we knew they must be pines. We found a baby oak tree too, which had been grown from an acorn and was the smallest tree in the forest. They even found a few tiny acorns, which were scarce because the birds evidently favour their taste. Jim suddenly lamented.. 'I've losted my coconuts, I've losted them!'

Around the back of the forest we found a chestnut tree surrounded by lots of conkers. They could all identify with the conkers and loved collecting them. Excitement mounted as this chestnut tree has a tree house built beside it and they could climb a little wooden

ladder up to a branch. This had to be ascended by everyone, to sit up high for a minute (just above my head). 'I see King Kong on the roof' (Joel).

As we went along, the children were collecting small sticks, pine-cones, walnuts and conkers. They came in bearing their treasures, which we put into buckets. We planted a few conkers, which had little shoots emerging, into small pots inside to see if they would sprout into seedlings. Two of these grew into little seedlings and they later saw the new leaves form. They then did a related art activity which was to mould some clay into a 'mud-base' to make a forest. As they designed their own forest, they chatted with each other about how they were making trees with their sticks, and what seeds they were putting in; trying to remember what all the new names were. They brought this home with them.

DECONSTRUCTION OF ACTIVITY 1 AGAINST THE PRIMARY SCHOOL CURRICULUM:

This simple activity will now be deconstructed to analyse how it weighed against the objectives of various strands in the Primary School Curriculum (1999) and whether it achieved augmenting the Curriculum in any way.

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Table 4.2.1: Deconstruction of Activity 1 against the Primary School Curriculum:

Component of activity	Curricular unit*	How achieved?
Finding and naming a variety of trees in early Spring - pine, walnut, ash, birch, oak, chestnut.	Science: variety and characteristics of living things. Processes of life. English: oral language. Geography: local natural environment.	Children observed, discussed and identified 6 types of trees in their habitats. Seasonal change, observed seeds of last year and buds appearing this year. Developing concepts by listening to stories about the trees. Explored and discussed aspects of environment-woods/forest.
Searching for and collecting the seeds of some trees: pine-cones, walnuts, acorns, chestnuts.	Science: variety and characteristics of living things.	Children sorted seeds of trees into sets. Recognised different types.
Running around field finding the trees; climbing up the tree and tree-house.	P.E: Outdoor and adventure activity, outdoor challenge. Athletics.	Children undertook adventure trail, appreciated and gained respect for environment. Running over distance.
Planting the conkers into small pots inside.	Science: processes of life.	Exploring conditions for growth of seed in soil. Waiting for shoots.
Making their forest using clay as mud, the sticks and seeds they had picked up.	Visual Arts: awareness of shape, form and texture. Maths: classifying. Shape and space.	Manipulating clay into a mud-base, getting their sticks, pine-cones and other seeds to stay in and resemble their idea of 'the woods'. Sorted their collections of objects. Sorted and combined shapes from the environment.

* Source: Dept. of Education: Primary School Curriculum (1999)

Table 4.2.1 above shows how this activity could be divided up into a number of specific components, each of which linked with different strands and subjects on the curriculum. The practical and active nature of the activity, while carrying out the objective of achieving the specific strand-unit, fully engaged the children. This was observed by the Researcher and the teachers, and photographs and video clips taken by the students backed this up. Comments from the children when asked what they thought of the day included: *'the most fun thing was collecting the "onckers" in the forest' (Jim); 'I liked*

running around and picking up sticks' (Valerie); 'I liked picking up sticks' (Sarah); 'I like the tree house' (Peter); 'very good, really very good' (Mary).

Now, the same activity will be deconstructed with the emphasis on the pedagogical concepts covered and incorporating the themes in Towards a Framework for Early Learning (2004) in Table 4.2.2 below:

EMBEDDED PEDAGOGIC CONCEPTS, TOWARDS A FRAMEWORK FOR EARLY LEARNING:

Table 4.2.2: Embedded Pedagogic Concepts, Towards a Framework for Early Learning:

Component of activity	Pedagogic concepts	Early learning themes	How achieved?
Finding and naming a variety of trees in early Spring - pine, walnut, ash, birch, oak, chestnut. Searching for and collecting the seeds of some trees: pine-cones, walnuts, acorns, chestnuts. Running around field finding the trees; climbing up the tree and tree-house.	Active, constructive child. Guided activity. Environment-based learning. Wonder and curiosity. Guided activity. Collective learning. Active child. Discovery.	Exploring and thinking. Communication. Well-being.	Children ran around in the field and woods to find each tree, learnt what each was called. Searched for and collected seeds themselves. Discussed with each other what they had found. Running all over the area looking for trees and seeds. Challenged by climbing up part of a tree and the tree-house.
Planting the conkers into small pots inside.	Curiosity Constructing knowledge.	Exploring and thinking.	Intrigued that conker might grow into baby tree.
Making their forest using clay as mud, the sticks and seeds they had picked up.	Integrated learning. Guided activity. Practical-based learning. Spiral curriculum.	Exploring and thinking. Communication. Identity and belonging.	As they worked, they talked about what they had picked up, tried to remember names, designed own forest.

Again, it can be seen from Table 4.2.2 that this activity also achieved a number of pedagogical concepts embraced by the principles of the Primary School Curriculum (1999) and Towards a Framework for Early Learning (2004). Observation by the Researcher showed that the practical, playful approach to learning as they ran around discovering and exploring in a real context kept the children totally occupied. For example, racing to see who could find 'King Pine first, followed by 'Queen Walnut'. The children themselves commented: *'my favourite thing was running around the field and picking up sticks and all that stuff' (Sam); 'my favourite was the hunting for stuff in the forest' (Holly).*

TEACHERS' PERCEPTIONS OF THE ACTIVITY:

The teachers felt that this activity achieved a number of the strand units on the Science strand as tabled above. The children learnt first hand about trees, leaves, pine-cones, conkers and sticks. They liked the way it linked in with the Arts, construction and clay, and PE strands. They felt the children gained by being so active while learning and developed an awareness of safety and dressing for the environment. They saw the children's oral language develop and felt that they also learned to help each other to find things, or to check with each other if they had found the right thing.

'It was seen as a fantastic opportunity for children from urban areas to experience a rural setting first-hand…The children have learned lots of new words and understand much more about trees now…They learned for themselves which is much more valuable to them in the long run' (Teachers in school K).

'The children enjoyed the freedom (while organised and planned) of running in fields, scavenging in woods and open spaces that simply can't be created in such a beautiful and real context in school. Learning occurred incidentally throughout. The children were having so much fun they did not realise that teaching and learning was occurring' (Teacher in school M).

'They developed the ability to identify and dress themselves in appropriate clothing/shoes for relevant situations and weather conditions' (Teacher in school M).

'The activity was meaningful, enjoyable and still a real hands-on approach to play and investigation' (Teacher in school C).

4.3 ACTIVITY 2: STRUCTURED OUTDOOR ACTIVITY ~ A WALK DOWN THE FARMYARD AND CARING FOR ANIMALS:

ETHNOGRAPHIC DESCRIPTION:

The next day we set off with the bird-feeders we had filled to put on various trees on the way to the farmyard. The birds were very hungry due to the extended cold period we were having and came to feed as soon as the feeders were up.

Down in the farmyard, the three calves were in for the day waiting for the vet to dehorn them. The children fed them hay and dragged over the hose to give them water. This took five of them in a joint effort. They filled up the wheelbarrow with straw and, again collectively, four of them wheeled it over to the duck-shed where they brought in armfuls of straw and spread it around the shed. They were delighted to see some eggs in the nests which were randomly around the floor in the straw. They found two huge, white goose eggs, three white duck eggs and two brown hen eggs. Eggs were collected and put into a bucket, unfortunately one fell and broke. They filled up their bath with more water from the hose, again lots of help together. They watched the ducks, hens and geese as they came out, walked around, looked for food and swam and cleaned themselves in the pool. In the sheds further up the yard were some more animals; the dog, Sasha, and two rabbits, Fluffy and Peter, were the current residents. They could go into the rabbits and pet the dog over the half-door.

We had some eggs in an incubator inside which subsequently hatched. The first achievement was two baby chickens, one black and one yellow. The second attempt

brought forth five ducklings, four brown and one yellow. On their final visit in the Summer, they were thrilled to see four baby bunnies produced by 'Fluffy and Peter'.

Inside, where they can see them each day, are a budgie and a goldfish.

DECONSTRUCTION OF ACTIVITY 2 AGAINST THE PRIMARY SCHOOL CURRICULUM:

This simple and popular activity encompassed a number of interesting aspects. It covered various units in the Science strand, but also incorporated Visual Arts, English and Maths skills.

Table 4.3.1: Deconstruction of Activity 2 against the Primary School Curriculum:

Component of activity	Curricular unit*	How achieved?
Feeding the birds	Science: Variety and characteristics of living things. Visual Arts: Manipulative skills. Environmental awareness and care, appreciate attributes of natural environment, people sharing environment with animal life. Developing sense of responsibility. English: Oral Language.	Children observed different types of birds coming to the feeder. Saw how badly they needed food. Set of little garden birds. Group helped to put nuts into feeder, watched where we hung them in the garden. Discussed how they needed help from us during Winter, no insects to eat.
Hay, water for the calves	Science: Variety and characteristics of living things. Processes of life. English: Oral language. SPHE: my friends and others. Helping each other, sharing, trusting. Developing citizenship, cooperating, taking turns.	Recognising animals, understand their need for feeding in Winter, and for water. Discussed what hay is, how it is different to straw. Took turns to get handfuls of hay, group of 5 held the hose together and helped to fill the trough.

(Table continued on page 48)

Table 4.3.1: Deconstruction of Activity 2 against the Primary School Curriculum (continued):

Component of activity	Curricular unit*	How achieved?
Straw, water for the ducks, geese and hens.	Science: living things, processes of life. Visual Arts: balance, manipulative skills. SPHE: helping, sharing, cooperating. English: oral language development. Maths: classifying, matching, comparing, counting.	Filled up wheelbarrow together, 4 of them manoeuvred it over to shed, and group helped to spread it around. Filled the pool for ducks and geese with hose. Groups of 4 together. Talked about straw, its use as bedding, discussed how 3 red/ brown hens, 4 brown ducks and 1 white duck and 2 white geese all lived together.
Collecting eggs.	Science: processes of life. English: oral language development. Maths: counting, classifying, comparing, matching.	Laying eggs as a natural process. How they make a nest, hens up high, ducks and geese cover eggs in nest on ground. 2 huge goose eggs, 3 white duck eggs, 2 small brown hen eggs. 1 broke, how many left?
Visiting sheds with dog, rabbits.	Science: living things, processes of life. English: oral language development. Maths: Counting, comparing, classifying.	More varieties of animals. Saw their needs and differences in care. Chat about differences, what little animals need, animals have some similar needs and some different. Counting, comparing and categorising all the different animals.

(Table continued on page 49)

Table 4.3.1: Deconstruction of Activity 2 against the Primary School Curriculum (continued):

Chickens and ducklings. Baby rabbits.	Science: processes of life, variety and characteristics of living things. English: Oral language development. Maths: counting, comparing, classifying, matching. Science: English: Maths: (as above).	Extending cycle of life. How eggs, if incubated or sat on eventually might turn into baby chicks/ducklings. No goslings because no gander. Discussed eggs in incubator and what might happen. After hatching could talk and compare between black and white chick, 4 brown ducklings, 1 white duckling. Saw how grey fluffy rabbit and white one could produce 2 black, 1 ginger, and 1 brown-grey babies. Saw how small they were, learnt how mother had made nest using her own fur for them.

* Source: Dept of Education Primary School Curriculum (1999)

This activity had a lot of component parts as seen in table 4.3.1. From the Researcher's observation notes, anything involving animals tended to bring out strong feelings in the children. *'I'm minding the egg, and it's going to hatch' (Sarah); I'm looking after a baby duck' (actually an egg!) (Joan); 'the cows are mooing back to me! (Chelsea).* Generally, they were caring and interested. They realised they could help to look after them and seemed to enjoy this contribution rather than looking at them in books or on a screen. Those that had any pets at home related stories about them and this helped to forge a link of communication between home and the programme. The farmyard chores also enabled a lot of group work, collectivity and collaboration to take place. These learning situations arose naturally, bringing straw over to the duck shed for example and it was interesting to see how the children coped with doing a chore on a group basis that needed everyone to cooperate, such as pulling over the hose to fill the water trough. Emerging here was the importance to the children of doing real activities that were genuinely helpful and contributing to the running of the farmyard. *'1, 2, 3 pull now,' video-footage of group of*

children dragging over hose, followed by carefully holding it while they filled up water trough. 'Watch it, it's not full yet'. Look! The cow wants it already!'

EMBEDDED PEDAGOGIC CONCEPTS, TOWARDS A FRAMEWORK FOR EARLY LEARNING:

Table 4.3.2: **Embedded Pedagogic Concepts, Towards a Framework for Early Learning:**

Component of activity	Pedagogic concepts	Early learning themes	How achieved?
Feeding the birds.	Active child, guided activity, Environment-based learning. Meaningful context.	Exploring and thinking. Communication.	Children filled feeders themselves, walked outside and watched as they were hung up in trees in the garden. Birds came almost immediately to feed.
Hay, water for the calves.	Active, environment-based learning, collective learning. Constructing knowledge, meaningful context.	Well-being. Communication. Identity and belonging. Exploring and thinking.	Children collected hay themselves and threw it to the calves, they dragged the hose over as a group and together they held it while they watched it filling the trough.
Straw, water for the ducks, geese, hens.	Environment-based learning, practical-based learning, collectivity, collaboration, wonder and curiosity. Meaningful context.	Well-being. Communication. Identity and belonging. Exploring and thinking.	They collected the straw, in armfuls, put it in a wheelbarrow and 4 of them wheeled it over to the duck-shed where they offloaded it in armfuls in the shed, spreading it around.
Collecting eggs.	Guided activity, wonder and curiosity, sharing. Meaningful context.	Exploring and thinking. Communication.	They searched in the straw for eggs which the ducks and geese cover over after laying. They see the hens lay up higher and leave eggs visible. They realised what happens if they dropped an egg!

(Table continued on page 51)

Table 4.3.2: **Embedded Pedagogic Concepts, Towards a Framework for Early Learning (continued):**

Component of activity	Pedagogic concepts	Early learning themes	How achieved?
Visiting dog, rabbits in sheds	Constructing knowledge, active, discovery.	Exploring and thinking. Communication. Identity and belonging.	They saw other more domestic animals which they could pet. Saw how their care was different to the others in the yard.
Chickens and ducklings Baby rabbits.	Constructing knowledge, wonder and curiosity, environment-based learning.	Well-being. Identity and belonging. Communication. Exploring and thinking.	Saw cycle of life. Could touch the baby animals. Identified with smallness, innocence and care needed for babies.

Each part of the activity, as identified above, had important learning and pedagogical components. It became more and more apparent to the Researcher, through observation, that very small details can realise learning opportunities. When the children understood the context their interest, questioning and curiosity grew. For example, seeing and holding the eggs, *'J, this egg is massive it is, how come this other one's so much smaller?' (Mark); 'what kind of animal makes this egg?' (Tim)... 'a crow!' (Pat).* Feeding the garden birds and the budgie were also popular: *'why does he chirp and not talk?' (Nicki); 'why do the ones outside eat nuts and the one in here eats seeds?' (Andy).*

TEACHERS' PERCEPTIONS OF ACTIVITY:

The teachers really liked the way this activity gave the children the opportunity to *'be active participants in the learning process' (Teacher in school M).* They all felt the children's social skills and their ability to work cooperatively in group situations grew. It developed their questioning skills and they understood how important it was to listen to instructions. Exposure to real life situations, such as animals on the farm, improved their oral language. In addition, *'we used baby animals and eggs to do all sorts of maths activities in the classroom' (in discussion with Teachers in school K).*

The teacher in school M recounted how the children would discuss during the week what sort of progress the animals might be making, such as the ducklings and chickens. *'They also loved being practical and manipulating real, useful and appropriate items; such as the hose, buckets, straw and the wheelbarrow'.* One particular child, who is very weak academically, spent ages sweeping out the ducks' shed, '*He did an excellent job, and was obviously very proud of himself. This did far more for his self-esteem than struggling in the classroom' (Teacher in school M).*

They all felt that the activity met many objectives of the Curriculum while still being a hands-on, practical and play-oriented approach. *'It linked in very well with the new curriculum in that it was a real hands-on approach to play and fun' (Teacher in school C).*

4.4 ACTIVITY 3: STRUCTURED OUTDOOR ACTIVITY ~ EXPEDITION FOR FROGSPAWN

ETHNOGRAPHIC DESCRIPTION:

We trudged down through the paddock into the big back field and the children were free to run. This was a moment of pure freedom, as they ran through the grass all the way to the end of the field. The only hindrance was muddy patches and those who had not brought boots were definitely at a disadvantage. When we got to the end of the field, we veered to the right. I showed them where there were reeds growing and that meant it was much more watery and bog-like. I also explained that these reeds were often used for making St. Brigid's crosses. In the corner is a large boggy area with huge puddles emanating out into the field and some of these were full of frogspawn. It was fascinating to see the sheer volume of eggs that little frogs could lay. The children were mesmerised. The jelly-like substance was completely unknown to them and that the black spots were eggs was another amazing observation. We collected some in buckets which we brought back up with us. I left two of the buckets outside, brought two inside and put a small amount of frogspawn into a jar in a warm room. The ones in the jar turned into a little 'line', as the children described it, within the week and shortly after into little tiny

tadpoles. The children were just intrigued with them. The ones in the inside buckets became tadpoles next, but those outside were a long time turning as the weather was so cold and there was so much frost at nights. The little tadpoles grew quite quickly inside and were carefully watched by many children. Before they had eaten all the jelly, we put them outside to acclimatise and then on the children's last visit we had another expedition down the field to return them to the stream. They even found some little tadpoles still in the puddles, but these were now drying up

DECONSTRUCTION OF ACTIVITY 3 AGAINST THE PRIMARY SCHOOL CURRICULUM:

This was a more single-focussed activity, but again it managed to incorporate a number of curricular units, straddling Science, Geography, English and PE It also became a continuous learning process for the ensuing weeks as the frogspawn changed into tadpoles and subsequently into frogs.

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Table 4.4.1: Deconstruction of Activity 3 against the Primary School Curriculum:

Component of activity	Curricular unit*	How achieved?
Expedition down the field to find frogspawn.	PE: walk and outdoor and adventure activities.	Children walked and ran into unknown territory. Differing surfaces, hard, muddy, boggy. Big long field to explore.
Searching in puddles and boggy land for frogspawn. Finding and collecting frogspawn into buckets.	Science: variety and characteristics of living things. Processes of life. Habitats and environments. Geography: the local natural environment. English: competence and confidence in using language.	Children observed and identified the frogspawn in the puddles. Saw them in their natural habitat. Observed what frogspawn looked like in relation to 'being an egg'. Experienced the actual environment lived in by frogs and used to lay their eggs. Developed new words and contexts to understand life-cycle of frog.
Bringing buckets back up to the house.	PE walking/running. Outdoor challenge.	Long walk/run back. They enjoyed the freedom of running through field of grass.
Observing growth of eggs and change into tadpoles.	Science: living things. Processes of life. English: developing cognitive abilities through language.	Watched change from egg to tadpole, inside ones grew quicker, saw how they ate the jelly. Fed grass leaves when needed. Conversation about what happens as they grow, understanding of a difficult concept.
Return the tadpoles to their natural habitat.	PE walk/run, outdoor challenge. Geography: environmental awareness and care.	Another hike down the field. Ground much drier now. Appreciated that we share plant and animal life. Developing a sense of responsibility for taking care of the environment.

* Source: Dept of Education Primary School Curriculum (1999)

This was a different example of an activity that involved studying a topic in its real context. Again, the striking observations were the full participation and interest in this venture by all the children. This was captured well in photographs taken by the students. Each group reacted similarly in loving the freedom of running through the field, fascination at finding the frogspawn, collecting it and carrying it back. This interest in the project continued as the tadpoles emerged and grew. *'J, can we see the buckets, how*

big are they now?' were the first comments heard by the Researcher as the children got off the bus for the next few weeks. Other comments included: *'How do we cook frog's eggs? (Jamie); 'how wriggly they are' (Sally); 'where is their body?' (Tim); 'how could those tiny things possibly be legs?' (Alan).*

EMBEDDED PEDAGOGIC CONCEPTS, TOWARDS A FRAMEWORK FOR EARLY LEARNING:

Table 4.4.2: Embedded Pedagogic Concepts, Towards a Framework for Early Learning:

Component of activity	Pedagogic concepts	Early learning themes	How achieved?
Expedition down the field to find frogspawn.	Guided activity. Environment-based learning.	Well-being. Exploring and thinking.	A long walk into unknown territory. Anticipation, excitement, fear.
Searching in puddles and boggy land for frogspawn. Finding and collecting frogspawn into buckets.	Active, constructive child. Wonder and curiosity. Discovery. Practical-based learning.	Exploring and thinking. Communication.	Actively went looking for the frogspawn. Amazement when they found it themselves. Intrigued at the look and consistency of it. Very interested in the whole concept.
Bringing buckets back up to house.	Active constructive child. Curiosity.	Well-being. Identity and belonging.	Long walk, very excited to show their teachers and to tell them all they had seen and learnt. Also, longing to tell their families.
Observing growth and change of frogspawn into tadpoles.	Wonder and curiosity. Practical-based learning. Discovery. Constructing knowledge.	Communication. Exploring and thinking.	Over next couple of weeks they watched them growing and changing, bit by bit. Concept had meaning because it was learnt in context.
Return tadpoles to their natural habitat.	Integrated learning. Guided activity. Practical-based learning.	Well-being. Identity and belonging. Communication. Exploring and thinking.	Felt important to bring them back to their home. Interested about where they lived. Understood what natural environment meant.

As can be seen above, the pedagogical concepts embraced by this activity included many aspects of the active, constructive child finding wonder and curiosity through exploration in nature. This was a novelty for the children and their amazement was observed by the Researcher and the teachers and was also evidenced in the photographs and video taken by the students. The video-footage showed many of the children running the whole length of the field shouting for joy, some pretending to be horses, others slipping in the mud, and most of them fascinated with the frogspawn.

TEACHERS' PERCEPTIONS OF THE ACTIVITY:

In the teacher interviews, they felt one of the activities that impacted the children most was collecting frogspawn, watching it change into tadpoles and seeing the tadpoles growing.

'*The children were fascinated and in our school they managed to bring four of the tadpoles to frog stage. The children followed this progress for weeks and the parents were also very interested, hearing and seeing a lot of this adventure. It really brought nature to life for them' (Teacher in school C).*

The teachers appreciated how the children enjoyed the freedom of running down the fields and how this activity, while curricular-based, was set in a real, practical environment. '*The children saw relevance in the activity and were able to relate learning to real-life experiences' (Teacher in school M).*

The teachers in school K also added that being exposed to real-life situations improved oral-language study and history in that the children learnt new words, had a meaning for them and then remembered them back in the classroom context for discussion on the topics. *'The children seemed to remember everything they did, much more so than when sitting and learning in class' (Teachers in school K).*

4.5 ACTIVITY 4: STRUCTURED INDOOR ACTIVITY ~ COOKING AND KITCHEN ACTIVITIES:

ETHNOGRAPHIC DESCRIPTION:

The Researcher was very curious to see how cooking activities could be incorporated into this research project and how they could be used to augment and enhance learning activities in the curriculum.

Bread loaves (two types): We made bread using yeast and water with plain flour as the dough one week and a few weeks later we made bread using self-raising flour and milk. With both types of dough a lot of kneading is required, so the children were shown how to roll it in flour (which they had sprinkled themselves using a sieve with a handle they had to learn how to squeeze to make it work), then bang it with their fists and knuckles, not fingers. When they did it wrong they got very sticky dough all over their hands, which they did not like, so they generally realised how to self-correct very quickly. They banged it flat, rolled it up again, and repeated this kneading manoeuvre a number of times. They really enjoyed the noise they could make while banging and even the doubtful starters would get involved. The dough with the yeast was considerably more 'gooey' than the milk and flour dough which was more 'spongey'. The children realised it was different and we discussed which was easier, which they liked to do better and whether it tasted different. When they had finished kneading, they made their dough into the shape they wanted. Then we gave out little dishes of seeds/raisins for them to look at, hear about, taste, decorate on the top of their bread, or put in the middle if they liked; little black poppy seeds, golden brown linseeds, raisins and porridge oats.

Vegetable soup was next on the agenda. This incorporated learning about vegetables and weighing them. We had onions, potatoes and carrots on the table. These would be familiar to almost every child, although they did not all know an onion by name. There was a big old-fashioned weighing scales that worked on a balancing mechanism. We put on a 2lb/1kg weight on and then counted how many onions it took to weigh that much, how many potatoes and then how many carrots. The children took turns to put in the

vegetable, so we did a lot of counting until the right weight was reached. Each time it was a different number, so they could see that the vegetables were different weights. There was a smaller balance scale there too for the children to weigh different carrots, and see if they could guess which one was the heaviest.

Once we had weighed our ingredients, the children each peeled a carrot with a hand peeler, one between each group of three or four. The adults cut the carrots up into small pieces, the children then washed them in a bowl of water and put them in the saucepan. If they said they did not like soup, they could choose to eat the carrot raw instead. Many of them then chose to try to peel a potato. While this was going on, I cut up the onions and showed them how they were different and we discussed the pungent smell.

To keep them all busy, the adults cut up a few potatoes as well for the children to wash and put into the saucepan. The industry accompanying this activity was amazing. The children loved it, beyond all expectations. They found the challenge of peeling a carrot really fascinating. They were 100% preoccupied with it. [Interestingly, the most likely trouble-makers in each group were the children who concentrated most on achieving this skill]. They equally enjoyed washing and putting the vegetables into the pot. There was great conversation flowing about how I would cook it for them and keep it in the freezer until their next visit. I showed them how I put oil into the pan to start off the cooking process. They also enjoyed helping to sweep up the carrot peels from the floor and tidy up the kitchen.

The following week, we gave them the soup while they were all sitting at their tables. It was a bit like a restaurant bringing bowls of soup in and out, little jugs of milk if they wanted it cooler, spoons, and quantities of sliced bread. Some liked it to eat and some did not. But it gave rise to a lot of chat about good food, cooking and their ability to play a large role in making it.

DECONSTRUCTION OF ACTIVITY 4 AGAINST THE PRIMARY SCHOOL CURRICULUM:

The different cooking projects used a variety of skills and straddled a number of the strands in the Curriculum. By deconstructing the kitchen activities, it can be seen more clearly how they achieved various objectives of the infant Curriculum:

Table 4.5.1: Deconstruction of Activity 4 against the Primary School Curriculum:

Component of activity	Curricular unit*	How achieved?
Kneading and shaping dough.	Visual Arts: awareness of shape, form and texture. Manipulation skills. Science: forces.	The children handled, squeezed, banged and rolled the different types of dough.
Make into a little loaf. Looked at, discussed and chose seeds, raisins, to put on top. Bake in oven.	Visual Arts: awareness of shape and form. Moulding and shaping. Manipulative skills. Science: myself – use of senses. Energy.	Designed and made it into their unique loaf. Used thumb and finger to pick up seeds Used sight, smell, touch and taste on the whole process. Saw how baking brought about changes in the dough.
Discussing, naming, counting, weighing vegetables.	SPHE: taking care of my body. Food and nutrition. English: oral language development and gaining competence in using new terms. Maths: classifying, matching, comparing, counting, weighing.	Discussed vegetables, healthy to eat, did we like to eat them. How did they make soup? Differences between them. Named the different types, counted how many weighed 1 kilo, compared how fewer potatoes weighed the same amount as carrots. Weighed all the vegetables.
Peeling carrots and potatoes.	Visual Arts: manipulation skills.	New skill to work on. Took practice and concentration.
Washing carrot pieces, potato pieces and putting into pot to cook.	SPHE: hygiene related to food.	Learnt to wash vegetables when preparing them to eat or cook.

(Table continued on page 60)

Table 4.5.1: Deconstruction of Activity 4 against the Primary School Curriculum (continued):

Component of activity	Curricular unit*	How achieved?
Cleaned table, swept floor.	SPHE: developing responsible habits, hygiene. Science: Environmental awareness and care.	Put peels into compost, bits for rabbits to eat. Sweeping, wiping, cleaning.
Cooking soup.	Science: materials and change. Heat when cooking food. Use of senses.	Watched how the vegetables change as they cook. Smell of cooking. Taste of soup.

*Source: Dept. of Education Primary School Curriculum (1999).

Table 4.5.1 shows how much can be achieved in the kitchen. These are only a few examples of the assorted cooking activities actually carried out. But it was always apparent to the observers that the children loved all sorts of cooking and related kitchen activities such as peeling, washing, sweeping, cleaning. The children's comments bear this out, as this was the activity where they felt they had learned the most. *'I learned bread is better with seeds' (Luke), 'I learned how to make soup and peel' (Frank). 'We used onions spuds and, and CARROTS to make soup!' (Gary).*

EMBEDDED PEDAGOGIC CONCEPTS, TOWARDS A FRAMEWORK FOR EARLY LEARNING:

Kitchen skills incorporated many pedagogical concepts, seen more clearly when deconstructed as in table 4.5.2 on the page following:

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Table 4.5.2: Embedded Pedagogic Concepts, Towards a Framework for Early Learning:

Component of activity	Pedagogic concept	Early learning themes	How achieved?
Kneading and shaping dough.	Meaningful contexts. Creativity. Importance of process.	Exploring and thinking.	The children used their hands to explore and experiment with the dough. They could do it their own way.
Make into a little loaf. Looked at, discussed and chose seeds, raisins, to put on top. Bake in oven.	Accomplishment. Process. Guided discovery. Social, constructive interaction. Worthwhile contribution.	Exploring and thinking. Communication. Well-being. Identity and belonging.	They each made their own unique creation. They decided what to put on top. They discussed and chose. No right or wrong. Sense of achievement that they had made a useful contribution. It was real.
Discussing, naming, counting, weighing vegetables.	Social, constructive interaction. Meaningful context. Guided discovery. Scaffolding.	Exploring and thinking. Communication.	They were working with real ingredients in a meaningful context. Huge interest in the process involved.
Peeling carrots and potatoes	Meaningful context. Guided activity. New skill. Worthwhile contribution. Collective and collaborative.	Exploring and thinking. Communication. Well-being.	They had to share the peelers, all intrigued with this new skill. Watched and helped each other. Enjoyed the sense of usefulness.

(Table continued on page 62)

Table 4.5.2: Embedded Pedagogic Concepts, Towards a Framework for Early Learning (continued):

Component of activity	Pedagogic concept	Early learning themes	How achieved?
Washing carrot pieces, potato pieces and putting into pot to cook.	Guided activity. Useful. Collective. Meaningful context.	Exploring and thinking. Communication. Identity and belonging.	This became a team effort, waiting their turn, helpful to each other, felt grown-up and useful.
Cleaned table, swept floor.	Worthwhile contribution. Guided activity. Meaningful context. Accomplishment.	Exploring and thinking. Communication. Identity and belonging. Well-being.	They had a great sense of pride in cleaning up and enjoyed the skills of sweeping and wiping clean. They enjoyed feeling grown-up.
Cooking soup.	Meaningful context. Worthwhile contribution. Discovery. Scaffolding.	Identity and belonging. Well-being. Exploring and thinking. Communication.	They thought this was the ultimate in a real, grown-up process. It explained how food changes from raw to cooked. They were fascinated with this.

In trying to understand what exactly they learnt, as opposed to it being just a novel experience, it was repeatedly noted that they seemed to love feeling useful and enjoyed real learning related to their lives. *'I learnt how to cook, I'd like to make pizza again' (Valerie); I'd like to make rice crispy buns, soup and crack eggs again' (Carl*). *'Cool! Look how sticky my hands are!' (Jill).* Many of the parents commented how their child was always talking about the cooking and showing them what they had made. *'He loved baking and being able to show off what he made when he got home' (Parent in school C).* On a deeper level, as discussed in detail in the next chapter, it extended their conversation base and gave them a more discursive topic to engage in at home.

TEACHERS PERCEPTIONS OF THE ACTIVITY:

The teachers' observations during cooking activities were that **all** the children were always very interested and keen to learn. Their experience was that this was difficult to

achieve with these groups, particularly in the classroom. They were amazed at certain individuals who they said had little academic ability and very short concentration spans in the classroom. Watching them peeling carrots and struggling to peel potatoes, they commented:

'We have never seen him spend so long on anything before'; and of another child, *'he is so engrossed he does not even hear us talk to him' (Teacher in school K).*

This was further supported by a visitor who called in to the kitchen and was very surprised at their concentration on their work. *'They never even looked up, they concentrated on what they were doing all the time'.*

The children evidently enjoyed doing useful, contributory chores. This was apparent to all of us, particularly the teachers who were observing. They loved kneading the bread, shaping into loaves, peeling vegetables, washing them, cleaning up. One of the teachers discussed how they continually brought this practical knowledge, particularly from the kitchen, back into the classroom:

'Children love being practical and manipulating real, useful/appropriate items. They are constantly questioning and looking for concrete proof of the facts. With this in mind it has been necessary to set up various practical stations in the classroom' (Teacher in school M).

The teachers also felt that the kitchen provided a very meaningful context for every child. Food is a natural necessity and all homes have a kitchen. The children could relate what they did in the project as a real and practical part of life:

'The activities were curriculum based but set in a more real, practical and home environment. The children saw relevance in the activities and were able to relate the learning to real life experiences. The learning was meaningful for the children because of its practical content and contextual setting' (Teacher in school M).

The teacher in school C also commented how popular cookery was with the children: '*they told me at school what they had made and I think it made them feel really grown-up'.*

By deconstructing these activities that were devised and weighing them against the objectives of the infant curriculum, as well as weighing them against broad pedagogical concepts and the themes for young children in Towards a Framework for Early Learning (2004), it has been shown here that using cooking as a subject base can integrate many aspects of learning and covers objectives of the Curriculum in a constructive, practical and meaningful way for the children.

4.6 ACTIVITY 5: UNSTRUCTURED ACTIVITY ~ OUTDOOR FREE PLAY:

ETHNOGRAPHIC DESCRIPTION:

Outdoor free play occurred every day in some shape and form. It is arguable that a lot of what we did incorporated free play, but I will discuss now the actual periods classified as 'free play outside'.

Free play meant playing out in the garden on the climbing equipment, slides, trampoline, swings, climbing-ropes and rope-ladder and on the tennis court which doubles up as a basket-ball area; on the swings and ropes in the woods, playing in the sand and in the barn.

Playing in the garden was a very energetic pastime and the children ran around trying everything in a big frenzy. When they could stay out long enough, they calmed down after a while and tended to spend their time trying to master a certain piece of equipment. One day, for example, Carol (aged four) was trying to climb up the ladder, onto the fireman's pole and slide down. She found it a big challenge, but did it time after time for at least twenty minutes without a break until she had got it right.

Many of them would try to master the monkey bars and often I was so impressed at the amount of effort and persistence they could put in to it. The equipment provided an opportunity for the children to practice whatever motor-skill appealed to them. Others would try to master the rope ladder that wobbled a lot as they tried to climb it. Some spent a lot of time on the tennis court where racquets and balls were freely available to them, to use as they wanted. Usually a group of 6 or 8 would end up hitting balls over and back to each other.

In the woods, there are an aerial swing, ordinary swings attached to trees, monkey ropes, a climbing rope and a rope ladder. These are among the trees and wild flowers, and there is an old stone hut there too. Down by the mounds is a zip-swing, another daring challenge. The aerial and zip swings provide a scary, exciting challenge for the children who want to have a go, yet they are safe and possible for all of them to do under proper supervision. AJ, on the zip-swing looked terrified, but was determined to do it and had the biggest smile of accomplishment afterwards. He went back for more turns once he had managed it.

Sand play is an immense favourite with many children. They seem to get a lot of satisfaction and innate pleasure by digging holes, building castles, making roads. They had to share the shovels around and, if allowed, water and had to follow those rules too. Digging in the sand uses their whole body and was a very physical activity.

I consider running around the fields whether looking for flags, scavenging, treasure-hunting, picking daffodils and blossoms, heading for frog-spawn, running up and down the mounds, as a form of free play. It was a structured activity in an unstructured environment, and consequently the children were allowed a freedom and wildness that they do not often experience any more. For some, these were their favourite activities.

A very intriguing development took place during free play for one particular little girl. Nuala was unbelievably shy, so much so that when she first came out, if we happened to glance at her, she would immediately drop her eyes and stop any bit of activity she was

doing. She improved a little over the weeks and then, on day seven, one of the transition year students started up a mobile phone conversation with her. She had a toy one and he had his own. We were outside in the woods and she could stay behind a tree and talk. She talked and talked, laughed and told him a big story about going to McDonalds. None of us had ever heard her say so much. She really enjoyed it and since the other children were playing around there was no pressure on her to perform in front of them as there might be in a classroom situation. This boosted her confidence considerably and on day eight when they came out we could see that this new-found confidence was still there.

DECONSTRUCTION OF ACTIVITY 5 AGAINST THE PRIMARY SCHOOL CURRICULUM:

In deconstructing Free Play it can be seen that it covered parts of both the PE and SPHE strands. It gave the children an opportunity to use a lot of different equipment, involving many skills in the natural environment

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Table 4.6.1 Deconstruction of Activity 5 against the Primary School Curriculum:

Component of activity	Curricular unit*	How achieved?
Climbing the equipment involved monkey bars, fireman's pole, ladders, slides.	PE: gymnastics – movement. SPHE: myself, developing self-confidence, learning about one's body. Safety issues.	Developing basic movement actions involving climbing, transferring weight, balancing, swinging, twisting, turning. Children gained in confidence as they mastered new skills, developed strength and care for body physically. Learnt how to be safe on equipment.
Jumping on the trampoline. Lying on it and rolling around.	PE: gymnastics – movement. Athletics, jumping unit, SPHE. taking care of my body. Safety issues.	Developing strength in muscles by jumping, jumping for height, exploring ways of taking off and landing; coordination and rolling developed body awareness. Developing fitness, benefits of exercise. Learnt to self-regulate their own safety.
Swinging on swings and ropes. Playing on see-saws.	PE: gymnastics. Movement. SPHE. Taking care of my body. Safety issues.	Developed basic actions of swinging, twisting, turning, and balance. Developed body awareness through variations of direction, shape, speed, and pathways. Benefits of exercise and exploring different things body can do. Learnt what they were capable of themselves.
Tennis court. Playing with racquets and balls. Bouncing basket ball, running around.	PE: athletics, running and throwing. Games: ball handling, carrying and striking. Understanding and appreciation of games. SPHE: myself and others, relating to others.	Running around in different directions after balls. Short bursts of speed. Throwing balls. Developed bouncing and striking skills. Beginning to learn about hitting ball over net, waiting for partner to return it. Taking turns. Began to learn how to play with others, playing fair, including others.

(Table continued on page 68)

Table 4.6.1 Deconstruction of Activity 5 against the Primary School Curriculum (continued):

Component of activity	Curricular unit*	How achieved?
Running around in the woods and fields.	PE: outdoor and adventure activities. Walking, orienteering, outdoor challenges, understanding and appreciation of outdoor and adventure activities. Athletics: running. SPHE: myself, taking care of my body, safety issues, my friends and others.	Lots of exposure to running and playing in woods, fields. Treasure hunting, scavenging, looking for orienteering flags. Rope swings, rope monkey bridge, and challenges in the woods. Running through fields for frogspawn, collecting flowers, sticks, pine-cones. Running up and down the mounds. Became aware of the world through the senses, benefits of exercise, learnt how to be safe, did lots of activities in groups helping each other.
Sand play in the sand-pit.	PE: outdoor activity. Visual Arts: awareness of shape, form and texture. Construction. SPHE: my friends and other people. Relating to others.	This was a very physical activity. Children used up lots of energy digging, filling and carrying buckets of water. Handled, manipulated sand when wet and dry. Experimented with different shapes, holes, making designs in the sand. Made structures, knocked them down, built more. Learning to be fair, to take turns, to respect others' creations, helping in big digging projects.

*Source: Dept of Education Primary School Curriculum (1999)

Table 4.6.1 shows how much of the PE and SPHE strands were accomplished in various ways. The benefit for the children of being able to choose what they would do meant that they were all actively engaged all the time, but busy with their own choice of activity. They were immersed in the natural environment during these activities, which is elaborated on in more detail in the next chapter. *'I love the tyre swing because you can spin around and go really fast' (Frances). 'We love digging in the sand and looking for treasure. We're going to bury the shovels before we go so they aren't taken' (Emer and*

Annie). A number of the volunteer students commented how they watched the children try to achieve a new skill by persisting again and again at something they found difficult. For example: *'Dan kept hitting tennis balls all by himself for ages until he could get them over the net' (Frank). 'I saw how they kept on trying to do the monkey bars until they could do it' (Lucy).*

EMBEDDED PEDAGOGIC CONCEPTS, TOWARDS A FRAMEWORK FOR EARLY LEARNING:

These activities also incorporated various pedagogic concepts particularly involving the children's feelings of fun, well-being and accomplishment.

Table 4.6.2: Embedded Pedagogic Concepts, Towards a Framework for Early Learning:

Component of activity	Pedagogic concepts	Early learning themes	How achieved?
Climbing the equipment involved monkey bars, fireman pole, ladders, slides.	Active, constructive child. Practical-based learning. Constructing knowledge. Scaffolding. Discovery.	Well-being. Exploring and thinking.	The children chose what they wanted to do, they constantly found something challenging and repeated it a number of times to perfect the skill. Delighted with their achievements.
Jumping on the trampoline. Lying on it and rolling around.	Active, constructive child. Practical-based learning. Constructing knowledge. Scaffolding. Wonder.	Well-being. Exploring and thinking.	Sensation of jumping and springing up again. Learnt about balance, boundaries, abilities and limitations. Sense of freedom.

(Table continued on page 70)

Table 4.6.2: Embedded Pedagogic Concepts, Towards a Framework for Early Learning (continued):

Component of activity	Pedagogic concepts	Early learning themes	How achieved?
Swinging on swings and ropes. Playing on see-saws.	Active, constructive child. Wonder. Practical-based learning. Scaffolding.	Well-being. Exploring and thinking. Identity and belonging.	Again, sense of achievement, finding their abilities and limitations. Skill of balance needed. Feeling of freedom when swinging. Needed to ask cooperation from a friend to use see-saw, or push swing.
Tennis court. Playing with racquets and balls. Bouncing basket ball, running around.	Active, constructive child. Guided activities. Discovery. Practical-based learning. Constructing knowledge.	Exploring and thinking. Communication. Identity and belonging.	Learnt to consider and involve others, new skills of bouncing, striking, receiving, idea of team and cooperation introduced to improve fun.
Running around in the woods and fields.	Wonder and Discovery. Active, constructive child. Practical-based learning.	Well-being. Exploring and thinking.	Feeling of freedom and wildness. Exploring and finding nature, outdoor challenges, flags. Discovering new territories such as woods, fields, mounds, boggy land.
Sand play in the sand-pit.	Active constructive child. Collaboration. Discovery. Practical-based learning.	Exploring and thinking. Communication. Well-being.	Digging, using hands to sculpt. Experimenting with and sharing water, pipes, buckets. Using new ideas, repeating ones already tried. Team work, helping each other.

Table 4.6.2 shows how many pedagogical concepts are achievable by playing outdoors. The Researcher's observations noted this. The children's play was sometimes individual, practicing skills such as climbing or jumping for long periods of time by themselves (for

example, Carol on the monkey bars and the fireman's pole). It was cooperative where they helped each other, such as on the aerial swing pulling the rope for the person on the swing. They also used the space to play games together, such as hitting balls on the tennis court. The woods especially were enjoyed by the children as well as running through the fields. This was evident in the video-footage. *'They loved helping each other do the aerial swing in the woods, even the quiet ones were involved pulling the other kids' (Student helper, Kirsty). 'Look at all the flowers I got in the field for my Mum' (Rachel).*

The outdoor play was summed up by two girls who said: *'all we can do in school is run around the yard or play hopscotch all the time' (Jenny). 'I prefer being outside here than in the yard in school because there are less people and more things to do' (Jackie).*

TEACHERS' PERCEPTIONS OF ACTIVITY:

The teachers really enjoyed the children having such a variety of equipment to play on, and to improve their skills on. They relished the fact that:

'They could achieve numerous parts of the PE strand units so comprehensively, and with so much more ease than in the school environs (Teachers in school K), and '*The children have an abundance of energy which so often has to be curtailed in the school environment. But here they could use it constructively' (Teacher in school M).*

The teachers were delighted the children had the opportunity of learning ball skills. They often commented on children who were hitting balls across the net that they would not have thought they could do so well. Or they were surprised at the children who chose to do it (in discussion with teachers in schools K and M). They felt another benefit of the programme was that: *'we had the chance to step back from our normal duties and see the children from a different and more relaxed perspective' (Teachers in school K).*

They all reported back how much the children had enjoyed the freedom of running down the fields, wandering through the woods, finding flowers in the fields:

'Playing in the woods on the aerial swing, walking across the monkey ropes, exploring the stone house, hiding behind trees, and chasing each other on a sunny Spring day was a highlight for the adults as well as the children' (Teachers in school K).

This was the day when Nuala played the mobile phone game with one of the Transition Year students. The teachers were amazed to hear her:

'What happened with Nuala was huge, just huge. She has continued the improvement into the classroom and she could have taken months to get that far otherwise' (Teacher in school K).

They all found the appeal of the sandpit interesting and noticed how the children used a lot of socialising skills as they learned to share the equipment, take turns to get water, help each other with the pipe or getting their castle or tunnel the way they wanted. The teacher in school C said: *'a number of the children told me the sand was one of their favourite things to do'.*

Overall, the teachers felt that the free play sessions had really helped the children to grow up, that they were more social as a result, took turns better, helped each other and encouraged each other. They also learnt about what were their limits, what was safe and not safe for them.

'*They learnt to take on a challenge and if they did not take it on then, they often came back to it later, or the following week' (Teachers in school K).*

4.7 CHILDREN'S AND PARENTS' PERCEPTIONS OF THE ACTIVITIES:

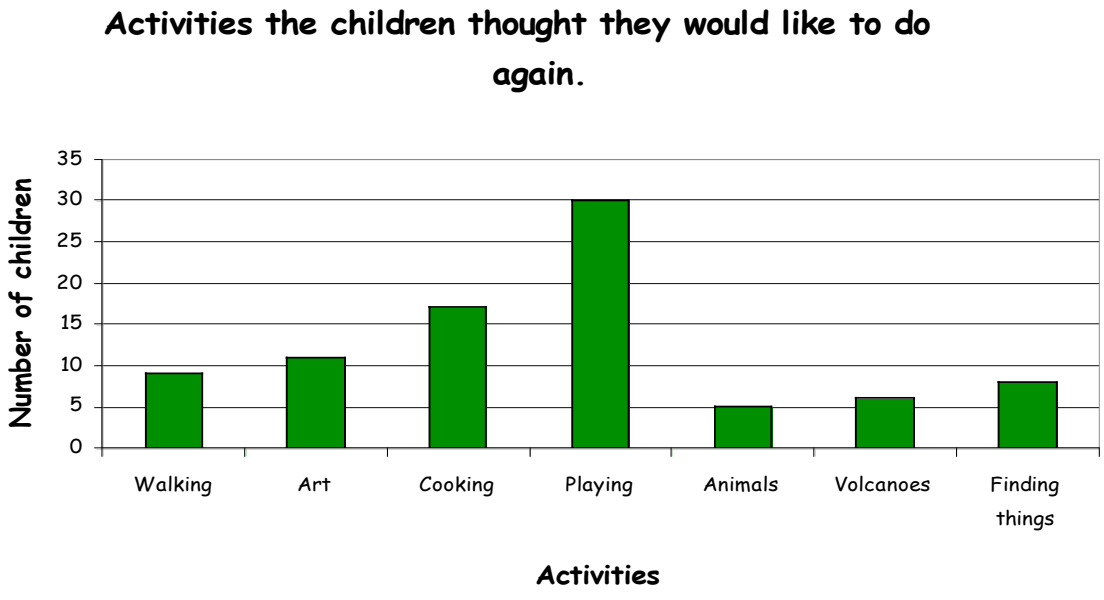
OVERVIEW:

This section evaluates the children's and parents' perceptions of all the activities. The data is drawn from the surveys they completed and comments noted during the programme. It should be remembered that the children were between four and six years old, and were trying to remember a lot of experiences over an extended period. Also, the return rate of parent surveys from some of the schools was low, so could not be used for a more formal quantitative analysis. Therefore, this section examines their perceptions collectively. The students completed a survey with each child on their last day with questions relating to the whole programme (see Appendix B). Their answers are presented graphically for easier reading and interpretation, followed by empirical data from the children and the parents.

ACTIVITIES CHILDREN WOULD LIKE TO DO AGAIN:

Chart 4.7.1 shows their answers to what activities they would like to do again:

Chart 4.7.1



While playing and cooking ranked the highest in terms of popularity, many of the children remembered and chose a large variety of activities they would like to repeat.

'I like being able to climb and practice monkey bars' (Carol).

'I love bouncing on the trampoline. I used to be scared, but now I can do it pretty well' (Valerie).

'I'd like to make a forest, rice crispy buns and soup' (Tim).

'Cook soup, look at the pony, chocolate biscuit cake, on the swings' (Sally).

'Making soup, playing on the monkey bars, on the trampoline' (Mary).

'Finding trees, monkey bars, volcanoes' (Peter).

'Trampoline, tennis-court, slide, swings' (Mark).

'Painting, making pizzas' (Nicki).

'Make a forest, rice crispy buns and soup, picking flowers, crack eggs, playing with sand' (Andy).

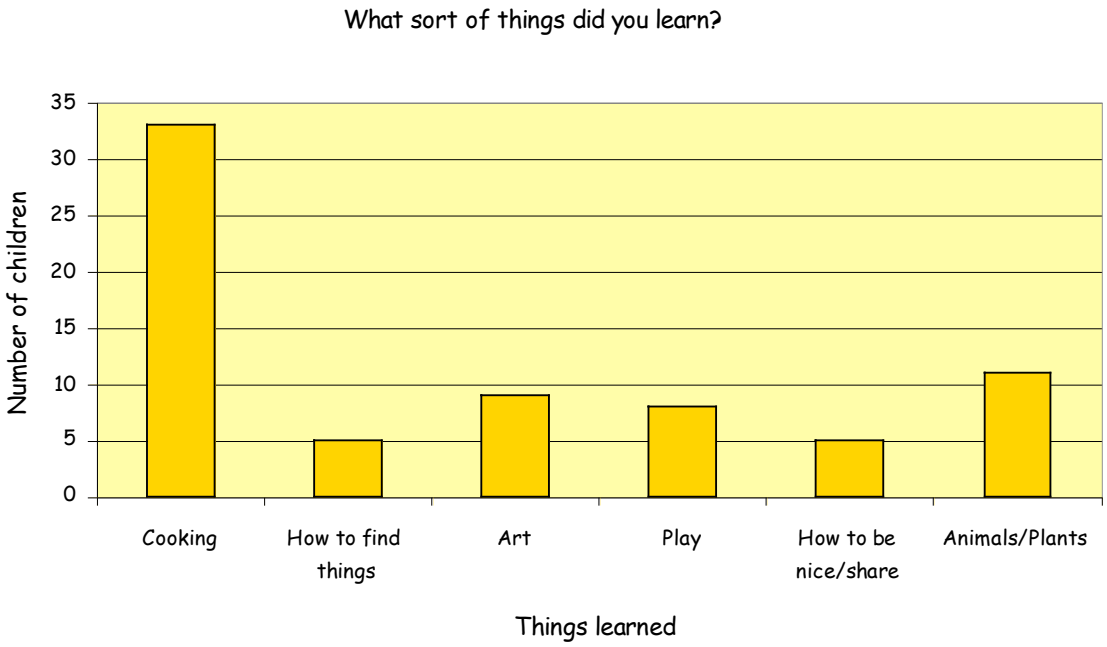
'Make things and being outside, going for walks' (Jim).

'Sliding down the pole, cooking cookies and eating all my smarties and bursting balloons' (Pat).

ACTIVITIES WHERE CHILDREN LEARNED MOST

The activity where they felt they had learned most was cooking:

Chart 4.7.2



The children's perceptions of what they had learned, as can be seen above, included answers that one would probably not have predicted such as 'how to find things' and 'how to be nice/share'. Giving them the chance to answer an open-ended question enabled interesting and varied replies. Their recognition of learning concepts like sharing and 'being nice' correlates with the parents' and teachers' perceptions of the improvement in their social skills. See below, and section 5.6.

'I learnt to make cookies and pizza and bread; and that I can go into the sitting room when I'm finished an activity' (Alan).

'I learnt to cook pizza, soup and all about frogs' (Jamie).

'Making cookies, being nice' (Chelsea).

'Frogspawn' (Joan).

'Playing, I learned how to make cookies, learned to cook' (Sam).

'Playing with my friends' (Eve).

'Playing nicely, how to jump on the trampoline' (Susie).

'Learned to share and make cookies' (Bill).

'I learned about conkers growing into trees and how to cook and also feed chickens' (Larry).

PARENTS' COMMENTS: COOKING

The parents' comments emphasised the role played by the cooking activities:

'*He loved baking and being able to show off what he made when he got home' (Parent in school C).*

'The cooking encouraged the child to be independent' (Parent in school C).

'He wants to make more things and cook' (Parent in school C).

'Loves to try and cook now' (Parent in school C).

'He loves to cook and talking about animals' (Parent in school K).

'She developed interest in cooking and animals' (Parent in school K).

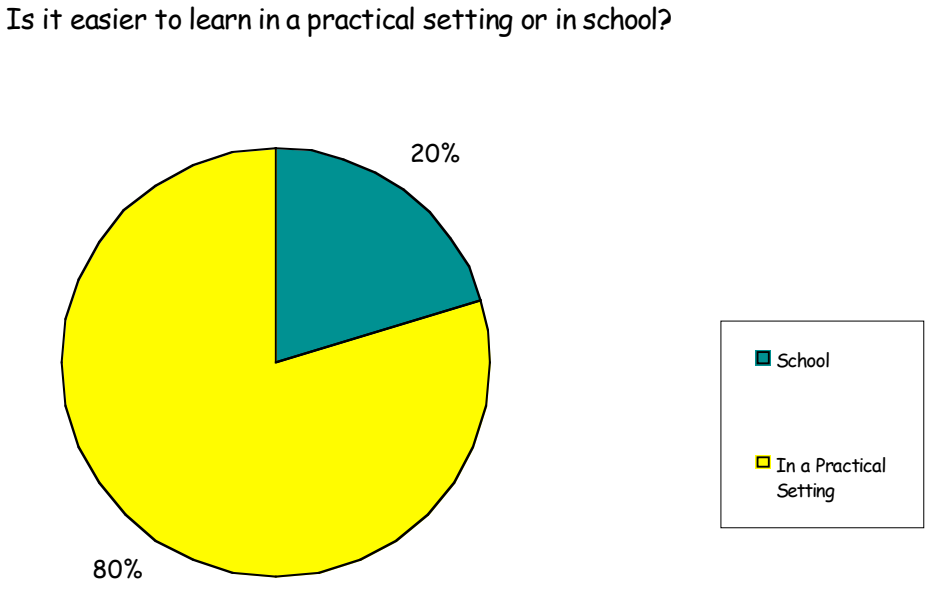
The number of children who answered that cooking was the activity where they learned most was very interesting. In the Researcher's notes, there are a number of references to

their concentration and involvement in trying to achieve the required skills each week. There was always lots of chat too as they worked, revolving around what they were trying to do, food they liked or did not like, what they ate at home. Kitchen activities provided conversation at home as well, as shown by the parents' comments above. The children expanded their world and their language by explaining what they had made and how they had made it. In the kitchen, there were also discussions extending beyond the actual cooking project, such as different types of breads in other countries and how many types of vegetables they could think of. One activity involved chocolate eggs on a chocolate nest and this gave rise to a discussion about what sort of birds they knew and what coloured eggs they might lay. Thus, a simple practical theme was often the basis for a much wider learning experience than the Researcher had planned.

WHERE IS LEARNING EASIER?

In answering the question about whether they found learning in school or doing practical things easier, some 80% of the children felt the practical activities were easier to learn and remember.

Chart 4.7.3



This would seem to comply with the pedagogical concepts of the active, constructive child described in detail earlier. It also has implications for the importance of contextual meaning, discussed in more detail in the next chapter. It would appear that the children found learning about topics much more meaningful when they were looking at, feeling, picking up animals, birds, eggs, frogspawn or collecting real leaves, sticks and stones. It was always easy to engage the children's interest with practical activities. The themes and topics used could be extended as needed but it was important to initially direct them at the children's level in order to retain their interest, for example, finding King Pine and pine-cones, Queen Walnut and walnuts.

PARENTS' COMMENTS: EASE OF LEARNING

The parents' comments reiterated these findings:

'I think the activities were a great help for my child, he seems to understand better and takes more notice' (Parent in school M).

'He explains in a calm and more detailed manner all he has seen and been told' (Parent in school K).

'She has more understanding about farms…[the activities were] *brilliant, she learned how to cook' (Parent in school M).*

'Activities were diverse, interesting and enjoyable for the child. He got great fun recounting the activities to his family' (Parent in school C).

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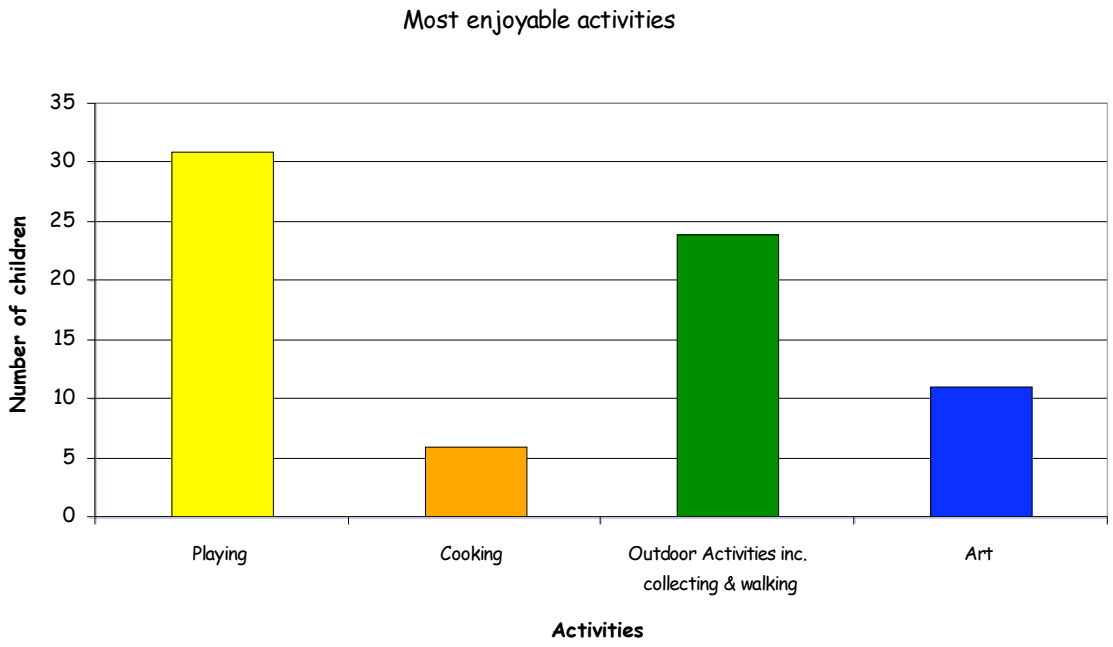
ACTIVITIES ENJOYED MOST:

The children were asked what activities they thought were the most enjoyable:

Chart 4.7.4



This is an interesting result to note that while children of their age are most likely to put playing top of the agenda, the outdoor activities including collecting and walking were rated nearly as popular. This shows that practical learning can be perceived by children as lots of fun. It also demonstrates how enjoyable they found outdoor activities.

'Playing with balls, it doesn't matter who wins' (Shane).

'Going on the trampoline, finding flowers' (Anne).

.

'Playing, looking around the field' (Jim).

'Playing in the sitting room' (Leonie).

'Making butterflies, going for walks in the woods and finding tadpoles' (Frances).

'Collecting frogspawn and climbing' (Andy.)

Many children answered *'playing', 'looking for conkers, pine-cones, sticks, and stones' or 'cooking'.*

PARENTS' COMMENTS: SOCIAL INTEGRATION, COMMUNICATIONS AND EXPECTATIONS

From a social integration point of view, many of the parents commented how they felt their child was getting on better with other children, was more able to socialise and less inclined to be shy. They had learnt to take turns and share. They had also learnt a number of life-skills such as dressing themselves on Saturday mornings, dressing for the weather, knowledge of animals and cooking.

'He has some more patience for waiting his turn for things' (Parent in school K).

On noticing any difference in the child's learning or behaviour*: 'Yes, playing and sharing with other kids' (Parent in school C).*

'It was good to get him mixing with his friends outside of school' (Parent in school C).

'Nora likes doing activities as part of a group now' (Parent in school C).

'It meant a great deal to us as Avril was very much to herself. Now she has no problem talking and meeting up with children her own age' (Parent in school C).

[On a Saturday] *'she was up at 7 in the morning dressed and ready by herself' (Parent in school C).*

'Helped with life-skills' (Parent in school M).
'She has been sharing a lot more and she has a sunnier outlook' (Parent in school M).

The parents' surveys included many comments about their child really looking forward to the day they were coming out to the farm.

'It is the only time I've seen him to get up on Monday morning and be excited to go to school' (Parent in school K).

She loved it, talked about it all the time. Every Sunday she'd be looking forward to Monday and all excited' (Parent in school K).

He loved going there. It was the highlight of the week' (Parent in school C).

'Really enjoyed going. Couldn't wait for Saturday morning' (Parent in school C).

'Anna couldn't wait to go, up at 7 in morning dressed and ready by herself' (Parent in school C).

'My child thoroughly enjoyed taking part in the programme' (Parent in school M).

Finally, the parents' surveys conveyed a lot of conversation from the children about the activities they had done which they had shared with their families. Every survey collected stated that they were delighted with the programme and wished it was longer, available to all children and done every year.

'Just a pity programme couldn't last a bit longer' (Parent in school M).

'Should do it every year' (Parent in school M).

'Brilliant idea. Wish it was on every Saturday' (Parent in school C).
'She looked forward to it every Saturday morning, was very relaxed when she came home and always asked was it on next week' (Parent in school C).

'There should be more places like this so other kids could enjoy them' (Parent in school K).

'If asked could Clare return to participate in another programme I would have no problem as I can see how much she enjoyed it every week with the smile on her face when she returned home' (Parent in school K).

'Going to J's farm should be made compulsory in all schools because of the joy my daughter got from it!' (Parent in school K).

4.8 THE USE OF VIDEO AND PHOTOGRAPHY IN THIS PROJECT:

Throughout the project, the students took photos and recorded activities with a video camera. It was done on an ad hoc basis as remembered and only when they were not too busy with the children. Thus, it could not be used in a formal way but the intention was to provide feedback, elicit more memories and provide a validity check for the participant researcher.

The photos were developed before the end and shown to the children to help them remember what they had done over the previous eight weeks. This provided for discussion with each other remembering different things and exclamations over the pictures.

As a participant observer, the Researcher had been happy with the level of interest that she could be aware of, but the photography showed this more clearly. For example, while the Researcher was leading the group in an activity and could witness first hand the participation and interest of some children, the video and photographs showed the same reactions among the remainder of the group. Examples include walking through the woods, carrying buckets while looking for the items they were collecting, the cooking activities showing all the children concentrating and participating as they created their own pizza, loaf of bread or cookie shapes and the free play activities, full of the energy of

children having fun, trying out new challenges and persisting with difficult tasks they have set themselves.

4.9 SUMMARY:

This chapter has applied a content analysis approach to the data collected. The examples and tables presented reduced a large volume of notes and documentation into a summary form, grouped around the five programme activities focused on. It also provided a description of each of the five activities, along with a detailed deconstruction of both the Curriculum objectives and the pedagogical concepts involved in each one. In addition, the teachers' perceptions of each activity have been noted. These combine to demonstrate that a practical programme, based in the natural environment, can achieve elements of the Primary School Curriculum (1999) and meet the objectives and developmental concepts set out in Towards a Framework for Early Learning (2004). Play was also seen to be an effective learning mechanism (Ref 4.6).

As a piece of Action Research, this project involved a planned change in learning strategies for children in the infant classes, with the collaboration of teachers and participants to find ways of improving practice. It was, as described by Hitchcock and Hughes, a piece of research using

> *action involving a change in order to try and improve a situation*…[It tried out] *particular ideas in practice as a means of improvement; and increasing our knowledge of the curriculum as both form and content (Hitchcock and Hughes, 1995:28).*

The aim was to see if a programme of structured and unstructured practical activities in the natural environment would improve children's learning. The empirical data in this chapter suggests that it did improve their learning, their desire to learn and their understanding of various concepts. This will be evaluated and reflected on more fully in the next chapter.

CHAPTER 5: DISCUSSION:

This chapter is an in-depth discussion of the teachers' overall perceptions and the Researcher's observation of the whole programme on a deeper level and what effect it had on a longer term basis. It is based on the data collected through the teacher surveys and by two informal interviews, one at the end of the programme and one a few months later. It particularly focuses on:

1. The value of the programme to the teachers as part of the curriculum, and
2. Whether the activities had a lasting learning effect on the children.

5.1 THEORY VERSUS PRACTICE:

The teachers felt that all the activities were very child-centred, focussing on the active child with everyone participating all the time. While they endeavour to do this in the classroom, it is very difficult for them to achieve as typically they are on their own with a large group of diverse children, in a limited environment. They all maintain that while the aims, objectives and directives of the curriculum are excellent, they find it very challenging, and in some respects impossible, to carry it out successfully. Reasons for this would be lack of funding and lack of opportunity because their environment has to be so controlled. They cited examples where children had tried to run away home from the schoolyard during the day. The lack of extra man-power to help with anything makes it very difficult to attempt excursions, experiments, or anything outside the structured classroom environment. However, they all strongly agree that the children do not learn particularly well in that structured environment all the time:

'We feel we are always juggling between the control issue and teaching at them versus the active, participating, constructive child. That concept is of course more ideal but can be very hard to work out in the actual class situation. What we, as teachers, loved when coming to your farm was that the children had more supervision, were always occupied, active and busy, so we could step back, see the children more objectively and enjoy them more' (Teachers in school K).

'The new curriculum is a lovely plan, very good content. But it only works if you have the ideal class, ideal class size and lots of funding. We don't have any of those. Your programme puts the theory in the curriculum into practice so easily' (Teacher in school C).

'The activities were so meaningful for the children because of their practical content and contextual setting. As they were curricular-based, they fitted easily into long-term and short-term school planning' (Teacher in school M).

The teachers all liked the practical nature of everything that was done in the programme. They agreed that the activities were truly child-centred, revolving around the constructive, active child. It was aimed directly at the children's level of development whereby learning, as noted by Crain, *'is through practical application'* (Crain, 2005:138-139). They all commented on how the hands-on approach kept all the children busy and using up their energy. It had a good effect on their concentration and engaged them in the activity. This approach embraced all types of learners, was non-competitive and catered for a wide range of abilities:

'I have an activity table where I can let one group go to at a time. With the children who need to be constantly active, or those who need to learn by doing the topic practically, this works well. But they have to take turns and I am on my own trying to oversee and help them all' (Teacher in school C).

'Learning was more practical based than we can do in the classroom. Even though we have now made more practical stations as a result, it is not as real a context as in the Rectory' (Teacher in school M).

5.2 PROCESS AND CONTEXT VERSUS PRODUCT:

> *'Children do not learn by first mastering the skills. They learn in a meaningful context and furthermore that learning should be rewarding and enjoyable' (Donaldson, 1978 in Dixon 2005:30).*

The teachers agreed with the Researcher's observations that the process in the activities was much more important than the product or outcome.

'*I'll never forget the time they spent collecting stones, where you had shown them a big one and a little one and they had to find ones in between! They were interested and learned lots about weight, volume and size without realising it. For them it was just a game!' (Teacher in school K).*

The teachers confirmed the significance of learning in context. *'The importance of learning in context became far clearer than we had realised before' (Teachers in school K).* In essence, the children saw the activities as relevant to real life. The programme demonstrated this point many times over. The children absorbed knowledge more readily than in the classroom situation by having concrete experiences in the woods, fields, farm-yard, garden and kitchen; with animals, birds, eggs, frogspawn, plants and trees. They remembered what they had learned and were better able to talk about it back in the classroom with each other and the teacher, and at home with their families:

'The children seem to remember everything we did at J's, much more than when sitting and learning in class. Hands on learning has been so successful with this class. They have learned for themselves which is much more valuable to them in the long run' (Teacher in school K).

[The children] *'are constantly questioning and looking for concrete proof of facts…they looked forward to checking the progress of the chickens etc.' (Teacher in school M).*

The teachers all felt that the activities made them realise too how much more the children learnt when they experienced the subjects in a real context. The activities were useful, the children could contribute and they knew they were being helpful. This point is also

made by Mercogliano (2007:57-8). Going through woods and fields, finding nature in its own environment, learning about the animals by helping to feed them, giving them water, cleaning out sheds all gave the children lots of real experiences. The boy who persevered mucking out a shed until it was completely clean to his satisfaction, long after the others had gone in for their lunch, *'was very proud of himself ….as he would constantly struggle in the classroom situation and achieve very little' (in discussion with Teacher in school M)*. Finding the frogspawn and watching the tadpoles had a huge impact on the children…*'It (the context) really brought nature to life for the children' (Teacher in school C*).

The teachers all emphasised how much they thought the children had gained from the opportunity to experience so many different forms and expressions of nature. They were fascinated how the real context of nature had such a powerful learning effect on the children. The fields and woods, the animals and birds, the vagaries of the weather, relating outdoor things back indoors, such as cooking and art projects and all the new topics of conversation were important areas of development for them. They said it was evident to them that the children found it very meaningful as they had so many things to say and to ask about everything they had learnt:

'They would ask us why were the ducklings coloured like that? How were the baby bunnies all different colours to the Mum and Dad? Why did the frogspawn have jelly everywhere? How did the conkers grow leaves? Where did all the flowers come from in the field? They went on and on. We were exhausted!' (Teachers in school K).

The other advantages of being outside in the country discussed with the teachers were the freedom and enjoyment of just running around in the fields, flying their kites, picking flowers and swinging on the swings and ropes in the trees.

'The children loved the freedom of running around in fields and woods. They loved playing in wide open spaces. They learnt all sorts of related things like what clothes to wear for the weather, for climbing, for indoors and outdoors. Learning occurred

incidentally and the children were having so much fun they did not even realise this' (Teacher in school M).

'The fresh air was another really beneficial aspect for the children. Also the opportunity to be so active must have a good effect on offsetting obesity. By this I mean that when one knows how to be active rather than sitting watching tv, it teaches them alternative ways to spend their free time. This could support and extend the school healthy eating programme' (Teacher in school K).

In the Literature Review, Sobel discusses 'ecophobia' in children. He makes the point that one cannot expect children to be concerned about global environmental problems, such as animals facing extinction, drought or deforestation, unless they have first learnt about what is near at hand and had a chance to care for nature in their own back yard (Sobel, 1999:1). The teachers and the Researcher observed the children's intense interest in all the nature stories and the opportunity to care for and help both wildlife and farm animals. The children's comments bear this out with their answers to questions about their favourite activities and what they would like to do again:

'picking up pine-cones and conkers', 'collecting stuff', 'finding the conkers, sticks and pine-cones', 'feeding all the animals', 'going out to the forest', 'playing outside'. (Ref 4.7).

'The children enjoyed the freedom (while organised and planned), of running in the fields, scavenging in the woods, orienteering in open spaces, that simply can't be created in such a beautiful and real context in the school' (Teacher in school M).

The children learnt they could relate all the kitchen projects to real life. Making bread, soup and pizzas used skills needed by anyone in a kitchen and moreover these were topics they could talk about at home too. The children always settled very well in the kitchen environment and were calm and helpful in a different way to anywhere else. They concentrated particularly well here. The teachers watching their junior infant boys

were very surprised, as noted earlier (4.5), at the length of their concentration span as they struggled with kitchen-skills:

'They loved everything about the making and baking; peeling and washing. They also really enjoyed being useful, even cleaning up the kitchen, sweeping and wiping' (Teachers in K).

'He loved baking and being able to show off what he made when he got home' (Parent in school C).

'The cooking encouraged the child to be independent' (Parent in school C).

'I learned how to make pizza' (Child in school C).

'I learned to make cookies and pizza and bread' (Child in school C).

'I learned how to cook chocolate biscuit cake, soup and make a forest' (Child in school K).

'I learned to cook and pick flowers' (Child in school K).

'I learned about conkers growing into trees and how to cook and also feed chickens' (Child in school M).

'We learned how to cook, how the plants grew and made kites' (Child in school M).

5.3 LEARNING ACHIEVED AND RETAINED:

The teachers described how they felt that the children from the city had a very limited urban environment within which they had developed so far. Their knowledge of the world was very limited and also, more worryingly, the teachers felt their curiosity was nearly non-existent. Coming out to the Rectory for the programme opened up a whole new world for these children:

'They saw sights and sounds they had never dreamed of; they did things like collecting stuff, cooking, and exploring that they had never thought possible' (Teacher in school K).

The teachers said that picking up conkers, sticks, stones, pine-cones and climbing and walking around the trees while they were told their names seemed to be a really important experience for the children. The fact that they experienced the awe, discovery and wonder of the size of an old tree and even climbed up it a little bit, awakened their curiosity in a way the teachers had not seen before. The animals, eggs, straw, hay, and water involved with the farmyard were equally compelling. Clements (2004) expresses this point thus:

> *Natural experiences such as collecting leaves, throwing stones in a pond, jumping over small brush or logs, building sandcastles, collecting sticks or nuts from the ground, or creating hiding spaces challenge the child's imagination and reasoning abilities (Clements, 2004:77).*

Their adventures in the kitchen, only a few of which have been documented, gave them a constant weekly discussion as well as a product to show their parents along with telling them how they made it. The teachers were amazed at how much chat and discussion this drew from the children on the bus and back in the classroom. It opened up their world and gave them things to talk about that they just had not known existed:

'We realised that there was a buzz of conversation going on in the bus which was really most unusual. It struck us that generally they have 'silly' TV oriented talk or messing and giving-out, but for the first time they had interesting topics of conversation to engage in.' (Teachers in school K).

The fact that they could relate the activities back to their parents also showed the learning they had accomplished:

'He got great fun recounting the activities to his family' (Parent in school C).

'She talked about it for hours and the activities that were done' (Parent in school C).

The teachers often used examples in the classroom of topics they had covered when out in the Rectory. They used ducklings and chickens; tadpoles and frogs; eggs; vegetables; pine-cones, conkers, stones and sticks to help them with Maths, English and History strands. . When they heard that five ducklings hatched out from ten eggs, four brown and one yellow:

'we spent two days using the news to do Maths with the children related to the ducklings and found it most successful in engaging their attention and enhancing their learning... we were able to do a more integrated curricular programme than before' (Teachers in school K).

'The children learnt about past, present and future just by discussing what they had done in J's, and anticipating what they would do the following week. Their vocabulary improved and expanded and their curiosity was woken up in a way that was really surprising to us' (Teachers in school K).

'The children would often refer to J during the week and talk about how excited they were to tell her news. They looked forward to checking the progress of the chickens etc. Behaviour improved as children saw the farm as a reward on Fridays' (Teacher in school M).

This teacher had a senior infant class and felt the children developed further again:

The programme developed the children's ability to question, experiment, analyse why they learnt things. It also developed their ability to work in groups, share and take instruction' (Teacher in school M).

The teachers saw that when they were using concepts the children were now able to identify with in the classroom, such as the trees or the animals, their ability to listen developed. They had thought some of the children had a hearing impairment but in fact they realised they were just tuned out, not bothered or interested enough to listen. Once the children were interested and saw some relevance in the subjects, their language skills improved. The teachers felt the programme significantly helped their language, comprehension and conversational skills:

'I really thought he had a hearing problem. It was only after coming back from the farm and doing English with them using the topics they had done with you that I realised he was really listening. As a result his understanding and ability to participate and develop his language skills increased a huge amount' (Teacher in school K).

5.4 ABILITY TO PLAY:

The teachers were delighted with how the children's ability to play improved. They felt that they learned **how** to play. They believe that:

'Their parents tend to buy them lots of 'stuff', so there is no shortage of toys and video-games, but there is very little time spent with the child at play' (Teachers in school K).

'It seems to us that many families do not play with their children, they do not teach them games, they spend very little time helping them with puzzles, books and board games, so much so that the school is setting up a programme this year with an older class to try and bring in parents to play board-games with their children' (Teacher in school C).

In her study on outdoor play, Clements noted that it indicated 'a major obstacle to outdoor play rests on the child's dependency on television viewing and computer games' (Clements, 2004:77). The teachers felt that the programme provided lots of opportunities for reviving outdoor play. The children learnt active, constructive games and ways of playing. There were plenty of people around supervising who gave them time and showed them how to do things if they needed help. The older students were patient, encouraging and enabling. While there was a lack of creative and imaginative play, it was apparent that in many cases the children needed to learn how to participate in active and socialising play first. As documented in activity 5, the children were completely preoccupied with the physical side of playing outside, going from one piece of equipment to another to use up their energy and responding to their need to do many different types of exercise, such as climbing, jumping, swinging and balancing. These activities did provide a lot of experience with turn-taking, sharing and cooperating, which was seen as very positive and constructive by the teachers (in discussion with all the Teachers):

'The children got much better at sharing in class, they had more fun together and they knew each other like friends rather than acquaintances' (Teacher in school C).

'He is playing and sharing with other kids now' (Parent in school C).

'Playing and socialising both improved. It was like they learnt both together, one feeding off the other' (Teacher in school K).

5.5 PARENTAL INTEREST INCREASED:

Another issue that came up persistently with the teachers is that there is a lack of parental support behind their endeavours in the classroom. They often feel that they are trying to cope with a lot more than just the curriculum objectives. They see themselves constantly in a socialising role, where they have to put a lot of time into the child's social and emotional development. Many parents seem to just want an ability to read and write achieved:

'When I have parent-teacher meetings, they come into the classroom and all they want to see is the child's copy and how many pages are done. If I try to tell them how well he shared something, or how she helped someone with a task they found difficult, they are not interested' (Teacher in school C).

'I spent half an hour trying to calm this child and reason with him after he had destroyed the room. He had pulled pictures down from the wall, wrecked other people's work. His mother came in, told him there was a present for him in the car when he said sorry, and off they went…I was dumbfounded' (Teacher in school K).

The teacher in school C described in great detail how much learning and enjoyment the children and indeed their parents had got from the development of the frogspawn into tadpoles and subsequently into frogs. *'It was a real highlight of the year and the children all spent ages every day watching, commenting on and discussing their progress'.* She elaborated further by saying:

'The children were so interested in the whole cycle. It was the first time I have felt they really had any real understanding of the concept of the tadpole changing into a frog. There was so much excitement in it and they had their parents interested too. This was a whole new dimension for us as usually the parents are not involved with anything going on in the classroom' (Teacher in school C).

5.6 SOCIALISATION TECHNIQUES:

The teachers have observed that, in many instances the children's only social environment outside school appears to them to be playing in the street or trailer site, television and video games. They talked about children who come into school on a Monday 'wired' from constant video-game playing; children whose news is that they spent the weekend in the pub with their parents. Even a lot of the children in the more rural area do not visit friends to play or have any social gatherings with their school-friends outside school hours. They felt that the unstructured play aspect of the research

programme in particular addressed a lot of these social needs of getting to know the other children on a less-structured, playful basis. This was their chance to meet and learn social mores that in previous times would have been met by casual dropping in to homes. The children themselves, as referenced in 4.7, also saw how they learnt social skills.

'Many of these children just do not see each other after school. Even if they live close by, there are so many varieties of the traditional 'family unit' that people do not seem to have others into their houses' (Teacher in school C).

She thought that their socialisation techniques improved a lot by coming up to the programme every week and it made a big difference in the classroom. This was backed up by the parents who also commented on their socialisation skills.

'It meant a great deal to us as Avril was very much to herself. Now she has no problem talking and meeting up with children her own age' (Parent in school C).

'It was good to get him mixing with his friends outside of school' (Parent in school C)

'The children became much more social with each other, made better friends and learnt the 'socialisation techniques' we would have taken for granted in days gone by' (Teacher in school C).

She was amazed and most impressed that the parents brought their children up regularly every Saturday. The other teachers were also really pleased that the parents made more of an effort to bring their child to school on time ready for the bus. There were occasions too when the children themselves got upset when one of their friends had not appeared in time to go on the bus: *'oh, Miss, wait for Mattie, he loves it out there so he does'.* This child begged them to stop the bus at their site, and went to find the child who had not turned up.

5.7 SUMMARY:

Chapter 4 concluded that a programme of activities, based in the natural environment, can deliver some aspects of the Curriculum. In this chapter, the teachers evidenced that the programme augmented their curriculum delivery, in particular the efficacy of both process and play and the positive impact that a relevant context has on retention, motivation and curiosity. They felt the children learnt better and retained learning more from the activities and the context than they would normally have solely in the classroom. They indicated an increased level of interest in many subject topics and took advantage of this in subsequent classroom time. Furthermore, they felt the children had benefited in important ways on a social and developmental level.

The positive impact of the programme is further evidenced by actions the teachers took in the classroom as a direct consequence this experience:

1. Implemented more practical stations (School M, pg 86)
2. Used experiences from the programme for Maths, English and History (School K, pg 92)
3. Brought tadpoles to frogs in the classroom (School C, pg 56)

CHAPTER 6: CONCLUSIONS AND RECOMMENDATIONS:

6.1 CONCLUSIONS:

The aim of the project was to devise and apply a programme of activities in the natural environment and assess whether it would augment elements of the Primary School Curriculum (1999), with embedded questions addressing the particular relevance of the natural environment, the effectiveness of both practical activities and play as learning mechanisms and the ability of the programme design to combine the curriculum with current leading Irish policy statements covering early childhood development.

A programme was designed which covered a wide range of the Curriculum and adhered strongly to both its principles and leading domestic and international thinking.

The evidence presented in this research, the detailed data and the extensive commentary from the teachers, has shown that for the children exposed to it, it was effective in improving their learning and retention due to the relevance of the context, the practical approach, the natural environment and the enjoyment they experienced through the play element.

Furthermore, based on the teachers' and parents' feedback, it is apparent that the programme went further than originally anticipated by advancing a number of non curricular, holistic childhood development objectives as follows:

- Increased curiosity from exposure to a new environment
- Increased parental interest and support
- Enhanced socialising techniques
- Learning how to play

This suggests that there maybe significant developmental value from such a programme beyond simply augmenting aspects of the Primary School Curriculum.

6.2 RECOMMENDATIONS:

The following recommendations arise:

1. A practical programme based in the natural environment should be considered as part of the Primary School Curriculum.

2. In order to accomplish this, the following short-term recommendations are made:

    1. A number of interested teachers could be shown how to do some of the practical activities, which could be tailored as necessary to suit different locations. The important message of contextual and practical learning could be conveyed and teachers encouraged to apply a programme of child-centred learning.
    2. Locate a small number of schools to undertake pilot programmes modelled on this approach, in the next school year.
    3. Arrange necessary media coverage so the message is more widely understood and appreciated.
    4. Arising from the above three steps, engage the attention of relevant thought leaders and the Department of Education.

3. Further research should be carried out to explore questions that were outside the scope of this project to determine:

    1. What would the optimal amount of time be for children to spend in a programme like this as part of their school year?
    2. What are the longer term effects of such a programme? How often should it be repeated and what is the best age group to target to get most benefit?
    3. Would it be as beneficial for children from middle-class backgrounds?

It is hoped that a programme of activities in the natural environment could be implemented more widely as it showed benefits and advantages beyond the original hopes and expectations of this Researcher.