

Following your visit to the National Botanic Garden of Wales or a similar setting, prepare a suitable resource and explain how you would use the resource to support identified aspects of the delivery of Science, ESDGC and the wider curriculum'

During the assignment, the theme of Education for Sustainable Development and Global Citizenship (ESDGC) will be promoted through the six lesson plans created by the trainee. The trainee will also look to focus and target the wider curriculum through looking at the different areas of learning in the foundation phase and the subjects taught in the Key stage 2.

"A good education is being able to understand life" - Malcolm X. This quote links well with the Welsh Assembly Government's definition of the theme of ESDGC: 'education that will prepare young people for life in the 21st century'. However, the Welsh Assembly Government believe that 'ESDGC should not be seen as an additional subject. It is more than a body of knowledge as it is about values and attitudes, understanding and skills'. Therefore, the concept of ESDGC should be embedded in primary school lessons, in order to make the future more sustainable through informing the future generations of how their actions will affect the world. Another definition for ESDGC is 'ESDGC is a cross-cutting theme in the revised curriculum for Wales 2008' (DCELLS, 2008), underlying how highly the concept of ESDGC is regarded, nationally.

Wales as a country has an obligation to promote sustainable development and this was made clear in the Government of Wales act 1998. The Welsh Assembly Government's Sustainable Development Action Plan 2004-2007 placed ESDGC as one of their main concerns. Furthermore, in September 2004, Estyn introduced a Common Inspection Framework, which meant that all inspection reports had to investigate the use of ESDGC in the schools. However, this was updated in 2006, it seemed that the schools were not engaging with ESDGC. Estyn believed that this was due to the fact that there seemed to be a 'lack of clear view' of what ESDGC was all about. Also, in September 2006, the Welsh Assembly Government published another document directed at the whole sector of education, to inform them how to implement the idea of ESDGC correctly and effectively in schools. In addition, there was a change in the national curriculum in Wales, in 2008 and it aimed to be "up-to-date and motivating for all learners" and it aimed to give the children of Wales a more in depth learning experience of the world around them. Therefore, the aims of the 2008 National Curriculum linked heavily with the theme of ESDGC, due to the fact that it would give children a more detailed account of how they can affect the world.

In recent years, the world has undergone the process of globalisation which has meant that countries all around the world have become inter-connected with one-another. The concept of ESDGC shows the role that the individual can have on the world around them and develops global citizenship. The wellbeing of future generations act (2015) is about improving the social, economic, environmental and cultural well-being of Wales. It looks to ensure the sustainability of Wales for future generations. Also, to make sure everyone is working towards making Wales sustainable and reaching the goal, the Welsh Government have put seven well-being goals in place. The seven well-being goals are:- A prosperous Wales, a resilient Wales, a healthier Wales, a more equal Wales, a Wales of cohesive communities, a Wales of vibrant culture and thriving Welsh Language and a globally responsible Wales. Now, the concept of ESDGC overlaps this act, due to the fact that through the incorporation of ESDGC in lessons, the well-being goals are more likely to be reached as ESDGC concentrates on sustainable development and global citizenship.

Furthermore, after a recent audit (2014) of education in Welsh schools, the Organisation for Economic Co-operation and Development (OECD) found that Wales did not possess the correct set of aims for education to thrive in Wales and recommended that the Welsh Government should 'develop a shared vision of the Welsh learner, reflecting the government commitment to

quality and equity'. As a result, Wales is in the process of developing a new curriculum that aims to ensure a successful future for all young children in Wales. The Donaldson report, 'Successful Futures' highlights the importance of the change in curriculum and the purposes of the new curriculum in Wales. There are four purposes of the new curriculum, they are that children in Wales are: Ambitious, capable learners, ready to learn throughout their lives, enterprising, creative contributors, ready to play a full part in life and work, ethical, informed citizens of Wales and the World and healthy, confident individuals, ready to lead fulfilling lives as valued members of society. Therefore, the teaching of ESDGC will play an important role in ensuring that the new curriculum adheres to and is working towards the four purposes. Due to the fact that the concept of ESDGC looks at the sustainable development of Wales and Global Citizenship, which links with all four purposes. Thus, emphasising the importance of ESDGC and why it should be taught in the new curriculum.

In addition, in 2014 Estyn completed a report on the progress in ESDGC in Welsh schools. The report looks into if the teaching and the understanding of ESDGC had improved since 2006. Estyn found that the 'understanding of the key concepts of sustainable development and global citizenship develops appropriately as pupils progress through school and is generally secure for each of the seven themes for ESDGC.' In addition, the report states that 'there has been an improvement since 2006 when understanding of global citizenship was not as well developed.' Therefore, schools have realised the importance of ESDGC also, the understanding and knowledge of ESDGC has meant that schools have been able to provide children with a more in depth learning experience of the world around them.

The ESDGC framework is divided into seven themes: 1. Consumption and Waste- The understanding that world's resources are limited and to ensure these resources are available for as long as possible, lifestyles might have to change in order to help this happen. 2. Choices and decisions- Understanding that the choices and decisions that individuals make have consequences and implications on the world. 3. Health- understanding the importance of a healthy and balanced lifestyle. 4. Natural Environment- Developing a new found respect and love for living things and understanding how individuals can affect the environment. 5. Identity and culture- understanding and respecting human diversification. Also, looking at discrimination and prejudice against groups of people. 6. Climate change- Recognise the importance of how they can make a difference and reduce the implications of climate change. 7. Wealth and Poverty- Understanding the gap between the rich and the poor. As the concept ESDGC is divided into seven themes this provides the teachers with a greater understanding of what ESDGC is and what topics should be incorporated into the lessons.

The chosen subject for both foundation phase and Key Stage 2 lesson plans was 'A time for change'. The chosen topic for the lesson plans was the different seasons, focusing on the season of spring for foundation phase and autumn for Key Stage 2. All six lesson plans have an element of indoor and outdoor learning. Both the first and the fourth lessons are the outdoor learning experiences. Therefore, the children are able to build on their prior knowledge and knowledge gained from the outdoor learning lessons.

Throughout the three foundation phase lesson plans elements of the Literacy and Numeracy framework (LNF) will be used and looked to be promoted. Also, the Cwricwlwm Cymreig (YCC) will be promoted through the lesson plans. The skills used to promote the LNF and the YCC can be found in the resources

The first Foundation phase lesson plan takes place in the local woodland area. This incorporates forest schools; which is defined by Sara Knight (2011) as a way of working in an outdoor environmental, preferably but not excessively in wooded settings. The purpose of the lesson is to observe the changes across the four seasons by going on a spring walk. The children will be

asked to try to spot some of the signs of spring. The lesson looks to promote the ESDGC theme of the Natural Environment. It develops a new found understanding for the children of the different seasons and how different plants, flowers, etc grow at different times of the year. In addition, the theme of Choices and Decisions looks to be promoted during the lesson through working in groups, through working co-operatively to make judgements of the task in hand e.g. working with others to identify the different signs of spring using the worksheet provided.

The second Foundation phase lesson plan will take place in the classroom and will look to recap on the previous lesson and to understand the life cycle of the butterfly. Therefore, the lesson plan will look at the scientific concept of life cycles and develop the children's knowledge and understanding of how a specific organism (in this context the butterfly), develops and changes throughout their life. The lesson looks to promote the ESDGC themes of the Natural Environment, through looking at the life cycle of the butterfly and develop a sense of wonder at the different stages of life in living things. Also, the theme of Choices and Decisions will also be targeted in this lesson plan through working co-operatively on the tasks provided as they are discussing and working on the tasks in mixed ability groups and with their partners, e.g. role play of the shop keeper and the shopper.

Furthermore, the third Foundation phase, will again be in the classroom and it will look to develop awareness of recycling and how it can affect the environment through creative development. The concept of recycling will link to the ESDGC of Waste and Consumption and Choices and Decisions. The lesson plan aims to develop their knowledge of how they can re-use different materials, in order to help save the environment. Also, it aims to teach them how as individuals their choices and decisions can have an affect on the environment, e.g. making the egg carton butterfly.

Now, for the Key Stage 2 lesson plans, elements and strands of the Literacy and Numeracy Framework (LNF) will be used and looked to be promoted through using a variety of skills, to ensure that the children develop their mathematical and language competence. In addition, the trainee teacher will look to ensure that the Cwricwlwm Cymreig will be pursued and promoted, throughout the three key stage 2 lesson plans, through linguistic and environmental means. The skills that will be used to develop the LNF and the YCC can be found in the resources.

The first Key Stage 2 lesson plan will take place in a near woodland area, to incorporate outdoor learning/ forest schools. The lesson plan will look to develop the ESDGC theme of the Natural Environment. It will develop respect for all living things and learning about how different animals hibernate and the reason they do so. Also, the use of natural materials provides the children a new found appreciation for their environment. Furthermore, the ESDGC theme of Choices and Decisions will be promoted in the lesson plan as the children will try to work together with the other children in the group, to obtain the best insulator as they have to decide which one they think would be the best insulator. In addition, during the measuring of the temperature of the water the children will need to work well and co-operatively together, to ensure that the test is fair.

Now, the second Key Stage 2 lesson will take place within the classroom. It will look to develop the children's literacy skills through the use of Haiku poems, but also develop the children's prior knowledge of the seasons, especially winter. During the lesson, the ESDGC theme of Choices of Decisions. The children will be working in pairs/groups to use maps/globes to try to find Wales and Japan. This will use the specific aspect of the curriculum- map work thus developing the map skills of the children. In addition, the children will be working in pairs, for an activity to choose which of the poems are Haiku or not. Furthermore, the ESDGC theme of Culture and Identify will be used and promoted through the lesson plan. The lesson will give an

introduction to the country of Japan. The use of a country as a comparison shows the different languages that are spoken in the world, the different cultures etc. Also, through the use of maps to compare the distance between Wales and Japan, provides a visual aid for the children.

Finally, the third Key Stage 2 lesson plan will also be within the classroom. The purpose of the lesson is to understand the impact of pollution on the environment and the importance of recycling to the environment. The lesson plan will help to develop the concepts of the habitats and how they are affected by pollution. The ESDGC themes that the lesson looks to develop is Consumption and Waste- Through introducing the knowledge that resources are finite and due to this, there will be implications for future generations. Also, the theme of Natural Environment as the children will be learning about the effect of plastic on the animals around the world and how much of an affect that humans have on the environment. Thus, developing their knowledge of the importance of recycling, e.g. learning how to use plastic to make bird feeders and wind spirals.

Overall, the importance of ESDGC is clear, to ensure that the future generations of children grow up to be sustainable and global citizens and ensure the well being of the world. Furthermore, through making children aware of the importance that every individual plays in helping to protect the world around will play a huge part in the success of the new curriculum in Wales.

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