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Activity Plan		
Activity: Building a den		
Number of children: 9	Age of children: 5-6	Number of adults: 2
Location: Outside in secure garden	Preparation time: 30 minutes	Activity time: 1 hour
Resources: Sheets and blankets of different sizes Precut in different sizes thin rope Bamboo canes and broom handles Plastic dust sheets Different size cardboard boxes Wooden and plastic pegs Giant sand timer (30 minutes) Logs of different sizes Twigs leaf's Loose parts (looking around the garden themselves for resources)		

Aim/s of activity:

The aim of this activity is for the children to develop an understanding of mathematical concepts such as – classification, that will support shape size, weight and height. Also, spatial and positional concepts such as center corner- top, bottom and middle.

Links to outcomes:

Count reliably up to 20 objects

Recite numbers up to 100, forwards and backwards and from different starting points.

Compare and order numbers to at least 20.

Use number facts within 10, i.e.: – doubling and halving, e.g. $4 + 4$ – bonds of 10, e.g. $6 + 4$.

Recall doubles and near doubles up to 10.

Count in 2s, 10s and 5s to 100.

Find halves in practical situations.

Use non-standard units to measure: – length, height and distance – weight/mass – capacity.

Use descriptive words for a range of temperatures, e.g. cooler/warmer.

Take measured risks.

Can use number effectively in different contexts.

Face and overcome challenges.

An awareness of time using a giant sand timer.

An awareness of time management.

Differentiation:

To make sure all the children are involved and are happy and stimulated by the activity.

Children with ALN will be supported with their 1-1.

Children with a physical impairment will make their den on a flat surface, where any adaptive equipment will be able to be used safely.

Also, could offer one to one support to complete the activity.

Health and safety:

The practitioner will do health and safety check on the outdoor area and doing a risk assessment. Follow the school's policy and having to right adult to child ratio.

Role of adult/adults:

The role of the adult is to ensure the children's safety and wellbeing and to only to be involved if invited by the children unless a child needs the one to one support.

To plan to activity and facilitate the activity.

To support shared thinking and self-directed play.

The activity:

The children will be sat on the tarpaulin and the practitioner will talk about the activity. It will be explained that the children can build a den of their choice but that it must be able to fit in it the animal, person, or who every it is built for and that I would need to stain certain weather and it should structurally stable so it wouldn't be able to be just pushed down. The children will work together in groups of 3, so there will be 3 groups of 3. The resources for this activity will be put in individual pills ready for the children to go and get whatever they need for their individual den's. After the den building the children will come back to the tarpaulin and discuss how they made their den and use the mathematical language to explain how they built it for explain they used 12 twigs 19 leaf's and so on and so one. This will not be adult assisted but if the children ask for help or invite us in, we shall be there.

The activity will be supporting and improving the children's math's in the way of: how many Sheets and blankets the different sizes the weight and the different length Precut thin rope, Bamboo canes and broom handles, Different size cardboard boxes. Counting how many Wooden and plastic pegs and so on and so on.

Section 2

When it coming to evaluating the activity the practitioner will be asking themselves were the children involved a sufficient amount in the activity provided for them, Did the children join in the planned activity, how could the activity be done differently next time, could the activity be extend or challenged further and what were the learning outcomes but also the practitioners could ask the children open-ended questions (The empowered educator, 2020).

When it comes to health and safety laws practitioners need to be aware of the main laws involving to their role, whilst understanding the setting's policy in relation to health and safety and emergency measures and lines of duties and reporting (Care Council of Wales, 2020). Also the safety measures that will need to be in place to guarantee the safety of the children and young people within the setting however knowing how to use setting's policies and techniques in relation to health and safety in the setting (Care Council of Wales, 2020). When explain the objective of a risk assessment and how this is handled in the work setting the practitioner needs to understand the importance of creating a safe environment and show how, this is suitable to the age and developmental abilities of the children in the practitioners care. The practitioner needs to explain that what they have done that conforms with the policies of the setting and how health and safety laws enlighten on this (Care Council of Wales, 2020).

According to West Sussex County Council (2019), When it comes to the role of the adult an positive relationship will inspire children to use new words and mathematical concepts within their play. This will children to investigate real-life problems and encourage the use home language to sustain children's knowledge of mathematical language and concepts (West Sussex County Council, 2019). Also making sure mathematical assets are independently free both indoors and out this can help develop mathematical understanding through stories, songs and imaginative play and by practitioners using the mathematical language during play and daily routines (West Sussex County Council, 2019).

When it comes to the Additional Learning Needs Act establishes the new constitutional support system in Wales for children and young people with special needs (The School Run, 2020). Special educational needs will be replaced with ALN and following will be LDD 'learning difficulties and/or disabilities' ALN will cover this as well so all children

and young people with additional needs, irrespective of how difficult or serious they are covered under one title (The School Run, 2020). Which means ALN covers the whole spectrum of needs, from so-called 'high functioning' as ADHD, dyslexia, autism and dyspraxia. The ALN Act tries to support children and young people with ALN beat barriers to learning and reach their full ability (The School Run, 2020).

When it comes to theoretical links Piaget was the forefather of modern-day children's development theory. This educational scholar began his profession in the natural sciences. Piaget's stages of mental development encompass growth from birth through adolescence. Practitioners can use the developmental concepts behind each stage to establish age-graded tactics for teaching mathematics (Loop, 2018).

When it comes to the social development of children. Bowlby suggested one of the earliest theories of social development. Bowlby said that early relationships with practitioners play and children's play a major part in child development and maintains to impact social relationships throughout life (Cherry, 2020).

According to Learning Theories (2005-2020), The Montessori Technique is an method of learning which emphasizes on active education, independence, support, and learning in harmony with the children's unique speed of development.

Section 3

Keith (2018) highlights that developing an understanding of young children's mathematical learning in the outdoors can give practitioners some guidance and practical advice when planning mathematical experiences for early years children; by analyzing the important characteristics of a mathematically rich outdoor natural environment, practitioners can then encourage children to become more self-directed in their own learning and mathematical thinking. The on-going diversity of the natural environment supports learning through play and the skill to problem solve (Keith, 2018). This experiential approach to learning is considered important for young

children to gain an understanding of the natural world around them believes Keith (2018). Mathematics is full of concepts and abstract ideas however children building a den can obtain a hands-on experience of problem solving through the use of concrete materials such as wood, string, sheets, blankets rope and bamboo canes, this links to Piaget (no date, cited in McLendon, 2011).

According to Muddy Faces (2016) by building a den it can help to support mathematical development as children will need to think logically and take a step back to look at the shape and size of the materials they are going to use. Children will gain measurement knowledge to understand if something is small or large (Muddy Faces, 2016). If the den the children have built is not sturdy it is going to fall over because it needs to be structurally safe so it cannot be unbalanced (Muddy Faces, 2016). When children are problem solving it requires them to think about the problem, plan what they want to do and manage it, collaborate about the issue and cooperate and work as a team. When it comes to learning to working together and collaborating can be difficult at any age (Muddy Faces, 2016). According to Zero To Three (2020) the capability to think a problem through and to recognize there is more than one way to fix the problem. By logical thinking about it and using the information to help find the right answer.

Wisbey, (2020) states that early years pioneers such as Rousseau, Froebel and Montessori advocated the use of the outdoor environment to support children's learning. According to Wisbey (2020), the use of outdoor has had a recent rebirth of curiosity in the UK in the benefit of the outdoor environment is just as important as the indoor environment, both working in harmony as an organic expansion of each other, children explore, assess and solve real-life challenges in both the indoor and outdoor environment (Welsh Government, 2015). This is to support the learning and development of children naturally, the outdoors provides us with opportunities, with resources supplied and resources supplied by the environment (Wisbey, 2020). The environment brings mathematical concept with-it nature the idea of shapes, symmetry, colour, order, patterning and quantity. In the natural environment children can gain hand-on experiences of math's to gain abstract concepts while having fun (Wisbey, 2020).

When it comes to natural vs plastic, Weebly, (2020) believed the educational supplies made of a natural material presents a non-artificial alternative for equipment that children can use. It empowers children to be presented to the world of nature that is all around them and this will help discover math and science ideas in the environment. This is vital in an age where digital technology is a distraction and can be overpowering for early years children. Plastic toys are said to be very valuable for the development of early years children because they are vibrantly coloured and are attractive for both the children of all ages and the adults as well (Weebly, 2020).

Children must have the opportunity to access the outdoor to have a better understanding of the natural world. This has been recognized in recent years through the number of Forest Schools opening up. In building the den the agenda was set by the adults and this limited the children to making a den while perhaps they could have made something else from the resources supplied still involving the use of problem solving and mathematical concepts. Forest schools are child led by their interests but are overseen by qualified practitioners. In the early years sector practitioners must allow children to develop in their own time and at their own speed by giving them opportunities to explore and discover in the natural environment. As the urban environment expands there is a need in the early year's curriculum for time, space and resources to include the outdoor environment. The list of benefits and opportunities is not restricted to only academic disciplines such as mathematics but include encouraging an active lifestyle, giving an appreciation of nature, understanding risks, encouraging independence and developing social skills (White and Stoecklin, 2016).

Section 4

The role of the adult in the early years is vital as it is they that set up the resources and ensure the right safeguarding issues are adhered to, including all health and safety issues (Welsh Government, 2015). Adults are responsible for the planning of activities (Welsh Government, 2015). It is helpful to understand maths when it comes to offering quality maths encounters in the early years sector. Practitioners can support children's mathematical development in a setting, and when speaking to the parents about them they can help reinforce the early maths concepts. There are many parts

within the mathematical development that practitioners can focus on whether it is the children's counting skills or their mindfulness to all the different shapes in and around the environment (Kelly, 2015). Introducing children to mathematical concepts through concrete activity at a young age is important so it can help them later on in life (Kelly, 2015).

In spite of maths being built-in to the Early Years Foundation Stage statutory framework, to raise the profile of maths and encourage the development in mathematical thinking in young children more needs to be done (UK Government, 2020). Maths is often known mainly as an unappealing subject; research behind this shows that this outlook stems from early years practitioners lack of self-assurance in maths (UK Government, 2020). The value of maths education differs in Early Years settings and this often changes on the qualifications and attitudes of practitioners (UK Government, 2020).

According to Nursery Resources, 2020 Early years children learn maths through a widespread variety of play involvements all the time wherever they are. From the day they are born babies are surrounded by sense impressions - shapes are immediately of crucial importance. Babies react automatically to shapes and the preparation of shapes which make up human faces. At home, parent and toddler groups and different educational settings the children will have many opportunities to enjoy maths through play.

'Play is an effective vehicle for fostering Mathematical concepts and developing positive attitudes to mathematics ... Adults in settings should see to extend informally the mathematical experiences the children have already had in the home environment' **(Curricular Guidance for Pre-School Education, 2020).**

Jones (2005) discusses the importance of lesson planning, to ensure the right mathematical content and that it is interesting skills to acquire. There are many different reasons why having a good lesson plan is important, to ensure that learning will take place during lesson (Jones, 2005). When planning good lessons plans that are motivating and interesting for the children because lesson planning is closely linked to the matter of current classroom management (Jones, 2005). This will actively include the children and boost the practitioner's confidence in the classroom. A good lesson plan will help with averting classroom problems. By learning to plan good

lesson plans will need work and effort and all this will take time because planning differs on your awareness and understanding of complex matters (Jones, 2005). This will include how the children learn mathematics, the construction of the mathematics curriculum, the exact content and the skills and concepts the practitioners are teaching (Jones, 2005). Devoting significant time to planning is worthwhile to have the maximum effectiveness (Jones, 2005).

When it comes to tracking children's development, Early Years Careers (2015) state the Early Years Foundation Phase provides a picture of children's progress and recognizes any areas for additional support. It is also an implement so practitioners can share with parents; this way parents can understand their children's learning and can support any improvements at home (Early Years Careers, 2015). Many documents within early year's settings are used to observe, assess and track children's development; these documents will contain a progress summary, the progress check takes place at age two, individual cohort tracker, group cohort tracker and language and communication monitoring tool. In different settings they might vary but all setting follows the same aims and objectives. These will help practitioners to recognize and note down the different stages of progress where the children are at within EYFS believes Early Years Careers (2015). The evidence will deliver whether children are working within the correct age band for their age but will also pick up any parts where the children need support. Practitioners essentially should gather evidence throughout the developmental assessments, for example make a observation of both planned and spontaneous parts of the children's work as well as photographs and information from the parents (Early Years Careers, 2015). The evidence will support practitioners to make the best judgement for the age band the children are working within (Kelly, 2015).

Early Years in Sweden lasts until the child is six as they do not begin school until they are seven. In the UK, children start school at the age of four and even younger regardless of whether they are ready or not (Kirsty, 2014-2018). They begin to be taught to read and write from a very early age. This is sometimes an impossible task for many children making their early years' time in school unenjoyable. It can also

cause stress for the teacher as they are having to ensure their class reach certain standards at such a young age (Kirsty, 2014-2018). Children in the UK are faced with learning and acquiring the academic skills of reading, writing and understand mathematics from the moment they enter Reception. In Sweden at the age of four or five, children spend half of their day outdoors, climbing trees, singing songs and having fun while, building and developing vital social skills. The education system in Sweden leaves it too much later in the child's life to acquire literacy or numeracy skills (Kirsty, 2014-2018).

Reference List

Care Council of Wales. (2020) *Early Years & Childcare Induction Framework for Wales*. Available: https://socialcare.wales/cms_assets/file-uploads/Early-Years-and-Childcare-Induction-Framework-guidance-for-managers (Accessed: 1st March 2020).

CCEA (2020) *Curricular Guidance for Pre-School Education*. Available: <https://ccea.org.uk/pre-school/curricular-guidance-pre-school-education> (Accessed: 26 February 2020).

Cherry, K. (2020). *Child Development Theories and Examples*. Available: <https://www.verywellmind.com/child-development-theories-2795068> (Accessed: 2nd March 2020).

Jones, K. (2005) *Planning for Mathematics Learning*. Available: https://eprints.soton.ac.uk/17326/1/Jones_planning_maths_learning_2005_final_proof.pdf (Accessed: 24 February 2020).

Kelly (2015) *Tracking in the EYFS*. Available: <http://www.earlyyearsprofessionals.com/eyc/latest-news/tracking-in-the-eyfs/> (Accessed: 24 February 2020).

Kelly. (2015) *Supporting children's Mathematical Development*. Available: <http://www.earlyyearsprofessionals.com/eyc/latest-news/supporting-childrens-mathematical-development-in-nursery/> (Accessed: 22nd January 2020).

Kirsty (2014-2018) *Sweden vs UK – Early Years*. Available: <https://www.org.uk/glowblogs/kquodeportfolio/2015/10/02/sweden-vs-uk-early-years/> (Accessed: 26 February 2020).

Learning Theories. (2005-2020). *Montessori Method (Montessori)*. Available: <https://www.learning-theories.com/montessori-method-montessori.html> (Accessed 1st March 2020).

Loop, E. (2018). *How to apply Piaget's theories to mathematical*. Available: <https://www.theclassroom.com/apply-piagets-theory-teaching-mathematics-7730997.html> (Accessed: 1st March 2020).

McLendon, K. (2011) *Jean Piaget: Cognitive Development in the Classroom*. Available: <https://www.funderstanding.com/educators/jean-piaget-cognitive-development-in-the-classroom/> (Accessed: 26 February 2020).

Muddy Faces (2016) *Den and shelter building*. Available at: https://www.muddyfaces.co.uk/download/Den_Building_MuddyFaces (Accessed: 13 February 2020).

Nature vs plastic, Ministry of Education. (1996). *Te Whāriki: He Whāriki Mātauranga mō ngā Mokopuna o Aotearoa: Early Childhood curriculum*. Wellington, NZ: Learning Media (Accessed: 9 February 2020).

Nature vs plastic. Available at: <https://naturevsplastic.weebly.com/index.html> (Accessed: 9 February 2020).

Nursery Resources (2020) *Maths and Numeracy in Early Years*. Available: <https://www.nurseryresources.org/post/maths-and-numeracy-earlyyears> (Accessed: 14 February 2020).

Supporting your child's learning journey. (2020) *The Welsh ALN Act*. Available: <https://www.theschoolrun.com/welsh-aln-act-explained> (Accessed: 26 February 2020).

The empowered educator. (2020). *Analysis, Reflection and Evaluation in Early Childhood Programming*. Available: <https://www.theempowerededucatoronline.com/2014/10/analysis-reflection-and-evaluation-in.html/> (Accessed: 2nd March 2020).

UK Government, 2020. *Early years foundation stage*. Available: <https://www.gov.uk/early-years-foundation-stage> (Accessed: 13 February 2020).

Welsh Government (2015) *Foundation Phase Framework*. Available: <https://gov.wales/sites/default/files/publications/2018-02/foundation-phase-framework-revised-2015.pdf> (Accessed: 23rd February 2020).

West Sussex County Council. (2019). *Adult role throughout the Learning Environment* . Available: https://www.westsussex.gov.uk/media/5550/adult_role_learning_environment (Accessed: 1st March 2020).

White, R. & Stoecklin, V. (2016) *Children's Outdoor Play & Learning Environments: Returning to Nature* . Available: <https://www.whitehutchinson.com/children/articles/outdoor.shtml> (Accessed: 24 February 2020) .

Wisbey, M. (2020) *Maths in the great outdoors*. Available: <https://www.communityplaythings.co.uk/learning-library/articles/maths-in-the-great-outdoors> (Accessed: 18 February 2020).

Zero To Three (2020) *Help Your Child Develop Early Math Skills*. Available at: <https://www.zerotothree.org/resources/299-help-your-child-develop-early-math-skills> (Accessed: 14 February 2020).