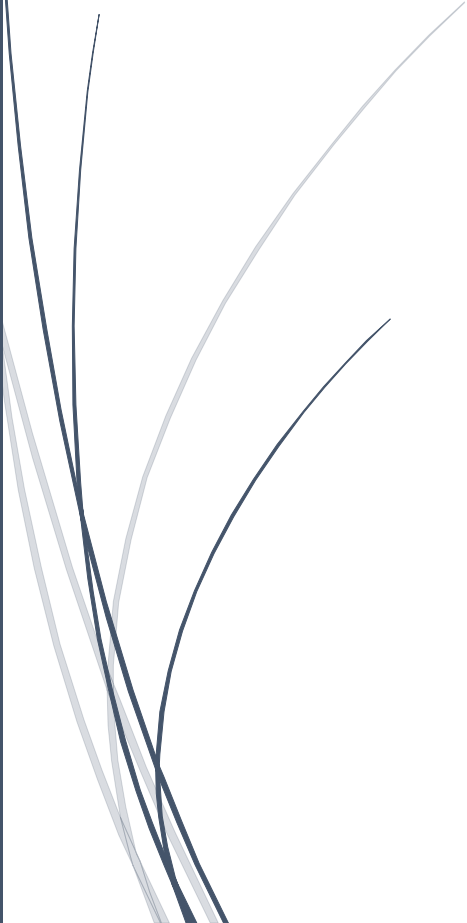


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10/1/2018

EAE5010

Learning Environments: Indoors
and Out

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Sarah James (1706410)
UWTSD

Activity Plan

LEARNING THROUGH GARDENING AND THE OUTDOORS

An inter-generational yearlong gardening and outdoors project enabling children to experience and explore the living environment and locality surrounding school. The aim is to provide a unique opportunity for children to gain regular first-hand experience of local vegetation, animals and insects working alongside other members of the community, promoting the children's development and learning whilst also supporting their physical and emotional health and wellbeing (Bath and North East Somerset, no date).

ACTIVITY PLAN

PLANTING ACORNS

To make a self-watering seed starter pot from a repurposed 1 litre plastic bottle and then use to plant and grow an acorn so that the process of germination can be observed (Royal Horticultural Society (RHS), 2015).

Preparation time: 2 hours

Session time: 1hour 30 minutes

Activity time: 30 minutes

Location: Volunteers garden,
5 minutes' walk from school

Number of adults: 1 practitioner,
2 volunteers

Number of children: 5 children
typical of
developmental stage

Age of children: Years 1 and 2
(5 – 7 years)

LEARNING OBJECTIVES

- Safely use a variety of hand tools and equipment with increasing confidence
- Appreciate the damage that plastic can have on the environment
- Appreciate the importance of reduce, repurpose and recycle in respect of plastics/manmade materials
- Discover what plants require to grow - water, light and the correct temperature

- Identify and name the different parts of an oak tree
- See how seeds grow into plants
- Find out what grows first – shoot or root (RHS, 2015).

CURRICULUM LINKS

FOUNDATION PHASE LINKS

Personal and Social Development, Wellbeing and Cultural Diversity

Opportunities for children to:

- Gain an interest in the world outside of school and what it has to offer whilst developing an awareness of its dangers
- Show care and respect for others and their surrounding environment
- Use their senses, demonstrate curiosity and develop a positive attitude towards new experiences whilst beginning to understand how they can protect their environment and be environmentally friendly.
- Take risks and explore the outdoors.
- Concentrate for lengthening periods.
- Develop an understanding of the behavioural expectations of the school and comprehend that rules are necessary part of society.
- Request help when required (Welsh Government, 2015).

Language, Literacy and Communication Skills

Opportunity for children to:

- To develop their collaboration and discussion skills by providing an opportunity to develop their vocabulary, speaking and listening skills (Welsh Government, 2015).

Mathematical Development

Opportunity for children to:

- Count objects and gain a practical comprehension of length, height, weight and capacity using both non-standard units.
- Acquire an understanding of time in terms of days, weeks, months and seasons.
- Acquire a practical understanding of temperature and words used to describe it, for example cold, hot (Welsh Government, 2015).

Knowledge and Understanding of the World

Opportunity for children to:

- Discover more about their locality, its natural and manmade features, distance and how to follow directions and routes.
- Measure time, sequence events, routines and changes whilst recognising how time causes changes.
- Recognise how the environment can be improved or damaged by people's actions.
- Become curious, enabling them to explore and experiment.
- Use and familiarise themselves with words and phrases commonly used in their world.
- Identify and learn the names and uses of different plants and how the seasons affect them (Welsh Government, 2015).

Physical Development

Opportunity for children to:

- Improve confidence, sensory and spatial awareness, skill and performance of the body by using and handling a variety of tools.
- Develop co-ordination, manipulative, gross and fine motor skills.
- Develop an awareness of dangers and safety issues and understand the need for safety equipment.
- Recognise that there are other types of exercise and activities that are beneficial for health and fitness of the body (Welsh Government, 2015).

Creative Development

Opportunity for children to:

- Make use of both the indoor and outdoor learning environments conjunctively.
- Make choices, explore and experiment with a variety of new techniques, resources and materials.

Education for Sustainable Development and Global Citizenship

Opportunity for children to:

- Acquire an understanding of how their choices and actions may affect the environment on a local and global basis (Welsh Government, 2015).

Well-being and Future Generations (Wales) Act 2015

Assists children in starting to develop an awareness of:

- Global responsibility
- Resilience and its importance
- Alternative ways to keep physically and emotionally healthy
- Being part of a bigger cohesive community (Welsh Government, 2015).

DIFFERENTIATION

Take into account the developmental stage and ability of each child, simplifying or extending the level of complexity of the task or information given where necessary.

HEALTH AND SAFETY

First Aid Kit

Please refer to Learning Through Gardening and the Outdoors Risk Benefit Assessment.

ROLE OF THE ADULT

- To model behaviour and discuss the living environment on the walk to the garden
- Gather acorns, point out, and explore using different senses the various parts of the oak tree.
- To model and support children whilst making the planter and planting the acorn, taking time to support where necessary.
- Discuss the issue of plastics and the harm to the environment.

Key Vocabulary

Deciduous tree, crown, leaves, species, trunk, roots, acorn, seed, seedling, roots (taproot is first to grow), shoot, light, photosynthesis, reduce, reuse and repurpose, recycle.

THE ACTIVITY

Adult Directed

1. Take pre-marked, flattened bottle and using scissors cut along the line.
2. Place the playdough on the wooden surface of the table.
3. Remove bottle top, place upside down in the centre of the playdough and push down firmly.
4. Using the rechargeable cordless drill carefully drill a hole in the bottle top.
5. Take a piece of string and tie a loop approximately 10 centimetres in length at one end.
6. Thread the string through the hole in the bottle top so the knot is on the inside of the cap.

7. Replace the cap on the bottle and nest the top of the bottle in the base.
8. Fold the kitchen roll in half and then place in the top of the bottle.
9. Add gravel/ sand mix to base of the bottle and then fill with compost.
10. Water soil, just enough to moisten.
11. Place collected acorns in a bucket of water and select one that has sunk (only those that sink are good to plant)
12. Plant the acorn between the kitchen roll and the side of the bottle.
13. Make a 'cylinder' out of the black sugar paper by placing around the bottle. With the help of another secure with masking tape (ensure that it slips on and off easily so that observation of germination can take place) and label with name and date.
14. Place in the plastic carrier for return journey to school.
15. Allow children to participate in one of the available activities of their choice for the remainder of the session.

N.B

On return to school get the children to place water in the base of the planter. The string 'wick' will ensure that the soil remains moist so providing just enough water for the emerging plant. Place in the fridge (sourced from waste section of local authority or other charitable organisation) so to replicate the coldness of winter which is required to break the outer seed coat. Check after one week and water if necessary. Remove after 2 weeks and place on the warmer classroom window sill so simulating spring and growth.

Child Chosen Activities

1. Mini-beast and nature hunt.
2. Caring for the chickens.
3. Pond dipping.
4. Digging, mud and water play.
5. Identification time with Mrs Gardner in the ring.
6. Pottering in the green house and shed.
7. Participating in tending and maintaining the garden and its equipment.

Risk Benefit Assessment

RISK BENEFIT ASSESSMENT FOR LEARNING THROUGH GARDENING AND THE OUTDOORS

Name of Assessor	Sarah James			
Assessment Frequency	Weekly/ Prior to session taking place			
Follow up Assessment Dates		01/10/18	08/10/18	15/10/18
Date of Initial Assessment	01/09/18			
Assessor Signature	<i>S. James</i>			

Persons Affected: Practitioners, pupils, adult volunteers

Risk Benefit Assessment Included for:

1. Inadequate planning and activity awareness
2. Walk to site and activities once on site
3. Planting acorns and other seeds/plants
4. Digging
5. Mini-beast and Nature Hunt
6. Caring for the chickens
7. Pond Dipping
8. Mud and water play

Area of Concern/ Activity	Benefits for Participants	Risk Management					
		Potential Harm/ Risk	Person at Risk	Control Measures	Comments/ Actions	Residual Risk Rating	Initial if all in place
Inadequate planning and activity awareness	- Promotes safety of all - Improved communication skills and increased enjoyment - Increased role awareness and activity timetable - Clear rules for pupils which provide boundaries, reduces	Confusion and possible injury	All	- Lead practitioners to carry out necessary risk benefit assessment prior to weekly session. - Meet with volunteers (Mr and Mrs Gardner) to discuss experience activity timetable and requirements on half-termly basis.	- Gain written parental consent for experience. - Weekly experience updates for parents to be included in weekly school newsletter.	Low	

	opportunity for misunderstandings			• Information sessions for children covering road safety rules, behaviour outside of school and treatment of wildlife and nature to take place in the week leading up to the experience starting. • Experience roles, activity plans and timetable to be shared with staff, parents, volunteers and pupils prior to experience commencing.			
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Volunteer grandparents, Mr and Mrs Gardner	- Promotes positive attitude towards elders. - Provides opportunity for children to learn new knowledge and skills	Unwanted or unnecessary harm being caused to children	Practitioner and children	Carry out Enhanced Disclosure and Baring Service Check prior to experience commencing		Low	
Walk to garden, short distance from school	- Increased awareness of being part of a larger community outside of school. - Exploring and becoming familiar with locality and its living environment. - Increasing awareness of traffic, becoming familiar and	See Offsite Trips and Visits Risk Benefit Assessment	See Offsite Trips and Visits Risk Benefit Assessment	See Offsite Trips and Visits Risk Benefit Assessment	See Offsite Trips and Visits Risk Benefit Assessment	Low	

	gaining skills to safely cross roads Physical exercise and development of gross motor skills.						
Garden site	Increases awareness of effects of weather on the body and taking responsibility to protect against them.	Weather (injury, sunburn, extreme cold)	All	- Practitioner to assess medium term weather forecast. - Suitable clothing to be worn, i.e. sun cream and hat for hot weather, warm, waterproof coat for cold and wet weather.	Request suitable footwear and clothing in weekly newsletter to parents.	Low	
	Opportunity to develop co-ordination, gross motor skills.	Slips, trips and falls – changing nature of terrain,	All	- Suitable footwear to be worn by all. - Garden to be assessed prior to session.	Remind parents and request suitable	Low	

	• Opportunity to develop risk awareness and judgement skills • Exploring living environment • Stimulation of senses and increased awareness. • Physical exercise				footwear in weekly newsletter to parents.		
	• Introduces children with how to deal calmly with difficulty.	Minor injury/ illness	All	• Practitioner to carry First Aid Kit along with any other prescribed medications e.g. inhalers, EpiPens if required.		Low	
	• Introduces child to importance of personal hygiene	Soil, animal faeces, Tetanus, Toxoplasmosis	All	• Prior to sessions commencing check that all involved have had	• Tetanus information letter to be sent home	Low	

	and taking responsibility for it. • Stimulates senses • Provides opportunity to investigate what makes up soil and its role in plant growth. • Provides opportunity to discover what lives in soil			Tetanus inoculation • Ensure hands are washed thoroughly using onsite site sink before consuming any food or drink. • Ensure any existing cuts are covered prior to session. • Prior to session check for animal faeces.	with child if puncture wound received		
	• Identification of wide variety of plants. • Extending vocabulary.	Plants – allergic reaction from touching or ingesting	All	• Children not to eat any plant unless they have been told to do so or gained permission. • Personal information of all			

				children to be checked for information regarding allergies, including asthma and hayfever. Specific medication to be carried by practitioner at all times. Practitioner to carry First Aid Kit along with any other prescribed medications e.g. inhalers, EpiPens if required.			
	Introduces concept of respecting others	Insect stings and bites		Practitioner to carry First Aid Kit along with any	Occur naturally, pose little		

	and treating all living things gently and with care			other prescribed medications e.g. inhalers, EpiPens if required.	risk if treated with gently and with respect.		
	Self-esteem and confidence	Tools, injury and possible cuts	All	- Tool safety rules to be discussed in lessons prior to sessions commencing. - Appropriate child size tools to be used where possible - Children to be instructed on safe use of tools before each session. - All tools to be stored in accordance with		Low	

				rules and replaced when not in use. • Suitable footwear to be worn when using tools.			
	• Introduces child to importance of personal hygiene and taking responsibility for it. • Introduces child to the natural world and the connection between humans, animals and plants. • Encourages empathy, responsibility and nurturing skills.	Chickens, zoonotic disease, allergic reaction, scratches or peck		• Remind the children of the Healthy, Happy Chickens and Children rules. • All hands to be washed thoroughly after being with the chickens and there is to be no kissing of the chickens.	• Provide parents with a copy of the Healthy and Happy Chickens and Children Fact Sheet.	Low	

	• Identification of pond and aquatic life. • Extending vocabulary. • Increasing desire for further study	Pond	All	• Pond raised off ground. • Pond covered by metal grid which is only removed for pond dipping with an adult present.		Low	
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Environmental Audit

ENVIRONMENTAL AUDIT FOR LEARNING THROUGH GARDENING EXPERIENCE (Planting Acorns Session)

Mater / Nodwedd amgylcheddol Issue / environmental feature	Niwed allai ddigwydd Damage that could occur	Sut i leihau y effaith negyddol How to minimise negative impact	Adnoddau sydd angen Required Resources	Pwy sy'n gyfrifol Who is responsible
Walk to garden location	Unintentional or intentional damage to plants, trees and wildlife by trampling, squashing, picking or dropping of litter.	Remind children and adult of Outdoor Behaviour and Treatment of Wildlife and Nature Rules. All living things, humans, wildlife, trees and plants are to be treated gently and with care. Only fallen leaves, twigs and seeds are to be collected/ removed – if in doubt then should seek adult advice.	N/A	Lead practitioner and all adults to reiterate/ reinforce the Rules.

Digging in soil, moving soil, replacing soil with general gardening tools	Damage to established plants and change to garden ecosystem.	Conduct a tour of the garden on arrival and ensure children are aware of the different areas and what can be dug or moved. Designated digging, water play area with no plants for those wishing to explore the properties of soil, sand and water.	N/A	Lead gardener, Mr Hedges
Collecting acorns	Damage to oak tree and change to ecosystem.	Inform children that only fallen acorns are to be collected and removed. Over collection to be avoided as food source for mice, squirrels and some birds.	N/A	Lead practitioner and all adults
Minibeast and Nature Hunt	Damage or squashing of insect, plant life. Change to garden ecosystem.	Remind children and adults of the Treatment of Wildlife and Nature Rules. Be mindful of over collection and return of living insects and wildlife to where it was found in the garden at the end of the session.	N/A	Lead practitioner and all adults to reiterate/ reinforce the Rules.
Chickens	Injury or death of chicken.	Remind children and adults of Treatment of Wildlife and Nature Rules. Ask before	N/A	Lead practitioner and all adults to

		feeding the chickens and only handle when an adult is present.		reiterate/ reinforce the Rules.
Pond	Pollution of water, injury or death of plant or aquatic life.	Remind children and adults of Water and Pond Dipping Rules. Pond dipping is only to be carried out when an adult is present. Reiterate that nothing is to be thrown or placed in the pond without the permission of an adult.		Lead practitioner and all adults to reiterate/ reinforce the Rules.

Explanation and Evaluation

The carefully planned and researched activity of planting an acorn as part of a longer term outdoor and intergenerational gardening experience was influenced by the theorists and approaches of Froebel, Montessori and Malaguzzi. It embraces the ethos of the Foundation Phase Framework, incorporates the theme of Education for Sustainable Development and Global Citizenship (ESDGC) and is mindful of the Well-being and Future Generations (Wales) Act 2015 whilst also considering health and safety requirements. The whole experience utilises the outdoor environment as a resource and promotes the child's learning through independent discovery (Welsh Government, 2015). The practitioner led and modelled activity, influenced by the theories of Vygotsky and Bruner, provides an opportunity for shared and sustained thinking to take place, enabling open ended questioning so to extend the child's intellectual development (Bilton, 2010). By also providing complementary child chosen active learning activities influenced by Piaget the child is also able to embark on their own journey of exploration and discovery (Wood, 2013).

The United Nations states that three of the most pressing global issues today are the environment, health (physical and mental) and the education of children (Cutter-Mackensie et al., 2014; United Nations, no date). The benefits of an intergenerational outdoor, gardening and growing experience are multidimensional. For those involved, both adults and children alike, provision of a frequent interactive experience with wildlife and nature can develop and support their emotional and physical health and well-being. For the child a regular interactive experience with wildlife and plants can also advance not only their environmental learning but their learning and development as set out in the Foundation Phase Curriculum (Bath and North East Somerset, no date).

Froebel (1782-1852) believed that play, first-hand experience of nature, and the outdoor environment was essential for children. His theory was influenced by Rousseau and Pestalozzi who all placed an emphasis on the provision of a quality learning environment. However, Froebel differed in that he believed that:

- children learnt through hands on learning experiences rather than observation and their senses.
- The outdoor environment provided for educational, emotional and physical development.
- Adults were to guide a child's learning and not leave it solely to nature as were the beliefs of Rousseau (Pound, 2014).

Such was the importance of nature to him that he replaced the word school with kindergarten, a garden for children, as he perceived it to be a place where children could 'develop in harmony with

nature' (Tovey, 2007:40). The garden was an essential element of the kindergarten and was representative of his holistic philosophy that all learning was connected. Community also played a significant part in Froebel's theory as he believed there was a link between an individual and their community. Being part of a community afforded protection to an individual but at the same taught them that they too had a responsibility to it.

Malaguzzi, the founder of the Reggio Emilia approach to learning, like Froebel also placed great emphasis on the environment and considered it to be the third educator (Kinney and Wharton, 2008). Pound (2014) states that he also considered that alongside parents and practitioners community members played an important part in a child's education. Tovey (2007) indicates that Montessori also placed a great emphasis on outdoor learning but unlike Froebel and Malaguzzi placed greater emphasis and educational value on her didactic apparatus rather than natural materials. Caring for the plants and animals was viewed by Montessori as an experience that would develop gross and fine motor skills and encourage independence and moral responsibility rather than stimulating an interest or knowledge in plants and wildlife. Montessori also encouraged individual study for longer periods whilst Froebel and Malaguzzi emphasise the importance of play and the role of adults in a child's learning and development (Tovey, 2007; Pound, 2014).

As previously stated it was the theories and influence of Froebel, Montessori and Malaguzzi that led to the choice of an intergenerational gardening experience as they all state the importance of nature and the garden. Froebel and Malaguzzi also value the involvement of other adults with Malaguzzi also encouraging the participation of the wider community. The involvement of two volunteer grandparents adds an additional intergenerational element which Bosak (no date) states is beneficial to children as it develops a child's social skills, self-esteem and confidence.

The volunteers can also act as more knowledgeable others and so support Vygotsky's and Bruner's theory of scaffolding by imparting their knowledge to the children during the course of the experience. The provision of adult directed activities also supports Vygotsky's and Bruner's theories with the provision of child chosen activities in contrast being supported by Piaget who believed that children have to choose their own materials with which to learn and experiment with (Pound, 2014).

The use of a repurposed plastic bottle and the intergenerational gardening experience provides an ideal opportunity to ensure that the ESDGC theme is delivered and integrated into the learning experience in an engaging way (Ysgol Ty Coch, 2016).



Image1

(Source: James, 2018)

Carrying out the activity prior to conducting it with the children highlighted the importance of the planning stage. Bilton (2010) recommends 'fine-tuning' so that the resources and the environment suit the children's needs. In this instance it highlighted where the task needed to be simplified or if additional adult support or guidance would be sufficient. In this instance the areas of difficulty highlighted were that of:

- Threading the string through the bottle cap and tying a knot.
- Requiring an additional drill with a second adult on hand to support for reasons of health and safety.
- Although the drill was powered by a rechargeable battery if it was raining then a shelter would be advantageous.



Image 2

(Source: James, 2018)

Image 2 above indicates how the bottle top was safely secured so that the children could use a battery powered drill. It enabled them to take part in what would be perceived by a child as an adult task so introducing an element of risk and the ability to build self-esteem and confidence. Bilton (2010) argues that it is important for children to learn about risk and be able to make judgements about it in controlled environments. This task did just that in a safe and controlled manner.



Image 3

(Source: James, 2018)



Image 4

(Source: James, 2018)

The finished planter ready for its journey back to school.

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