

## LEVEL 6 ASSESSMENT SPECIFICATION

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| Student name:                   | Nicholas Thomas                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Student ID number:                                   | 1702851                                                       |
| Programme:                      | BA Education with QTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      |                                                               |
| Module:                         | ECAD6012 Cross Curricular Responsibilities: Literacy, Numeracy and Digital Competence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                      |                                                               |
| Module code:                    | ECAD6012                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Contribution to Overall Module Assessment (%):       | 50%                                                           |
| Lecturer:                       | Rachel Wallis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Internal Verifier:                                   | Rachel Wallis                                                 |
| Assignment Title:               | Academic Poster: Design and present an academic poster applying theoretical models of cross-curricular teaching to the incorporation of literacy, numeracy and digital competence as cross-curricular responsibilities                                                                                                                                                                                                                                                                                                                                                                                              | Word count (or equivalent):                          | Poster equivalent to 2, 500 words (words will not be counted) |
| Submission deadline:            | 20.12.19 (23:59)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Return date of provisional marks & written feedback: | 31.01.20                                                      |
| Submission method:              | <p>All written assessments, where practical and possible, must be submitted via Turnitin unless otherwise instructed by the Lecturer. (Please DO NOT put this assessment specification into Turnitin or it will match many similarities with other students' submissions.)</p> <p><b>Alternative submission method (if applicable):</b></p> <p><b>Late submission of the assessment will result in a late penalty mark.</b> Penalties for late submission: Up to one week late, maximum mark of 40%. Over one week late, 0%. Only the Extenuating Circumstances Panel may approve a change to submission dates.</p> |                                                      |                                                               |
| Academic honesty / referencing: | <p>Academic honesty is required. In the main body of your submission you must give credit to authors on whose research and ideas your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have used, cited or quoted in order to complete this assessment.</p>                                                                                                                                                                                                                                                                                              |                                                      |                                                               |

Many Welsh Government documents (2015, 2017) outline the need for cross curricular learning planning in readiness for the upcoming curriculum reform. Professor Donaldson in his curriculum review 'successful futures' (2015) writes that a pupil leaving a curriculum designed around his suggestions will become *Ambitious, capable learners.*  
*Ethical, informed citizens.*  
*Enterprising, creative contributors.*  
*Healthy, confident individuals.*

Donaldson (2015) adds that these learners will also have high levels of relative literacy, numeracy, and digital competency skills. Ensuring that they can be successful throughout their futures. Literacy, Numeracy, and Digital Competence will become cross curricular responsibilities, intended to be strengthened and developed throughout the wider curriculum and will be the responsibility of all teachers.

Literacy, numeracy and digital competence skills are strongly linked and weaved together. It is vital that the development of literacy in reading, writing, and oracy are linked with numeracy and now digital competence. Literacy acts as a method to communicate and become adept at extracting information, these skills will then be intertwined with the need for high numeracy skills to use the extracted information from tables, charts, graphs, and text in numerical processing. Reading a timetable for example requires both literacy and numeracy skills (Estyn 2013). Digital competence skills are just as vital (Donaldson, 2015) they will link between both the literacy and numeracy skills. Communication in the 21st century is developing and digital forms of communication are becoming the standard (Barnes, 2011). As such learners must develop their skills in using digital communication and publishing tools (Welsh Government 2018). As with the example above, where a learner is extracting information from a timetable, these timetables may now be stored and accessed online, a user must possess the skills to initially find the data before extracting and then processing. A very simple example of a task that will require skills from each of the responsibilities.



MODEL 1

This model will consist of cross-curricular learning through an inter-disciplinary model (Barnes, 2011). The learners will be aiming to create a purposeful solution to a water based need. The needs will be developed around a discussion on the importance of water. This discussion should follow a powerful experience such as videos on water shortages that will display our reliance on water. Following Arnstein's ladder of participation (1969) the pupils will be at delegated power, they will follow their own initiative to find a solution to a problem given in this case around water and its importance. This will also allow the pupils to take control of their learning and ensure they have a voice (UNCRC, 2003; Grigg and Hughes, 2012). The pupils will be divided into groups, as Barnes (2011) notes this will develop learners emotional development, which is possibly a indicator of future development (Goleman, 1996). Within the groups the pupils will decide on a water based issue they will attempt to solve. The teacher will give the pupils a outline of what they need to be successful. Clearly listing a success criteria that will allow both the learners to understand where they need to go and give the practitioner a way to assess their learning (Barnes, 2011; Black and William, 1998). The success criteria could include options such as; hold group meetings and keep notes, document the issue and possible solutions, research the issue, develop a solution, present the solution to an audience. The areas we will be developing during these series of lessons will be the three responsibilities (literacy, numeracy, and digital competency) and humanities. Barnes (2011) suggests that it is best practice to limit the number of areas covered to ensure stronger connections in learning.

- Lesson 1-** Pupils will work as groups to discuss a water related issue. The discussions will revolve around opinions and prior knowledge of issues that they can recall from previous experiences. Note taking will be encouraged to document all ideas and opinions for later development. This will develop skills in progression step 2 of the oracy and writing elements of the LNF and progression step 2 of the what matters statement (H2) in humanities through offering suggestions for possible enquiries, recording observations in a variety of ways, Expressing opinions, and listening to others.
- Lesson 2-** Pupils will research the issues discussed in the previous lesson building on knowledge using any available sources of information. This will develop learners ability to strategise their online searches using keywords and skimming results. The learners will create collaborative documents to record their findings. Working towards progression step 2 of the digital competency framework. Through engaging with a various sources of information, pupils will work on humanities (H2) progression step 2.
- Lesson 3-** Pupils will begin to collect data and quantifiable statistics that highlight the issues they have researched. The groups will collect and extract information from graphs, tables and text to later present to the class. The learners will develop skills in progression step 2 of humanities, by collecting and recording information from various sources, and by working as groups during primary research. Numeracy skills will be developed from progression step 2, by gathering and interpreting data from graphs, statistics, lists, tables, and diagrams.
- Lesson 4/5-** Groups will collate their work and create a presentation to the class. Producing a presentation in any format to the remainder of the class to highlight the issue the group has researched. By providing data, facts, and a basic solution to the issue the learners will be working towards skills in progression step 3 of the numeracy framework. Following the presentation the group will answer questions from the class. The pupils will also be working towards progression step 3 of the oracy skills framework through presenting information using accompanying resources and responding to questions on their work.
- Lesson 6-** This lesson will be where the groups can respond to the questions they received and evaluate their presentation. Self-evaluation is an essential tool to assessment in enquiry based tasks the instant feedback of self-criticism can give the learner a platform with which to improve (Grigg and Hughes, 2004). This self evaluation and idea development advances skills from the progression step 3 of humanities (H2) as well as progression step 3 of the writing skills by evaluating and improving their work.

Advantages

This method allows pupils to become autonomous by using the pupils natural intuition of what they want to do and need to do (Bowring-Carr and West-Burnham, 1997; Wood, 2009).  
This activity will also allow pupils to follow their own interests which shows them respect (De Vries, 1997), a pupils own interests are then a good springboard to developing further knowledge (Jarvis, 2010)

Disadvantages

The inter-disciplinary model requires caution to ensure that teaching and learning is not superficial, practitioners must know exactly where they wish to take the learning (Grigg and Hughes, 2012; Barnes, 2011). The inquiry based learning used in this model can be resource heavy for example it requires access to digital devices for many lessons, this would be difficult for many schools to implement (Blessinger and Carfora, 2014).

Powerful shared experience

# Why do we need water?

Starting with a question may lead to better connections with learning. Stronger links can be made across the curriculum when the learners are connecting understanding through an enquiry. (Ofsted, 2003 & 2009; Laurie, 2011; Barnes, 2011))

It has been suggested that schools should:  
**ASSESS** their current plans and policies around teaching the LNF and DCF.  
**EVALUATE** the current skills of the teachers in teaching the LNF and DCF.  
**CREATE** a new internal framework as to ensure teachers know what skills to teach and where.  
**UP-SKILL** teachers to ensure they are comfortable teaching the high level skills needed.  
(ESTYN, 2017; 2018a; 2018b) (WG, 2013; 2017; 2018)

The lessons in these examples can be used for a class in Year 3.



**Skills developed within the lessons;**

- Explain information and ideas using relevant vocabulary
- Speak clearly, varying expression to help listeners
- Check understanding by asking relevant questions or making relevant comments
- Contribute to group discussion, sharing ideas and information
- Use talk purposefully to complete a task in a group.
- Use information from texts in their discussion or writing
- Make links between what they read and what they already know and believe about the topic.
- Write for different purposes and readers choosing words for variety and interest
- Include relevant details, information or observations in their writing
- Note down ideas to use in writing
- Use on-screen functions, e.g. font, colour, cut, paste, size, to present their work in ways to interest the reader and enhance meaning
- Review and improve sections of their work



**Skills developed within the lessons;**

- Select and use suitable instruments and units of measurement
- Represent data using:
  - lists, tally charts, tables and diagrams
  - bar charts and bar line graphs labelled in 2s, 5s and 10s
- pictograms where one symbol represents more than one unit using a key – Venn and Carroll diagrams
- Extract and interpret information from charts, timetables, diagrams and graphs.
- Use appropriate notation, symbols and units of measurement
- Select and construct appropriate charts, diagrams and graphs with suitable scales



**Skills developed within the lessons;**

- Use an online collaborative platform to create or edit a file, e.g. word processing, presenting tools, spreadsheets
- Save files to a specific location using an appropriate file name, e.g. select a file name that would be searchable at a later date
- Understand the importance of saving work periodically to avoid losing work.
- Develop strategies for finding information using different keywords and techniques, e.g. follow a step-by-step set of instructions on how to search effectively for information relevant to a task and select an appropriate website from skimming through a small number of sources
- Give an opinion about their own work and suggest improvements, e.g. spot mistakes and use editing tools to improve their work.



MODEL 2



Thematic cross curricular learning will use a theme as a vehicle to explore several subjects or areas of learning. The chosen theme should be relatable and driven by shared interests of the teacher and the learners with preference given to themes with strong connections to the local community (Barnes, 2011). Thompson quoted in Grigg and Hughes (2012) says that a theme should be thought of as a thread of string that subjects are attached to, the subjects may all be of different sizes but they will all be on the same string. Whilst choosing the activities and lessons for this model we must be cautious to include the learners in decision making, Thematic teaching can often be very teacher lead where the pupils have very little say in what gets taught. Fisher (2002) writes that to counter this practitioners must that the class are capable and invited to create links in the learning possibly deciding where further lessons might go. This also allows the building of important relationships between the teacher and learner through the demonstration of respect (De Vries, 1997; Hattie, 2009).

**Lesson 1-** The first lesson will centre around humanities combined with digital competencies. The learning will focus on why towns seem to always form around larger water sources such as rivers. The teacher will initiate the lesson by drawing a comparison between the local town or city and a larger city such as London or Manchester. These locations may seem completely different to the learners but one common factor is their location near water sources. This adheres to Barnes (2011) suggestion of creating connections with the local community.

**Activity 1-** The pupils in small groups (Goleman, 1996) will research towns and cities around the UK and investigate if they are near a water source. The groups will use google maps or traditional maps in their investigation and will make notes of any additional features, such as do larger cities have larger water sources, are there houses near the water or businesses. The groups will then feedback to the class on what they have noted in their research and possibly answering questions or defending their opinions.

**Activity 2-** The groups will decide on one aspect of why towns/cities formed around water sources and create a digital poster or presentation on the importance of water to that aspect. For example if a town was agricultural maybe the water was used for crops and farming and without a nearby water source the crops would not grow or, if a town is industrial maybe water was used to power large machinery or as transportation of goods. Without the water would these businesses survive or adapt? These are some examples a practitioner could use to initiate thinking or spark ideas. The presentations will then be shared with the class and if possible displayed within the classroom or school. This lesson will develop skills with the humanities curriculum, specifically around the what matters statement of 'Our natural world is diverse and dynamic, influenced by physical processes and human actions'(H1). Pupils will be developing skills from the progressions step 2 and 3 by describing the relationship between water sources and it impact on human development. From the digital competencies framework the learners will be developing skills within the producing, and the data and information literacy strands. They will be developing these progression step 2 skills through; creating and modifying multimedia components, searching for and extracting data from suitable sources.

**Lesson 2-** This lesson will focus on science and technology area of learning. By following the advice of Fisher (2002) and Jarvis (2010) we will take an idea suggested in the previous lesson and create a link between the learning that has been created by the learners. In this case a pupil may suggest that water has been used to transport goods or people. This suggestion can be springboard from to investigate buoyancy.

**Activity 1-** Small groups will work within water trays or tubs to experiment with different items from around the classroom or school grounds. The pupils will create a record of the results in the form of a table where they will categorise items by weight and size. This develops skills within progression step 2 in the numeracy framework. The pupils will then document whether the items float or sink. Following their investigation the groups will share findings with the other groups to discuss similar findings, then they will share their results and findings with the class. (S1- recognising trends and patterns- progress step 2).

**Activity 2-** The pupils investigation may lead to very interesting results and conclusions, from noticing that the lighter objects tend to float to heavier objects sinking. The teacher must lead the thinking towards density, noting to the class that it is density that plays a large factor in buoyancy. An example would be a large piece of wood might float but a small metal ball may sink, and what about metal boats? Heavy boats will use a principle called displacement to float. Using clay as an example, clay is denser than water and would usually sink (demonstrate this with a clay ball and water container). It is denser and as such sinks, just like many objects may have in their investigation. What would happen if we reshape the clay? Reshaping the clay into a hull shape and placing in back into the water demonstrating that it is now buoyant. Allow the groups some time to digest and discuss this phenomena (Bloome et al., 2005; Alexander, 2008). The teacher should now discuss displacement and Archimedes' principle. Groups will begin by marking the water level on their containers as a baseline. This will aid in the visualisation of water displacement. The higher the water rises the more water is being displaced and therefore the more buoyant an object is. The groups are to be tasked with forming boats from clay to

Disadvantages

Thematic learning has been done many times historically, notably before the introduction of the National Curriculum. The issues that existed then can still cause problems. Practitioners must be careful to not create tedious links to areas and ensure that the lessons have been well planned and thought out to ensure interest and longevity. Practitioners must avoid lessons of convenience (Routman, 1991; Barnes, 2011).



Advantages

Theme based teaching engages pupils in deeper learning by connecting various areas or learning just as knowledge is connected in the real world (Handal and Bobis, 2004; Lipson, et al., 1993). If this technique is effectively planned and delivered it can be a highly motivational tool and vehicle for success for learners (Barnes, 2011)

## **REFERENCE LIST-**

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