

Cross Curricular teaching within the Foundation Phase.

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Cross-curricular learning is becoming a vital factor in the new curriculum for Wales. Donaldson (2015) recommends that Literacy, Numeracy and Digital Competency are all taught throughout the curriculum with the same importance. With the new purposed have Areas of Learning and Experiences (AOLE) rather than subjects' teachers need to have an understanding of how to deliver cross-curricular lessons.

Barnes (2015) taxonomy of cross-curricular learning recognises 7 different themes which can be used when teaching cross-curricular: Tokenistic – Where the link between subjects is tokenistic and does not enhance the learning. Single-transferable subjects learning across the curriculum – Applying something you learnt in one subject to other areas of the curriculum. Hierarchical – Where learners take ideas from one subject to support the learning in another. Multidisciplinary – The different subjects come together into a project, the learning is equal in all subject involved. Interdisciplinary – When different subjects intertwine during learning. Opportunistic – Where the children guide the learning as opportunities arise. Theme-based – When themes are used to link the learning of different subjects. Double focus – Where learners learn subject skills separately, meeting them again at future point to support the learning throughout the curriculum.

Thinking skills

Donaldson (2015) believes that the new curriculum will provide learners with opportunities to develop their critical thinking skills through transferring knowledge throughout the different AOLE's. This is supported by Fogarty (1995) including thinking skills being targeted within the 10 levels of cross curricular learning. Whilst Grigg (2015) doesn't specifically relate to cross curricular learning he believes that thinking skills are crucial to employers. Learning to apply thinking skills in a different context could benefit the learners in their future lives, which connects to Donaldson (2015) view of creating enterprising, creative contributors and also ambitious, capable learners.

Real life and Meaningful Contexts

Cross curricular learning is believed to support children's learning by providing learning through real life meaningful experiences (Hayes, 2010; Barnes, 2015). Estyn (2018) recognise good practice in schools which adapt scheme of work to provide learners with real life experiences throughout the curriculum. Providing these experiences will allow learners to take ownership of their own work increasing their confidence in applying their skills across the curriculum (Estyn, 2016) and (DCSF 2009). Making real life and meaningful connections contribute to 3 of Donaldson (2015) 4 purposes: ambitious capable learners: enterprising, creative contributors and healthy, confident individuals.

Subject knowledge

Barnes (2015) believes that in order to deliver a successful cross-curricular education the teacher needs good subject knowledge across all areas of the curriculum, without this subject knowledge the learners could be at a disadvantage as sufficient knowledge is not being delivered. Barnes (2011) believes that the individual skills teachers have should be taken into consideration during the planning phase.

Tenuous links

Cross-curricular links between some subjects are more natural than between others, links between design and technology are much easier to make than links between music and geography (Hayes, 2010). Kerry (2010) believes that forcing links between subjects can create a barrier to the learners education development.

Planning

Barnes (2011), Chard and Katz (2000) and Kerry (2010) believe that planning for a cross-curricular approach should be done in collaboration with other staff members, this could be challenging as teachers will need to find a suitable time to come together in order to plan. Barnes (2011) believes that the individual skills teachers have should be taken into consideration during the planning phase. In addition to this Donaldson (2015) believes that the children should be involved with the planning of cross curricular activities.

Activity 1 - Multidisciplinary

During this activity the learners will be using BeeBot's to move from one enclosure to another. The learner will be working in pairs to correctly code the BeeBot's discussing which steps they should take in order to complete the tasks, they will be using descriptive language to describe the position, direction and movement of the BeeBot. Once the learners have successfully moved into the second enclosure they will need to write a set of instructions for another pair to follow. The pairs will then switch to a different pairs enclosure and follow their instructions in order to see

if they are correct. During this stage the learners will be challenged to see whether they can move enclosures in a shorter number of steps than the original pair. Within this activity the learners will be developing their computational thinking skills as they will be sequencing their instructions.

Coding is included within the draft Science and Technology AOLE (WG, 2019b) Learners need to learn these skills as technology is continuously developing. Computational thinking is included in Yuhyun (2016) 8 digital skills that must be taught to children in order to prepare them for the future.

Strand: Oracy.-Take part in activities with others and talk about what they are doing. Contribute to conversations and respond to others, taking turns when prompted. **Strand:** Reading.-Read suitable texts with accuracy and fluency. **Strand:** Writing.- Sequence instruction content correctly. - Use specific words which relate to the topic of writing. (WG,2015).

Strand: Data and computational thinking. - Follow a sequence of steps to solve a problem. - Create and record written instructions that others understand and can follow. - Change instructions to achieve a different outcome. **Strand:** Interacting and collaborating.- Collaborate with a partner on a piece of digital work. (WG,2019c)

Strand: Using measuring skills. **Element:** Area and Volume, Angle and Position. - Make whole turns and half turns describe position, direction and movement. (WG,2015).

The activities outlined are planned meet the guidelines set out in the current curriculum for year one.



Activity 2 - Opportunistic

Strand: Oracy.- Express an opinion on familiar subjects. - Listen to others, with growing attention. - Talk about things they have done. **Strand:** Writing. - Communicate purposefully in writing. - Talk about what they are going to write. (WG,2015).

Strand: Producing. **Element:** Creating. - Select appropriate software to complete given tasks in order to use text, image, sound, animation and video. **Strand:** Data and computational thinking. **Element:** Data and Information literacy.- Record data collected in a suitable format. (WG,2019c)

Strand: Using number skills. **Element:** Manage money. - Use different combinations of money to pay for items up to 20p. **Strand:** Using data skills. **Element:** Collect and record data, present and analyse data, interpret results. - Make lists and tables based on data collected (WG,2015).

This activity will take place during a class visit to the local beach. During the day of the visit the children will have the opportunity to visit the shop to buy an ice cream of their choice, they will be using various coins adding up to 20p to pay for their chosen ice cream. This will provide the children the opportunity to discuss which ice cream flavours they like and dislike. Once all of the children have had their ice cream they will be collecting data on which flavour everyone had chosen for future use back in class. Once the children are back in class they will be using HWB to create a pictogram recording the results using the data they

collected during the visit, the children will then discuss their findings and write a brief description about their findings using images to support them if necessary. In preparation for the visit the teacher will visit the ice cream shop and pre-pay the full amount for an ice cream each for the children.

Financial literacy is embedded within the new draft curriculum for Wales (WG, 2019a). The experience of purchasing an ice cream will be a meaningful and real life context for the learners which will hopefully become memorable for use in the future.

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