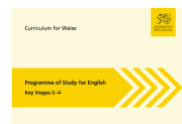


Cross Curricular Teaching: How could this be applied within the evolving curriculum for Wales?

Context

This poster demonstrates how cross curricular teaching approaches can be used for children between the ages of 8 and 9 years old. These children will be in **Year 4** and study the **Key Stage Two** programme of study. The approaches will demonstrate how numeracy, literacy and digital competence can be embedded using Barnes (2015) theoretical cross curricular approaches. The theme of both approaches is Nature however the second approach does look at “Food” in more depth. As well as this, the first approach will centre around Nature in Wales in order to develop the Curriculum Cymreig (QCAA, 2003).



(Welsh Government, 2016)



(Welsh Government, 2016b)

Why is there a need for cross curricular teaching in Wales?

There is a need for cross curricular teaching in Wales due to a new evolving curriculum which is set to be introduced into primary schools across Wales by 2022. The evolving curriculum in Wales outlines that there will be three cross curricular responsibilities. These responsibilities include the skills of numeracy, literacy and digital competence. Therefore, cross curricular approaches such as a theme based or a hierarchical approach can help individuals and schools implement the three cross curricular responsibilities (Donaldson, 2015). In addition to this, the Welsh Government (2017) have stated that Wales needs individuals who have “high-level digital, literacy and numeracy skills” (Welsh Government, 2017, p. 7) therefore these approaches will help embed these into the evolving curriculum for Wales.



(Donaldson, 2015)



(Donaldson, 2015)



(Donaldson, 2015)

Effective ways of incorporating the cross curricular responsibilities

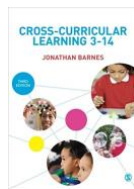
According to Barnes (2015) cross curricular approaches are seen as effective ways of incorporating cross curricular teaching and learning into the primary school. His approaches can help implement effective ways of incorporating literacy, numeracy and digital competence within the evolving curriculum for Wales. From my time on professional teaching experience, many schools used Barnes (2015) theoretical models in order to embed some of the cross curricular responsibilities into their teaching and learning (Donaldson, 2015).



(Donaldson, 2015)



(The Royal Society, 2018)



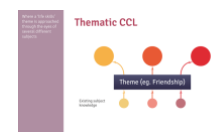
(Barnes, 2015)

The Cross Curricular Approaches

The cross curricular approaches that I have chosen have been designed to be taught over a 1 or 2-week period. Each of the models have four different lessons. Each lesson shows how the skills of literacy, numeracy and digital competence can be embedded within a Theme Based approach and a Hierarchical approach.

Theme Based Approach

A theme based approach to learning is when a theme such as Nature is used to “generate exploration” (Barnes, 2015, p.69) through a wide variety of areas within the curriculum. These areas are then used to enhance a child’s learning within a specific theme such as Nature. A theme based approach to learning can also help teachers implement the proposed cross curricular responsibilities of the new curriculum, which include the skills of literacy, numeracy and digital competence. Within this particular approach the children could learn the theme of nature through the subtheme of ‘the weather’.



(Barnes, 2014)

Lesson 1: Within this lesson the children can look at the weather climate in Wales. In order to do this the children can take a daily recording of the weather by “taking a temperature reading” (Welsh Government, 2016b, p. 7) using a thermometer throughout a five-day period. Therefore, within this themed lesson the children are developing their numerical skills (Welsh Government, 2014).

Lesson 2: During this lesson, the children can identify and describe the different weather conditions which occurred throughout the week. The children can do this by writing a report on the weather conditions that they saw. By doing this they will be incorporating the skill of literacy into their work as they will have to “organise writing into logical sequences / sections” (Welsh Government, 2016, p. 11).

Lesson 3: Within this lesson the children can use a search engine such as google to research and record information on how the weather can impact how foods and crops grow in Wales. By doing this the children will be using digital competence skills in their work (Welsh Government, 2018). In order to record this information, the children will use tables. This is a numerical skill (Welsh Government, 2016b) and as a result throughout this lesson the children will be developing their numerical and digital competence skills (Welsh Government, 2014).

Lesson 4: For the final lesson on the topic of the weather the children can present a weather forecast of their findings. This can give the children the opportunity to discover “the environmental factors” (Welsh Government, 2008b) within nature. The children will develop their literacy skills during this task as they will develop their oracy skills by organising “talk so that different audiences can follow what is being said” (Welsh Government, 2016, p. 3) they can also develop their numeracy skills as the children will “read and write numbers” (Welsh Government, 2016b, p. 3) and lastly they can develop their digital competence skills as they will be “producing” (Welsh Government, 2018) their own weather forecasts using “multimedia software” (Welsh Government, 2018) such as a green screen.

Hierarchical Approach

“Hierarchical cross-curricular methods aim at achieving progress in one discipline by also teaching aspects of another” (Barnes, 2015, p. 66). Therefore, within the hierarchical approach the children can look at the subject Design and Technology and in order to support their learning further then they can use the cross curricular responsibilities from the evolving curriculum of numeracy, literacy and digital competence skills.



(Barnes, 2014)

Throughout this approach the children can learn the theme of nature through the subtheme of ‘Food’.

Lesson 1: During the first Design and Technology lesson the children will research “natural food recipes” (Welsh Government, 2008). In order to research this the children will use iPads and Laptops. Whilst on the iPad’s and Laptops the children will carry out an internet search using a search engine. This will not only improve the children’s understanding of generating ideas and research for Design and Technology but it will also enhance the children’s digital competence skills as they are using technology such as iPad’s and Laptops to carry out research (Welsh Government, 2018).

Lesson 2: Following on from the research lesson, the children will plan one of the “natural food recipes” that they found on the internet. The children will decide on this recipe as a class. Throughout this session the children will start thinking about the ingredients that they will need for their food recipe. By thinking of the ingredients that they will need the children will also need to measure out how much ingredients they will need to make their “natural food recipe”. Therefore, their learning within Design and Technology is being enhanced by the numerical skill “weight” (Welsh Government, 2016b, p. 6).

Lesson 3: Then within the third lesson the children will make the “natural food recipe”. The children’s Design and Technology skills will be developed as they will be “making” (Welsh Government, 2008) the recipe. As well as this, their numerical skills can be developed as they will measure out and weigh the ingredients to ensure that they are accurate. Therefore, the children will use the numerical skills of weight and measure (Welsh Government, 2016b).

Lesson 4: Within the final lesson the children will evaluate their work within Design and Technology. The children will evaluate the recipe that they used and how the making process went. During this session, the children will be developing their literacy skills. This is because the children will be writing an evaluation of how the process went (Welsh Government, 2008). Therefore, throughout the session the children will “organise writing into logical sequences/ sections” (Welsh Government, 2016, p. 11).

Advantages of these approaches

Theme Based Approach

- ✓ Works well “to inform and motivate children” (Barnes, 2015, p. 69)
- ✓ Relevant themes such as ‘Nature’ in this approach can “generate learning in a variety of subjects” (Barnes, 2015, p. 69) such as the cross curricular responsibilities of numeracy, literacy and digital competence.
- ✓ Many themes that can be explored within the primary school are linked “all the time in life outside school” (Barnes, 2018 p. 12) as a result this can be seen as an advantage as children are able to link experiences to their hobbies or home life and they are therefore seen as very relatable to the child.
- ✓ From my time on PTE the majority of the children that I worked with were often enthusiastic and enjoyed this approach far more than subject specific learning such as Mathematics or English.

Hierarchical Approach

- ✓ Is a “highly motivating” (Barnes, 2015 p. 67) approach that can be used to “extend learning to more pupils” (Barnes, 2015, p. 67).
- ✓ The approach is seen as “inclusive and motivating” (Barnes, 2015, p.67) and it can help improve learners’ skills in more areas “than straight subject teaching” (Barnes, 2015, p.67).
- ✓ From observation on PTE, this approach was the most popular one used by primary schools in Wales.

(Clker, 2018)



Possible limitations of these approaches

Theme Based Approach

- ✗ Teachers must be “confident and knowledgeable” (Barnes, 2015, p. 69) when using this approach as if they are not “tenuous links and unclear aims” (Barnes, 2015 p. 69) can limit the learning that takes place within the classroom.
- ✗ Teachers must consider their themes carefully as they need to be authentic, well-planned, relatable, sustainable and well-assessed as if they are not the themes chosen can be seen as weak and unmeasurable (Barnes, 2015).
- ✗ From my time on PTE I noted that whilst children were working on this particular model some children within the classroom were reluctant to work on a particular theme if they were not interested in that particular area. As a result, this made them unenthusiastic and uninvolved within ‘theme’ work.

Hierarchical Approach

- ✗ As two subject areas are being looked at within this approach, often within the second subject area “little progress is made” (Barnes, 2015, p. 67). This was also noted whilst I was on PTE.
- ✗ Barnes (2012) states that progression is difficult to achieve in one subject let alone when two or more subjects are involved.
- ✗ Teachers need to clarify to the children what they are actually learning, as children can often become confused by the concept. This was seen whilst I was out on PTE (Barnes, 2015).

(Clip Art Max, 2018)

