

Overview

Prepare a portfolio (as though you were sharing with a mentor or student colleagues) which illustrates a critical reflection of progress made on the planning and implementation of three pedagogical principles.

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Pathway: PGCE Primary

Link to OneNote: https://uowtsd-my.sharepoint.com/:o:/g/personal/1700677_student_uwtsd_ac_uk/EIWbsDhQ0HBMhqQFoc_1cpcBw345mvDoNINvM8IJHzGMeQ?e=Vnr5Ci

Targets from previous assignment:

	Target	What I have done in this assignment...
Target 1	Following the discussions on strengths and limitations, try and synthesise the arguments and offer a next step.	I have written how I can further develop my pedagogy in each of the three pedagogical principles.
Target 2	Ensure that the literature review is explicitly linked to the subject of the research e.g. 'in light of the discussion on critical incidents.....'	I have made numerous references to my experiences in the classroom and the illustrative examples when discussing the literature surrounding each of the pedagogical principles.

Employing Assessment for Learning Principles

Illustrative Example 1.1

Time	Activities/Methodology/Key Concepts (Teacher's Role – including key teaching points and key questions)	Pupil Tasks (Pupils' role -including differentiation strategies, engagement in formative assessment and homework)	Resources (Including Health and Safety requirement)
Opening phase (with links to prior learning)	1) This is the start of the topic, so I am unaware of any prior learning. I will explain what a source of light is. I will ask the pupils if they can tell me what is a source of light? What are the sources of light in the classroom right now? 2) I will then begin a PowerPoint containing pictures of different objects, some of which are sources of light, others are not. 3) I'll move on to the second stage of the PowerPoint – introducing shadows. I will ask the children if they know how shadows are created. I'll explain they're formed because the light is blocked. I'll model the creation of a shadow (hand puppet) using a torch in front of the pupils.	1) The pupils will respond with hands up to my initial questions. 2) I will then engage the whole class, asking them to give either thumbs up or thumbs down if they think the object is a source of light or not. 3) I will ask for hands up to answer the question about how shadows are formed.	2) Computer and interactive whiteboard with my PowerPoint loaded. 3) Piece of large white paper (at least A3) and a torch.

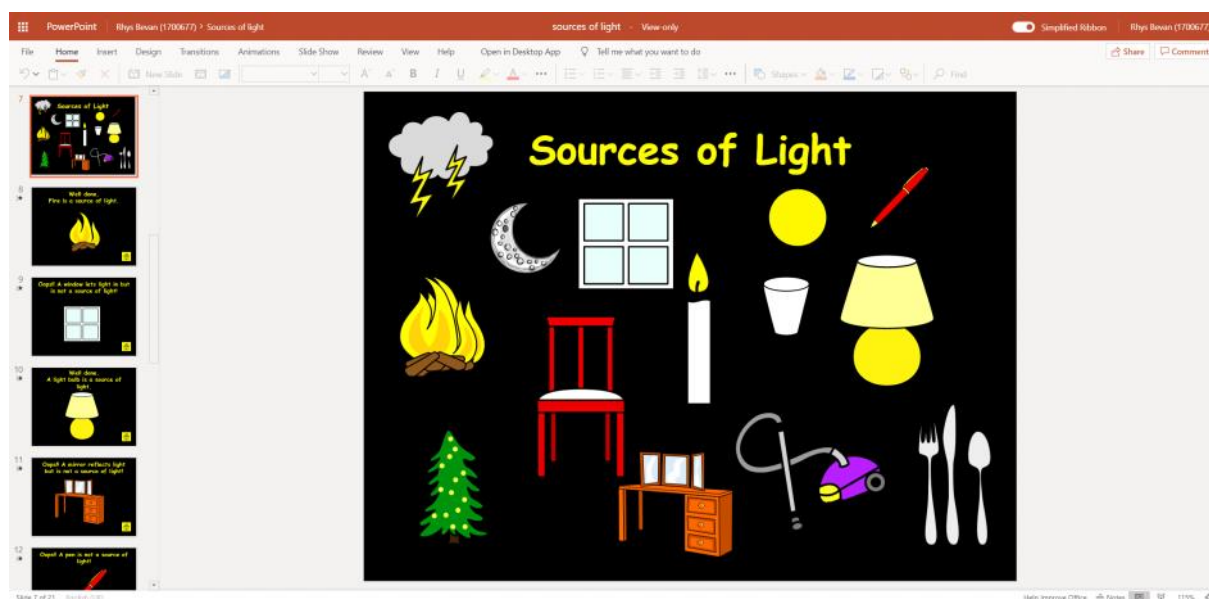
Illustrative Example 1.2

Plenary	1) I'll point at random objects in the room and ask if they are a source of light or not. 2) Each child will model a hand puppet shape to the rest of the class with a partner. They will have to demonstrate they know where to hold the torch to make the shadow appear on the paper.	1) Answer my question giving either a thumbs up or thumbs down. 2) Each child will need to demonstrate a hand puppet to the rest of the class. I will ask them to pair up and position the torch/paper themselves to assess whether they have conceptualised where to place the paper, their hands and the source of light.	2) Torch and A3 white paper.
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Illustrative Example 1.3

Areas for my Development	The planned activities were too time-consuming for a one-hour lesson, so on the advice of my class mentor, I have split this planned lesson into two lessons. Today I concentrated on Learning Objective 1.
Personal Targets for Progress	During the introduction to the lesson, I had planned on having the pupils respond to my questions with 'hands up'. Whilst this did initially work as planned, it descended into the children shouting out as they were very eager to be chosen to interact with the activity on the PowerPoint presentation. This was my fault as I did not explain to the children well enough at the start of the questioning activity how I wanted them to respond. Furthermore, a small number of pupils did not engage at all during the questioning activities. Some of these pupils struggled with the worksheet later in the lesson.

Illustrative Example 1.4

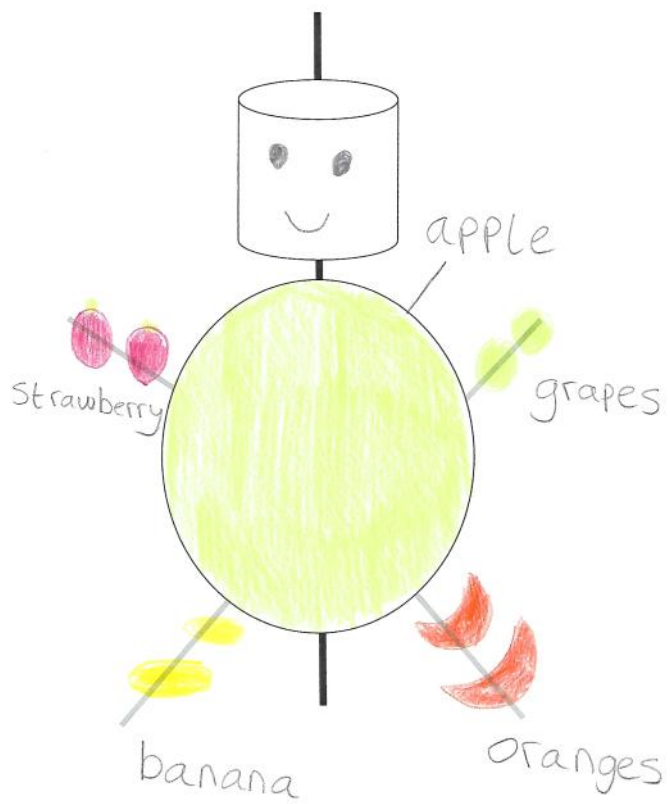


This extract was taken from my planning for my first lesson with the Year 1 class. It was the pupils' first lesson about a new topic (light and dark). I included a range of assessment for learning (AfL) strategies during the opening phase (highlighted in red), with a focus on questioning. These were used to activate prior knowledge about what the pupils already knew about the topic, which would then assist me with my planning for the following light and dark lessons. Questioning was also used in the plenary to assess the pupils' understanding and whether they had made progress during the lesson.

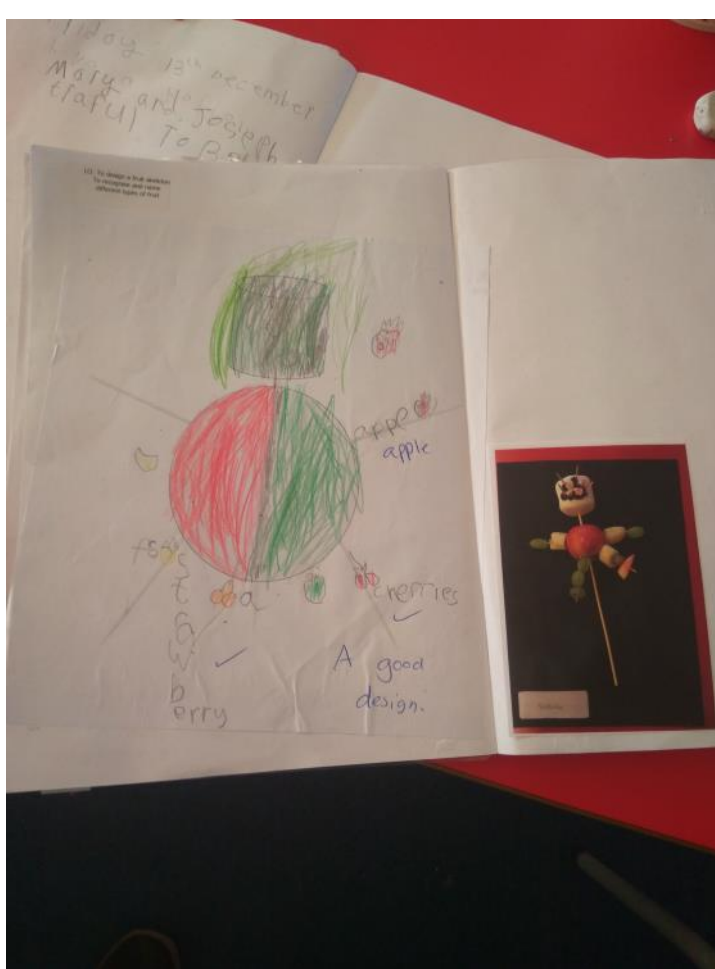
Welsh Government (2010) note that good questioning allows all learners to contribute. To achieve this, I included a whole class questioning activity using a PowerPoint presentation (illustrative example 1.4) where the pupils had to give either a thumbs up or thumbs down in response to my questions (is the sun a source of light?). I found that this worked well in terms of engaging the whole class. However, it was noticeable that some pupils were copying the responses given by one or two particular pupils, which suggests they were not independently thinking about the possible answers themselves. Going forward, I considered alternative whole class strategies which limited these pupils' opportunities to copy others, and instead encouraged them to think for themselves instead.

Hussain (2017, p. 19) discusses how the use of questioning in the classroom can be used to manage behaviour. I chose to implement a hands-up policy when I asked open ended questions to prevent pupils from shouting out. This successfully kept noise to a minimum, and all pupils were able to clearly hear their peers answers. However, it was noticeable that many pupils did not put their hands up to answer any of the open ended questions. William (2014, p. 16) noted how hands-up questioning makes participation voluntary. For this reason, I considered other answering strategies when conducting open ended questioning activities with the pupils.

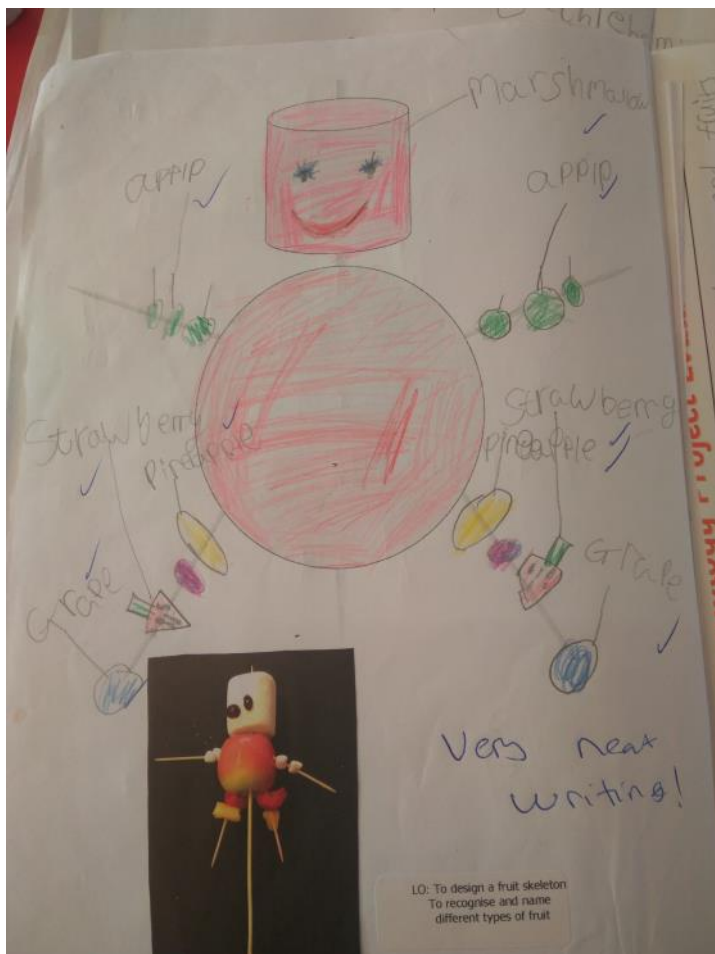
Illustrative Example 2.1



Illustrative Example 2.2



Illustrative Example 2.3



In the 'design a fruit skeleton' lesson with the Year 1 class, I decided to use a WAGOLL to demonstrate to the pupils how they can design their fruit skeleton. This lesson was taught in groups (the pupils had already been placed into groups by the

class teacher based on their ability). I sat at the table with each group and asked each pupil questions about their previous lesson where they tasted different fruits. After this short exercise, the pupils had plenty of different fruits they could recall to use in their design. I asked the pupils what fruit would they use on each part of the fruit skeleton, and then I drew and labelled the fruit. This helped me model to the pupils how I expected them to create their design.

I chose to use a WAGOLL for this lesson because I was not confident I could explain to the pupils what a successful design will look like without showing them a completed design. As the pupils would be using the design the following day to create their fruit skeleton, it was important they created a usable design within the lesson.

Beere (2015) discusses how the use of a WAGOLL can help convince the pupils that they are capable of progressing and meeting the lesson objectives by the end of a lesson. Every pupil appeared excited as we created the WAGOLL together and were eager to complete their own design, supporting Beere's (2015) discussion. At the end of the lesson, I felt it had gone tremendously well. However, it became apparent after the subsequent lesson where they created the fruit skeletons that my 'design a fruit skeleton' lesson hadn't been as successful as I initially thought. I observed how very few pupils actually followed the designs we had created (as can be seen in a pupil's work above). I believe this was a result of me spending too much time explaining how to create the design, rather than explaining to the pupils why we were designing our fruit skeletons. Whilst I haven't yet had an opportunity to teach another lesson where the pupils are designing something, I will make sure to learn from my mistake in any future lesson and ensure I sufficiently explain why we design things before moving on to the practical designing and creating activities.

Illustrative Example 3.1

Opening phase (with links to prior learning)	I will be using the Numicon software on the interactive whiteboard. I will begin by showing the children 1p, 2p and 5p coins whilst asking APK questions to assess what they remember from previous lessons. Coins is an area the class is having great difficulty with, so determining what they remembered from last time is important.	As this is a short activity which will involve the whole class, it is difficult to differentiate the activity. I will ask more difficult questions on occasion, but I will not expect any pupils from the lower two groups to answer. However, they are welcome to participate with these questions.	Interactive whiteboard, Numicon software
Teaching & Core Learning	I will then display various amounts of coins on the board. The pupils will need to determine and write down on their individual mini whiteboard how many pence the coins are worth. I will encourage them to discuss it with a partner or others sitting nearby.	The pupils will have to write the answer to each question on a mini-whiteboard and then lift it in the air to show me. They will be encouraged to discuss it with a partner.	Interactive whiteboard, Numicon software, mini-whiteboards, pens, board rubbers

Illustrative Example 3.2

Evaluation of Pupil Learning	
Evidence of Learning (including attitude to learning over time))	The pupils thoroughly enjoyed this activity. The class teacher commented on how engaged they were. During the first few questions, some students were getting some of the questions wrong. However, as the lesson progressed these pupils were getting more and more questions correct.
Next Steps for Progress	After observing how pupils from the different groups performed, I will create a number of 'nests' with different coins inside for the pupils to work on tomorrow. The 'nest' aspect is linked to the topic this half term (The Owl Who Is Afraid of The Dark). I do not believe the lower groups are ready to work with 10p coins yet. They can continue working with 1p, 2p and 5p, whilst the top group will be encouraged to tackle 'nests' with 10p coins as well.

Reflective Analysis of Teaching and Strategies For Development – including justification/rationale for pedagogical choices	
Evidence of my Effective Practice	I have made sure to note how the students performed with the questions in today's math lesson to inform my planning for tomorrows math lesson – this links to the 'Progression in learning' QTS Standard. I made sure that even the pupils from the lower groups were encouraged to attempt the 'harder' questions during the session. They all did give it an excellent go, which is evidence of the pupils being 'Ambitious, capable learners' - relating to one of the Four Purposes.

Illustrative Example 3.3



In the 'coin recognition and addition lesson' with the Year 1 class, I included an AfL strategy (in red) to ensure my planned questioning activity promoted discussion amongst the pupils and allowed all pupils to contribute, as is recommended by Welsh Government (2010). Furthermore, I had read how Gimbutas (2019, p. 5) found that the use of mini-whiteboards

increased participation during questioning activities when compared to hand-raising.

As the use of mini-whiteboards is already a familiar strategy used throughout the school, I did not need to model the process of answering the questions using the mini-whiteboards. I found that the use of mini-whiteboards during my questioning activity increased the levels of involvement during the lesson. I believe this was because this removed the element of choice in terms of participating within the lesson. Every pupil knew they would be required to answer every question. This helped ensure I did not repeat mistakes I made in previous questioning activities, where many pupils sat through entire questioning activities with minimal participation due to my implementation of a hands-up approach.

However, a small number of pupils appeared to be copying the answers their friends had written down and did not appear to be calculating the answers themselves. This was an issue I had encountered during previous questioning activities using other strategies (hands-up and think pair share). My decision to encourage the pupils to discuss the questions with each other before answering likely contributed towards this. Going forward, I must carefully consider what my aims of the questioning activity are and base my AfL strategy around the learning objectives I have for the pupils.

Reinforcing Cross-curriculum Responsibilities Including Literacy, Numeracy and Digital Competence

Illustrative Example 4.1

Student-teacher	Rhys Bevan	Class:	Y1K
AoLE or Subject	Science & Technology	Date:	05/12/2019
Lesson Focus:	Creating sentences about the day and night.		
Meaningful links to Curriculum	Foundation Phase Framework – Knowledge and Understanding of the World - understand that light comes from a variety of sources, such as the sun, and that darkness is the absence of light.		
Meaningful links to: Cross Curricular Responsibilities	Literacy & Numeracy Framework – Writing – Progression Step 2: use specific words which relate to the topic of their writing.		

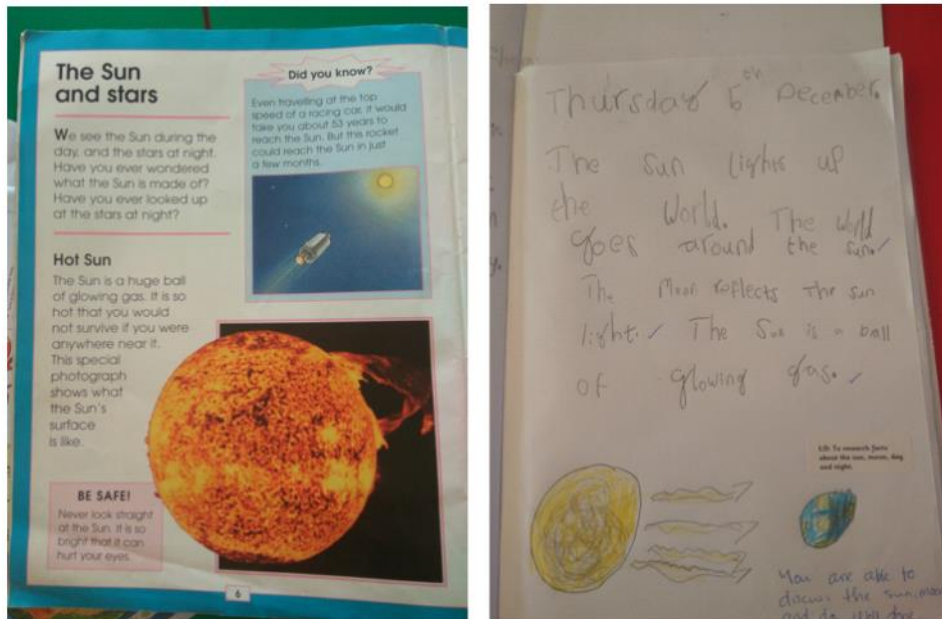
Illustrative Example 4.2

Opening phase (with links to prior learning)	I will read pages from the Sun and Stars book to the children, asking them questions as we go along. I'll let the pupils know they need to listen out for any 'Wow Words' about the sun and stars. I will note down any words they identify and add them to the 'Wow Words' sheet to use later in the lesson.	The pupils will need to listen as I read sections of the book. They will need to listen out for any important words we can use later in the lesson.	1x copy of Sun and Stars
Teaching & Core Learning	The pupils will use words I have identified beforehand as well as words they have identified during our reading to create sentences about the day, night, stars, the sun and moon.	The pupils will work in groups (Red, Blue, Yellow and Green) to complete the work. The Yellow group will have a separate 'Wow Words' sheet with more difficult words to include in their sentences. The Blue group will have a separate sheet with simpler words to include in their sentences.	The pupils' topic books, A4 sheets with our 'Wow Words', pencils.

Illustrative Example 4.3

Evidence of Learning (including attitude to learning over time))	The pupils always enjoy being read to, and so were highly engaged throughout the reading of the book. I had already created a set of 'wow words' for the activity, however I was surprised by how many other topic related words the children remembered and made me add to our list at the end of the reading. These were words I initially deemed to be too difficult, however many pupils were confidently able to pronounce and recall the meaning of these words later in the activity. Without my planned emphasis on including aspects from the LNF framework, it is likely the pupils would not have had the opportunity to advance both their learning in literacy and regarding the topic (day and night).
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Illustrative Example 4.4



The above two extracts are from the lesson plan for my 'Day and Night lesson' with the Year 1 class. Whilst the objective of the lesson was for the pupils to learn facts about day and night from 'The Sun and Stars' book (illustrative example 4.4), I felt there was a simple way to include elements of literacy into the lesson. After examining the National Literacy and Numeracy Framework (Welsh Government, 2013), I identified elements (highlighted in red) which I thought would be suitable. I chose this element of the writing strand in the National Literacy and Numeracy Framework because the pupils were already familiar with using specific words identified by the teacher (known in the school as 'wow' words) in their writing.

Allowing the children to create their own sentences using the 'wow' words resulted in a variety of different sentences being constructed, with some pupils using words I initially deemed to be too difficult. Furthermore, I found myself introducing other aspects of the Literacy and Numeracy Framework throughout the lesson which I had not initially planned. For example, after we had finished reading the information book, many pupils were eager to share what else they already knew about the topic with their peers, helping improve their oracy. However, whilst it could be considered a positive that extra elements of the Literacy and Numeracy Framework were incorporated to the lesson, this suggests that my initial planning of the lesson was not as thorough as it could have been. In future lesson plans I will check to see if I can include multiple cross curricular elements into my lessons, instead of being content with including just one.

Illustrative Example 5.1

Student-teacher	Rhys Bevan	Class:	Y1K
AoLE or Subject	Language, Literacy and Communication - Oracy	Date:	19/11/2019, 20/11/2019, 21/11/2019
Lesson Focus:	The pupils will use their Welsh sentences from a previous lesson to have a conversation with a partner. They will film each other's conversations using iPads.		
Meaningful links to Curriculum	Foundation Phase Framework – Welsh Language Development Outcomes – Foundation Phase Outcome 5 - With support, they express simple information, and ask and answer questions. They recognise familiar words.		
Meaningful links to: Cross Curricular Responsibilities	Digital Competency Framework – Progression Step 2 – Citizenship - use digital devices within a controlled environment, time and context, e.g use for a given time limit and specified outcome.		

Illustrative Example 5.2

Opening phase (with links to prior learning)	The children will begin by sitting on the carpet. I will go through each of the questions they are to use, asking random pupils the questions and have them answer. They have already written down questions and answers to use in a previous lesson. Once I have gone through each question, I'll explain that I expect them to use these questions in a conversation with a partner. I'll invite up a student and model how the conversation will go. I'll invite a second student to film the conversation using an iPad.	The pupils will sit on the carpet and answer my Welsh questions if selected. The Yellow and Red groups will be expected to use all questions. The Blue and Green groups will only be expected to use <u>Pwy wyt ti</u>, <u>Sut wyt ti</u> and <u>Ble wyt ti'n byw?</u>	The pupils' Welsh books, iPads
Teaching & Core Learning	The children will then work in pairs (or possibly groups of 3) to record themselves, using iPads, having their conversation in Welsh.	The Yellow and Red groups will be expected to use all questions from the previous lesson. The Blue and Green groups will only be expected to use <u>Pwy wyt ti</u>, <u>Sut wyt ti</u> and <u>Ble wyt ti'n byw?</u>	The pupils' Welsh books, iPads

Illustrative Example 5.3

Reflective Analysis of Teaching and Strategies For Development – including justification/rationale for pedagogical choices	
Evidence of my Effective Practice	The pupils were highly engaged throughout the lesson, with every pupil eager to participate and complete the activity. The "Listening to learners" QTS Standard is an area that I was able to achieve in this lesson. After recording the first two pairs, they watched their recording back. Both commented on how they struggled to hear themselves due to the noise in the classroom. Whilst the noise was a direct result of the pupil's excitement and engagement with the activity (specifically the use of the iPads), it was unacceptable and I told the rest of the class that their level of noise was very unfair on the pairs recording their conversations, feeding back to the class what I had listened to from the learners I had worked with. The noise in the class dropped, the two pairs re-recorded their conversations and were much happier. I believe this further encouraged them when recording their conversation.

These three extracts were taken from my planning for my first Welsh lesson with the Year 1 class. This was the concluding lesson in a series of three lessons, two of which were taught by my class mentor. I was asked by my class mentor to incorporate an element of the Digital Competence Framework (Welsh Government, 2019) into the lesson. The pupils had practiced a number of previously learnt greetings and questions in Welsh, as well as being introduced to a small number of new questions. The aim of this lesson was to record the pupils using some of these questions in a conversation.

After a discussion with my class mentor and examining the Digital Competence Framework (Welsh Government, 2019) to ensure my lesson was planned around a relevant and age appropriate strand for my Year 1 class, I chose to use iPads as the digital devices because each class within the school is provided with multiple iPads. Nevertheless, if other digital devices had been available, I still would have chosen to use iPads after reading how Flewitt, Messer and Kucirkova (2014, p. 289) found that the use of iPads offered rich opportunities for collaborative interaction and communication.

I found that the use of iPads increased the pupils' motivation to achieve the objective of the lesson compared to when completing written work. However, I did not anticipate that the excitement caused by using iPads during a lesson would raise the noise levels in the classroom to the extent it did. I found it difficult to reduce the noise to an acceptable level. Therefore, I tweaked the opening phase of the lesson the following two days, with an increased emphasis on the noise levels I considered acceptable. In my future planning involving digital devices I will ensure I consider how the use of digital devices in lessons may alter the usual behaviour of the pupils and plan appropriate behaviour management strategies to prevent this happening again.

Illustrative Example 6.1

Student-teacher	Rhys Bevan	Class:	Y1K
AoLE or Subject	Language, Literacy and Communication	Date:	28/11/2019, 29/11/2019
Lesson Focus:	Researching nocturnal animal facts		
Meaningful links to Curriculum	Foundation Phase Framework – Language, Literacy and Communication Skills – <u>Oracy</u> – Year 1 - speak audibly, conveying meaning to listeners beyond their friendship group. Foundation Phase Framework – Language, Literacy and Communication Skills – Reading – Year 1 – recall details from information texts.		
Meaningful links to: Cross Curricular Responsibilities	DCF Framework - Progression Step 2 - Producing - use text when searching for information/media (image, video, sound) and use an internet browser independently, e.g. open web browser and type in one keyword for a search		

Illustrative Example 6.2

Teaching & Core Learning	The children will work with me in groups. Each group will be provided with several information sheets about a specific nocturnal animal that is local to the area (foxes, owls, bats or hedgehogs). The pupils will need to read some of the text to identify information about the nocturnal animal. I will ask questions when needed to help guide the children in the right direction (What do owls eat? Etc). The pupils will be allowed to use iPads to research their animal using a search engine as well. Once they have found a fact, they will need to write it in their book. I have prepared sentence starters for the Blue group to follow. The Red/Green group will have a list of questions to help them narrow down what to look for. The Yellow group will not get this help unless it is clearly needed.	The pupils will need to research the texts, identify information about the animal and then write it down.	Nocturnal animal information texts, iPads, literacy workbooks, pencils.
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Illustrative Example 6.3

Evidence of my Effective Practice	When on the carpet, I noticed the children were becoming a little noisy and I was struggling to keep the whole class quiet after the clip had finished. On the spot I decided to let them have two minutes to discuss the clip with their friends before we started going around the class to recall our facts. This appeared to let them get their chats out of the way and then they engaged very well when we went around the class. The differentiation helped ensure every pupil was able to learn new facts about nocturnal animals and all were introduced to the concept of researching information at a level that challenged them but did not push them too hard.
Areas for my Development Personal Targets for Progress	The children did get a little restless and noisy on the carpet towards the end of the sharing exercise. A personal target would be to develop new ways to keep their noise to a minimum when on the carpet. Furthermore, a small number of pupil's became frustrated that they were not able to use the iPads for later lessons.

These two extracts are from the lesson plan for my 'researching nocturnal animal facts' with the Year 1 class. The aim of the lesson was for the pupils to be able to independently research facts about nocturnal animals from various forms of media. Initially I planned on just using information sheets, dictionaries and a video from BBC Bitesize. However, it occurred to me on the day of the lesson that the children could use the class iPads to research information as well, as they have had previous lessons introducing them to search engines. Therefore, I tweaked the lesson plan slightly that morning.

I found that the majority of pupils enjoyed using the iPads more for their research compared to the information sheets. This may be because there are few lessons each week where they are allowed to use the iPads as part of the lesson. Furthermore, some pupils were able to successfully find excellent facts about their nocturnal animal using the iPads, which were not available to find in any of the information sheets. However, a common issue that I find occurs in most lessons which incorporates the use of digital devices was prevalent in this lesson as well. Some pupils would opt to use the iPads for their research, but would attempt to play games or load other applications unrelated to the lesson instead.

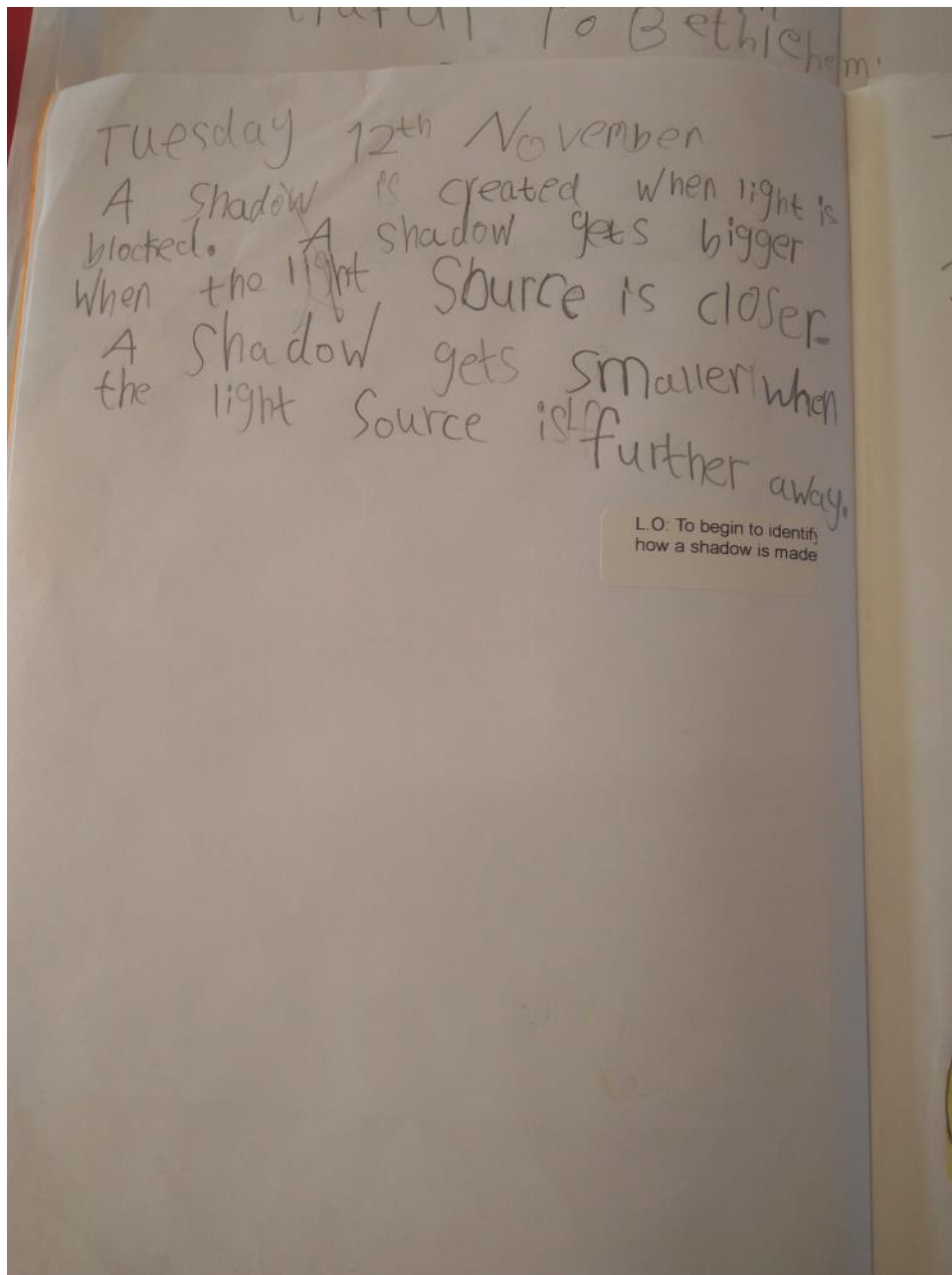
I found it difficult to monitor every pupil using the iPad at the same time. In hindsight, maybe I should have planned that each pupil had to use a different form of media to research for a set period of time. For example, 5 minutes with the iPads, 5 minutes with the information sheets and 5 minutes with the BBC Bitesize videos. This would have enabled me to keep a closer eye on the pupils using the iPads. Additionally, it would have helped ensure every pupil was experiencing the process of recalling details from information texts, which was the meaningful link to the curriculum that this lesson was planned around.

Employing a Blend of Approaches Including Direct Teaching

Illustrative Example 7.1

Opening phase (with links to prior learning)	The opening phase will be presented to the whole class. I will begin by recapping a previous lesson (sources of light) to make sure the children remember what is and what is not a source of light. I will then begin my PowerPoint on shadows which includes several interactive slides where the children must tell me where they think the sun is in the picture based on the shadow they can see. I will then take one of my pre-made shadow puppets and use a torch to create a shadow on the wall to ensure the children know how to create one. Finally, I'll finish my introduction by explaining what I expect of them during their activity. I will list the three questions on the board and read them out to the children, emphasising that they will need to be able to answer these questions after their play/experimentation with the torches and shadow puppets.	The pupils will need to tell me which objects on the slide are sources of light and which are not. Then, they will listen to my introduction and then engage with the puzzles in the PowerPoint.	Computer, interactive whiteboard, Shadows PowerPoint, torch and shadow puppet.
Teaching & Core Learning	For their activity, the children will split into their groups and have 10 minutes to play and experiment with the torches and shadow puppets. I will encourage them to move the torch closer and further away from the shadow puppet, and ask them what is happening to the shadow? The children will complete the three sentences in their 'Topic' book. A shadow is made by _____. The shadow gets _____ when the source of light is moved closer. The shadow gets _____ when the source of light is moved further away I will encourage the children to take photos and videos of each other using iPads playing with the shadow puppets.	The pupils will be allowed to get up and play with the torches and shadow puppets for 10 minutes. The Yellow (top) group will have an additional question to answer depending on how they manage with the initial 3 questions. The additional question will be "Why can you see a spot of light on the wall?" If this question is used, I will give the Yellow group shadow puppets with a hole punctured for the animal's eye which will allow light to shine through onto the wall.	Torches, shadow puppets, hole puncher, computer (for the countdown clock) and topic books.

Illustrative Example 7.2



Illustrative Example 7.3

Areas for my Development	It was noticeable that the children were having a great deal of fun exploring with the torches, and consequently they did make a lot of noise. I did attempt to tell them to keep their voices to an acceptable level, however after a few minutes they would revert to being very loud again. This would be an area for development. I did not warn them to keep their voices down prior to letting them go off and explore. Perhaps this would have helped prevent them being so loud. However even though the children were loud, they were being productive and discussing their findings.
Personal Targets for Progress	Furthermore, in my planning I failed to identify an excellent opportunity to take the learning outdoors. The pupils had already had a lesson on the sun and how it is a source of light that can create shadows, therefore taking the activity outside made sense. Fortunately, my class mentor suggested this, and two groups were able to take the activity outside and use the sun as a source of light for their shadow investigations.

The lesson plan extracts and the example of a pupil's completed work at the end of the lesson are from my 'shadows' lesson with the Year 1 class. The focus of the lesson was to introduce the pupils to shadows; specifically how they are created and how they can be manipulated. Donaldson (2015)

described that pupils must receive a broad repertoire of teaching and learning experiences. In this lesson I planned for whole-class direct teaching, modelling with smaller groups as well as independent work. Input from my class mentor resulted in two groups being taken outside for the activity.

I chose to begin the lesson with all the pupils on the carpet for two reasons. Primarily, I had planned an interactive activity on the board which involved the pupils needing to justify their choice to the rest of the class. Secondly, it provides an opportunity to recap the previous topic lesson with every pupil, whereas recapping previous lessons in smaller groups would take up a lot of valuable time. The decision to split the children into groups for the core part of the lesson was because I wanted to ensure I had enough time to speak with every pupil during their experimentation with the torches and shadow puppets. Whilst I did plan for the lesson to be fun, I wanted to make sure the pupils stayed on task with their play and did not waste their time during the activity. This would have been harder if I had to watch a larger number of pupils.

I found that clarifying what I wanted the pupils to investigate during their experimentation with the torches helped ensure most pupils stayed on task during the activity and achieved the success criteria and learning objectives. The pupils enjoyed the activity so much that this became an enhanced provision activity in the classroom for the rest of the term. However, after finishing with the first group, it became apparent that there was an opportunity to have pushed the pupils further and investigated other concepts involving shadows during the lesson. Therefore, in my future planning I will think more carefully about the length of time any planned activities will take, and whether there are opportunities to extend the activity further if needed. Furthermore, I'll consider taking activities outdoors where appropriate.

Illustrative Example 8.1

Student-teacher	Rhys Bevan	Class:	Y1K
AoLE or Subject	Numeracy	Date:	20/11/2019, 22/11/2019
Lesson Focus:	Identifying how much money is in Plop's nest.		
Meaningful links to Curriculum	Foundation Phase Framework – Mathematical Development – Year 1 Manage money (find totals). Foundation Phase Outcome 3 - They understand very simple addition		
Meaningful links to: Cross Curricular Responsibilities	LNF Framework – Numeracy – Progression Step 2 – Manage Money – Find totals. LNF Framework – Language, Literacy and Communication Skills – Reading – Foundation phase outcome 4 - They recall information in texts (The Owl who was Afraid of the Dark)		

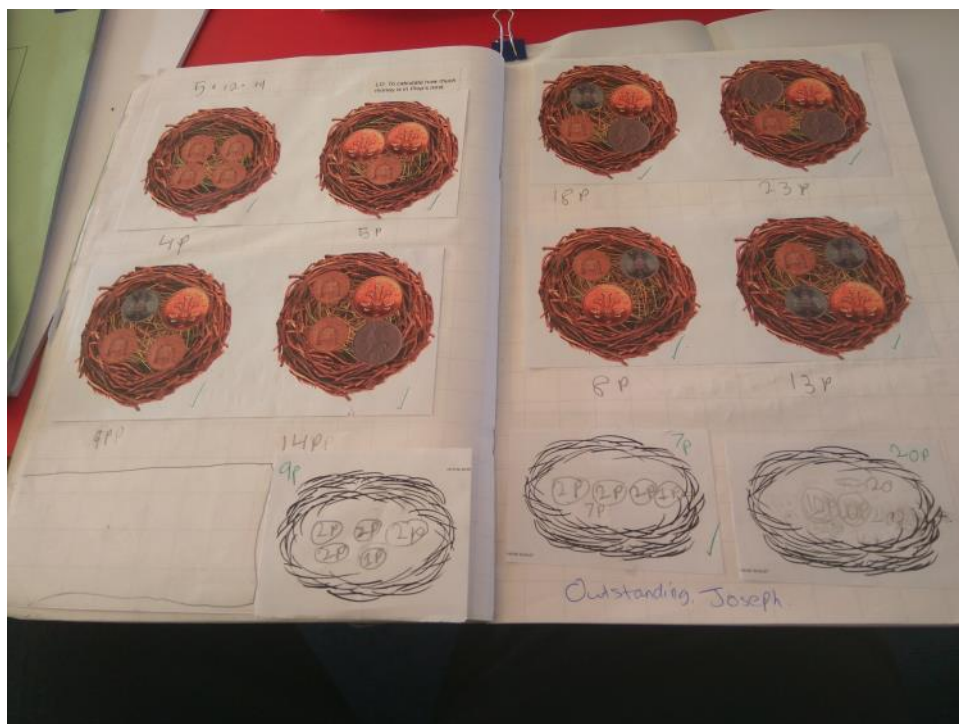
Illustrative Example 8.2

Opening phase (with links to prior learning)	Initially I will introduce the lesson to the whole class using a PowerPoint. This will start with pictures from the book 'The Owl Who Was Afraid of the Dark' which is a key topic for Year 1 until Christmas. I'll ask the children what they remember about Plop. I'll then move on to asking them where Plop lives – this will help me direct the children towards nests. I'll show the pupils the different coin denominations we'll be using and run through a few of the activity nests on the board. The primary activity for the lesson will be taught in groups. When moving on to work with each group, I will sit at the table with each group. I'll start by asking them if they recognise each of the coins in the nest. I'll then use one nest as an example and run through how to find the total whilst the pupils listen. I will then encourage one pupil who I know understands how to do the activity to explain and show the rest of the group how to do it.	The pupils will sit at the table and listen to me going through the example. One or two children may be asked to complete one nest in front of the group as well.	Pencils, Plop's nest cut-outs
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Illustrative Example 8.3

Teaching & Core Learning	I'll then let the pupils take some time to individually find the totals for each of the six nests. I'll be chatting to them casually the whole time to see how they're doing and if they understand. I'll go and work directly with any pupils who appear to be struggling. If possible, I'll call over a pupil to help their peers as well. I will already have an idea of who is likely to struggle based on my numeracy lesson the previous day. When they finish the six nests, I will give the child an extension task nest. This is a picture of an empty nest. I will write a number under the nest and the pupil will need to draw coins inside the nest that represent the total I gave them.	The pupils will sit at the table and complete the six nests as well several extension <u>task</u> nests. I will have three different set of nests. One for the Yellow group, one for the Red and Green groups and one for the Blue groups. These are differentiated in their difficulty. For this lesson (and with my class mentors' consent) I will move Alfie and Mateusz from the Blue group (lower ability) to the Yellow group (higher ability) based on their excellent answers and confidence surrounding the topic that they displayed during the activity and plenary in yesterday's numeracy lesson.	Pencils, Plop's nest cut-outs
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Illustrative Example 8.4



This illustrative example consists of an extract of my lesson plan and an example of a pupil's completed work (including the extension task) from my 'Plop's coin nests' lesson with the Year 1 class. At the time of the lesson, the class' numeracy topic was coins, and the language, literacy and communication was the book 'The Owl Who Was Afraid Of The Dark'. The pupils had already experienced numerous coin related lessons, and it is an area many were having great difficulty with. I knew some pupils were getting frustrated with the topic, which is why I decided to try and combine it with an element of their learning I knew they really enjoyed – the book 'The Owl Who Was Afraid Of The Dark'.

I chose to begin the lesson with whole class direct teaching as I wanted to transition the theme of the lesson from the story book to the numeracy activity myself, as I knew the prospect of more coin related activities may negatively affect some of the pupil's motivation. I thought standing in front of the class would provide me with an opportunity to see who looked disheartened at the prospect of more coin related activities, as these would likely be the pupils who were struggling the most. I found that as I expected, I was able to identify a number of pupils who reacted negatively to the revelation that we would be exploring another coin related activity. Therefore, I was able to keep a closer eye on these pupils in their smaller groups and allocate them more of my time.

The decision to work in smaller groups during the activity helped ensure I was able to spend more time working individually with pupils I had previously identified as struggling with coin recognition. It also provided me with opportunities to encourage pupils who had a good understanding of the topic to help their peers and hopefully convey the processes which help them recognise the different coins to their peers. I found that working in the smaller groups helped ensure I could spend more time working with the pupils who needed the most support. However, I feel that the time I spent at the start of the lesson talking about the class' book would have been better spent working with the pupils who needed extra support with the topic. Therefore, in my future planning I will evaluate whether my lesson actually benefits from a whole class direct teaching activity at the start, or whether it would benefit the pupil's learning more if we spent more time working in smaller groups.

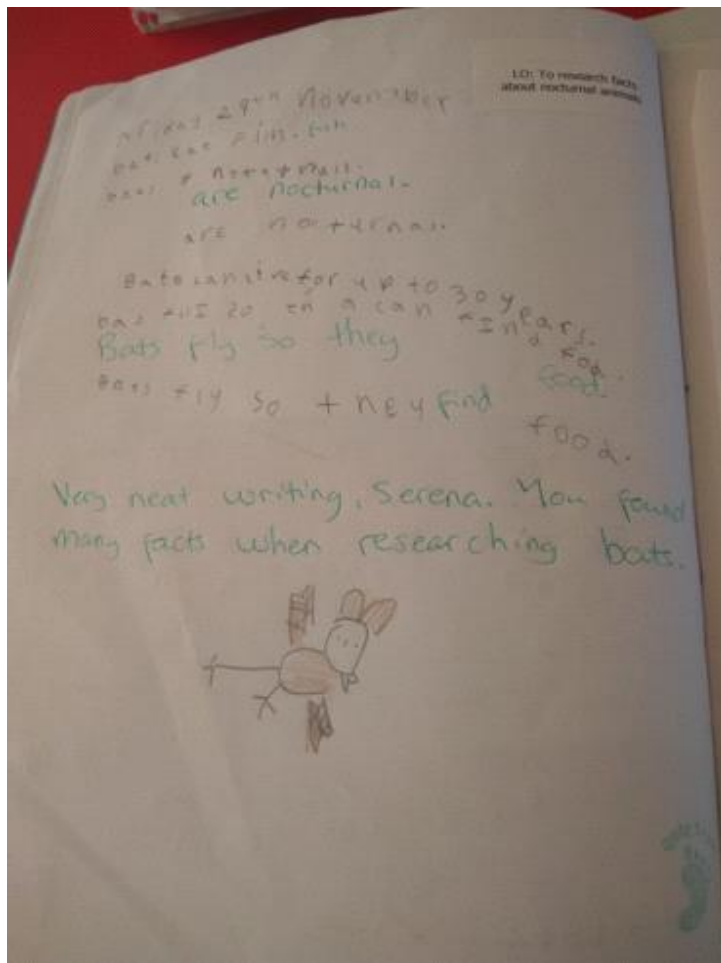
Illustrative Example 9.1

Opening phase (with links to prior learning)	I will start the lesson with the whole class gathered on the carpet. I'll ask the pupils what facts they already know about nocturnal animals. I'll ask the pupils if they can name any nocturnal animals that they may see where they live. I'll make a list on the whiteboard of nocturnal animals native to the local area as we go along. I'll then let them know I will be playing a clip from BBC Bitesize about nocturnal animals and that I expect them to remember one fact from the clip, as I will be asking each person in the class for a fact at the end of the video.	Every pupil will watch the clip and then recall one fact to me in front of their peers.	Interactive whiteboard, computer, BBC Bitesize clip.
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Illustrative Example 9.2

Teaching & Core Learning	The children will work with me in groups. Each group will be provided with several information sheets about a specific nocturnal animal that is local to the area (foxes, owls, bats or hedgehogs). The pupils will need to read some of the text to identify information about the nocturnal animal. I will ask questions when needed to help guide the children in the right direction (What do owls eat? Etc). The pupils can choose to work together or independently, using whatever form of media they wish (information sheets, iPads, dictionaries etc). The pupils will be allowed to use iPads to research their animal using a search engine as well. Once they have found a fact, they will need to write it in their book. I have prepared sentence starters for the Blue group to follow. The Red/Green group will have a list of questions to help them narrow down what to look for. The Yellow group will not get this help unless it is clearly needed.	The pupils will need to research the texts, identify information about the animal and then write it down.	Nocturnal animal information texts, dictionaries, iPads, literacy workbooks, pencils.
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Illustrative Example 9.3



This illustrative extract consists of extracts from my 'researching nocturnal animal facts' lessons. The purpose of the lesson was to use a range of different media to research new facts about local nocturnal animals. This was the first lesson where I introduced an element of choice to the pupils in terms of how they would prefer to approach the learning. I offered them opportunities to use dictionaries, information sheets I had printed out or to use iPads. As I expected, the majority of pupils chose to use iPads. Had this not been taught in groups, there would not have been enough resources to go around.

I chose to introduce the lesson to the whole class for two reasons. First, introducing it to every pupil at once saved a lot of time as I did not have to repeat the same information to four groups. Secondly, it allowed the pupils to hear a fact from every pupil in the class, rather than just from those in their group. This hopefully contributed to them remembering many facts to use later in the lesson. I believe this contributed to effective learning, as the pupils were flooded with a range of facts, however it did not appear to be overwhelming as they appeared to enjoy listening to each other's findings. This was reflected in the quality of work, where pupils found some facts I had not included on the information sheets (illustrative example 9.3).

Critical Reflection

Introduction

As part of a review of education in Wales, Donaldson (2015) made 68 recommendations to Welsh Government, all of which were accepted. One recommendation called for teachers to apply the 12 pedagogical principles when planning their teaching and learning. As a result, Donaldson's (2015) pedagogical principles make up an important aspect of learning in initial teacher education in Wales.

In addition to Donaldson's (2015) review, Welsh Government commissioned Furlong (2015) to identify changes needed to improve initial teacher education and training in Wales. Furlong (2015) describes how there is "virtually no explicit recognition of the role of research or critical reflection in teachers' professional learning". Consequently, newly qualified teachers in Wales are not conceptualised and have not been required to consume or participate in research to inform their decision making when planning. In this writing, I will critically reflect on my implementation of three pedagogical principles during Professional Teaching Experience (PTE) part 1, outlined by Donaldson (2015). This will help me identify recommendations for ensuring further progress in my future Professional Teaching Experiences, as well as evidence how reflection has informed my professional learning.

Throughout PTE part 1 I was based in a Year 1 class at a large Catholic primary school in Swansea. The school has 504 pupils as of 2019, 13.2% of whom are entitled to free school meals (My Local School, 2019). The pupil to teacher ratio is 30:1 and 39.1% of pupils have English as an additional language, far higher than the national average of 6.2% (My Local School, 2019). The Year 1 class I taught in had 29 pupils, 18 of which have English as an additional language. There was one teaching assistant present throughout every lesson.

Employing Assessment for Learning Principles

Donaldson (2015) quotes the early work of Black and William (1998, p. 141), who suggested that effective assessment for learning (AfL) can "double" the rate of learning. Contemporary research continues to provide supporting evidence for increases in achievement (Cowie and Khoo, 2018, p. 11; Heritage and Wylie, 2018, p. 739) and levels of participation (Gimbutas, 2019, p. 5) when implementing AfL in the classroom. However, conclusions drawn by Black and William (1998, p. 141) have been repeatedly critiqued. It has been argued that the claims their data sources were flawed (Baas *et al.*, 2014, p.34) and that the studies used in their research were too diverse (Bennett, 2011, p.11). Black *et al.* (2004, p. 10) describe AfL as activities conducted by students as well as teachers which provide the teacher with feedback on where the learners are in their learning and where they need to go. The feedback can then be used to adapt the teaching to the needs of the learners. However, others argue that the definition of AfL is too broad and should be restricted to when the teacher processes the feedback and adapts the lesson immediately (Heitink *et al.*, 2016, p. 58; Heritage, 2018, p. 51).

Welsh Government describe questioning as the driving force of AfL, however, I believe my opening phase questioning activities were poorly planned and did not promote effective learning. These activities mostly focussed on exploring what the learners already knew about a topic. Whilst Hattie (2012, p. 19) describes how teachers need to be aware of what every pupil already knows to help plan each pupil's progression, I feel I spent too much lesson time focussing on this. Furthermore, most of my lesson plans were rigid with tailor-made resources, allowing little room for adaptation during the lesson. Therefore, the feedback I received during these questioning activities was unusable, as I could not use it to adapt the lesson plan on the spot, and I could not use it to inform future lesson planning as the learning would have advanced by the end of the lesson. Only when I planned and implemented the use of WAGOLLS (illustrative example 2.1) did I provide myself with the

opportunity to tweak lesson objectives and expectations on the spot. However, the use of WAGOLLs often resulted in learners completed work appearing very similar and made me question how much learning had taken place (illustrative examples 2.2 and 2.3).

I can see I should have spent more time during my observation week researching the pupils' books to identify what they already knew, as well as initiating further discourse with my class mentor to develop a comprehensive understanding of where each pupil in the class was at. This would have enabled me to plan more time delivering activities to advance pupils' learning, rather than spend so much time conducting questioning activities recalling information they already knew. In addition, to develop my pedagogy I need to allow for more flexibility in my lesson plans which would allow for opportunities to process feedback and adapt lessons immediately (Heritage, 2018, p. 51).

In contrast, feedback received from learners during questioning activities at end of lesson plenaries was helpful in identifying what learning had taken place and helped inform future planning (illustrative example 3). Steenbergen-Hu *et al.* (2017, p. 892) discuss how ability groups may not consider how a learners' progress in numeracy may differ from their progress in other areas, which could negatively affect their progression. End of lesson questioning enabled me to identify which pupils were outperforming what was expected of them based on their ability groups, enabling me to supply them with differentiated work to prevent any negative effect on their progression. To develop my pedagogy, I must consider how individual learners may progress at a different pace across AOLEs. My planning must concentrate on progressing individuals, rather than on progressing ability groups.

I chose to use a 'hands up' approach during my initial questioning activities (illustrative example 1.1) because I had observed my class mentor use this with the pupils successfully. Hussain (2017, p. 19) and Postholm (2013, p. 398) discuss how this approach can help manage behaviour. However, my experiences lead me to disagree with their findings, as I witnessed decreased engagement and unwanted behaviour (illustrative example 1.3). This may have been caused due to the voluntary approach to engagement hands up questioning offers pupils (William, 2014, p. 16) or through reluctance to participate due to anxiety or low intellectual confidence (Cohen *et al.*, 2019, p. 265). Unfortunately, this likely caused a negative effect on learning in my initial lessons, as was evident some of the disengaged pupils struggled with the activity (illustrative example 1.3). Therefore, to improve my pedagogy going forward and to help promote more effective learning, I need to plan questioning activities that engage the whole class. I started to introduce the use of mini-whiteboards later in PTE part 1 (illustrative examples 3.1 and 3.3) as they offer increased participation compared to hand raising (Gimbutas, 2019, p. 5). Continuing to move away from hands up questioning to a more whole-class approach will also help me employ a wider blend of teaching approaches and AfL strategies; two of Donaldson's (2015) pedagogical principles.

Reinforcing Cross-curriculum Responsibilities Including Literacy, Numeracy and Digital Competence

Cross-curricular teaching and learning approaches use authentic links between traditional curriculum subjects to promote new learning (Barnes, 2018, p. 14). Furthermore, cross-curricular learning can be used to motivate learners (Petersson, 2019, p.33) and develop knowledge and skills which are transferable to the world around us (Barnes, 2018 p. 15). Comparable to education reviews of the past (Hadow, 1931; Plowden, 1967; Rose, 2009; Rumbold 1990), Donaldson (2015) recognised the importance of a cross-curricular approach to teaching and learning. Nevertheless, the pressures of Welsh Government's focus on numeracy and literacy through the Literacy and Numeracy Framework (LNF) (Welsh Government, 2013) may have compromised pupils' knowledge and understanding of other subjects (Jones, 2017, p.1). In addition, many teachers feel they are inadequately trained to successfully teach using a cross-curricular approach (Parker, Heywood and Jolley, 2012, p.), which can result in low order work being set, contributing to a lack of progression (Greenwood, 2013, p. 447).

Despite some teachers' scepticism, research has indicated that implementing the teaching of

literacy across subject disciplines enhances not only literacy learning but also subject content learning (Kirsten, 2019, p. 369). I found that planning my 'day and night' lesson around a literacy progression step from the LNF (illustrative example 4.1) had a positive effect on literacy and subject learning. (illustrative example 4.2). Some learners were able to pronounce and recall the meaning of topic words I initially omitted from the activity which I thought would be too difficult. Whilst I believe my planning and implementation of this pedagogical principle was successful, I could have included these words from the beginning had I collaborated further with the class teacher, which is a critical part in planning (Hattie, 2012, p. 41). In addition, whilst I made efforts to integrate different class themes in lessons (illustrative example 8.1) to encourage amongst pupils a more holistic view of learning (Hayes, 2010, p. 383), these links were often tenuous. Therefore, the development of learners' literacy skills and concepts would have been negligible (Laurie, 2011, p. 128). To progress the development of my pedagogy relating to cross-curricular literacy teaching, I will initiate more discussions with my class mentor to ensure I am selecting cross-curricular links that will we believe will promote the most effective learning for every pupil.

Regrettably, I failed to apply numeracy through a cross-curricular approach to any lessons during PTE part 1. Consequently, the learners will have missed out on authentic opportunities to apply and further develop skills and concepts they had learnt in numeracy lessons (Jones and Nankivell, 2016, p. 110). I found this to be the most difficult aspect to plan and implement. I felt my ideas were tenuous and could compromise the primary learning objectives of the lesson (Parker, Heywood and Jolley, 2012, p. 708). Interestingly, I had little difficulty linking other subjects into my numeracy lessons (see illustrative example 8.1). After discussions with fellow PGCE students, I realised my conception of a cross-curricular approach to numeracy was flawed. I mistakenly believed I needed to make numeracy a key component of the lesson, whereas simply supplementing existing activities with elements of numeracy could have had a positive effect on learning (Hopkin, 2015, p. 12). For example, in my day and night lesson (illustrative example 4.2), I could have used a tally chart to count our 'wow words' as we went along, instead of keeping a verbal record with the pupils. To develop my pedagogy going into PTE part 2, I will remember a cross-curricular approach to numeracy does not mean radically overhauling a lesson to make numeracy the prime focus. In addition, I will reach out to my class mentor and fellow PGCE students sooner if I feel I am still struggling with my numeracy based cross-curricular pedagogy.

In addition to the LNF, Welsh Government introduced the Digital Competence Framework (Welsh Government, 2016) as a cross-curricular responsibility in Wales. Earlier research found it difficult to find strong evidence for the positive impacts of information and communication technologies (ICTs) on student learning (Cox and Marshall, 2007, p. 68; Livingstone, 2012, p. 19), citing problems with the pedagogical approaches of the teachers. Ensuing research placed an emphasis on methods of effectively applying digital technologies to teaching and learning (Beauchamp, 2016, p. 2). Thus, more contemporary research with a strong focus on pedagogy has praised the positive effects on learning the use of digital devices can have across a range of traditional subject areas including literacy (Kucirkova, 2017, p. 275), numeracy (Disney *et al.*, 2019, p. 177) and science (Buchanan *et al.*, 2019, p. 11).

In contrast to numeracy, I found applying elements of the DCF to my lessons with purposeful and authentic cross-curricular links to be straightforward (illustrative examples 5.1 and 6.1). Consistent with conclusions found in the literature (Ciampa, 2014, p. 82), learners were highly motivated and engaged during these lessons (illustrative example 5.3) which I believe contributed towards effective learning. However, despite expecting some pupils to misuse the digital devices (Lam and Tony, 2012, p. 388), I was unprepared for when in later lessons, a few pupils exhibited unwanted behaviour because these lessons did not include the use of digital devices (illustrative example 6.3). My failure to convey to the pupils why we were using digital devices may have contributed to this. Therefore, to develop my cross-curricular pedagogy going forward into PTE part 2, I will endeavour to explain to the pupils why I have included the use of digital devices or other cross-curricular elements in lessons. This could be done using success criteria.

Employing a Blend of Approaches Including Direct Teaching

Employing a blend of approaches to learning has the potential to make learning more meaningful and authentic, better engage learners (Albiladi and Alshareef, 2019, p. 232) and encourage collaborative learning (Coll and Coll, 2017, p. 185). Most importantly, research indicates it can have a positive effect on learning (Riel, Lawless and Brown, 2016, p.189). However, Riel, Lawless and Brown's conclusion was drawn from data self-reported by teachers, which could potentially be open to bias as teachers may have been inclined to share only positive results.

Hattie (2009, pp. 204-206) describes direct teaching as lessons with a clear purpose, aim and success criteria which are modelled by the teacher, invoking regular feedback from the learners to check for understanding. Donaldson (2015) expands on this further, emphasising the need for the teacher to 'scaffold' learning. The desire to seek regular feedback from the learners draws similarities from the practice of formative assessment (Black and William, 1998, p. 140) and AfL (Black *et al.*, 2004, p. 10). In addition, the potential to make learning more authentic, a vital purpose of cross-curricular teaching, suggests implementing the principles of a blend of approaches with a cross-curricular approach to learning correspond well. As with other pedagogical principles, including employing AfL and cross-curricular approaches, teachers must develop a deep understanding of this pedagogy to successfully have a positive effect on learning (Oliver and Stallings, 2014, p. 170). Without this understanding, it is possible teachers will unknowingly deviate from the pedagogical principle. Consequently, they may plan lessons which do not align with the theories of which Donaldson (2015) built these pedagogical principles upon, as was evident with my flawed approach to applying a cross-curricular approach to numeracy.

Donaldson (2015) discusses the importance of creating contexts which provide learners with the opportunity to "apply learning independently in unfamiliar settings" when employing a blend of teaching approaches. During my 'shadows' lesson (illustrative example 7.1), learners were able to manipulate shadows using torches as I had modelled. I then took the children outside and they were made to apply this learning to an unfamiliar context (the sun and their body). This encouraged the learners to experience a more holistic picture of the information (Coll, Coll and Treagust, 2018, p. 1). Djonko-Moore *et al.* (2018, p. 18) describe how experiential teaching can have a positive impact on children's learning. The learners' successful application of the concept to an unfamiliar context and the level of understanding they later conveyed in the independent written activity (illustrative example 7.2) suggests that the experiential activity had a positive effect on the learning. Therefore, to develop my pedagogy further in PTE part 2 I will seek to plan experiential learning activities for other subjects, as throughout PTE part 1 these activities were limited to my series of science lessons. Furthermore, where appropriate I will plan for these activities to be conducted outside, as developing outdoor learning is an action point the school identified in its school development plan (Davies, 2019, p. 28)

Most lessons I planned throughout PTE part 1 consisted of a whole class activity during the opening phase (illustrative example 9.1), followed by group work (illustrative example 9.2) involving co-teaching. The use of whole-class teaching during the opening phases helped make the learning intentions and success criteria transparent to the learners, a vital component of direct teaching (Hattie, 2009, pp. 204-206). However, my decision to use hands up questioning as the AfL strategy to evaluate their understanding during whole-class activities (illustrative example 7.1) caused difficulties. I was often unable to provide effective feedback due to the volume of learners wanting to answer my questions. Whilst effective feedback can have a positive effect on learning, ineffective feedback can have negative effects (Hattie and Timperley, 2007, p. 81). Although I dealt with this by switching to strategies that involved every learner (illustrative example 9.1), it is reflective of a deficiency in my behaviour management. Furthermore, it suggests that aspects of one pedagogical principle (hands-up questioning for AfL) do not necessarily promote effective learning when combined with certain approaches to teaching (whole class teaching).

In contrast, my experiences with group teaching were positive. I was able to provide effective feedback to learners as fewer pupils required my attention simultaneously. In addition, Emanovský (2019, p. 46) discusses how working with smaller groups can open learning opportunities that are not typically available with whole-class teaching, which I

discovered to be true. It enabled me to plan for learners to assist others in the group, which was highly effective at maintaining the motivation of higher ability learners after completing their work. Furthermore, it allowed me to introduce elements of choice (illustrative example 9.2) in terms of how pupils approached their work. In the case of my 'researching nocturnal animal facts' lesson, observing which method individual pupils chose developed my understanding of their preferred approaches to learning, and provided further insight into their personalities as well which can help me plan for effective learning in future planning (Hattie, 2009, p. 42).

To develop my pedagogy going forward into PTE part 2, it is essential I improve my behaviour management when conducting a whole class approach to teaching. Whilst poorly constructed questioning activities may have contributed to this unwanted behaviour (Bond, 2008, p. 41), whole-class teaching developed into a key component of direct teaching in my pedagogy to convey lesson aims and success criteria. Therefore, any inadequacies in this area will have a negative effect on learning throughout most of my lessons (Sieberer-Nagler, 2016, p. 163). I will address this by documenting the behaviour management strategies used by my class mentor during the observation week of PTE part 2 and implement these established strategies in my lessons.

Conclusion

To conclude, I believe I have made progress across each of the three pedagogical principles, most notably in employing AfL in my lessons. I would attribute this progress to the extended reading I have conducted into AfL strategies as part of a prior critical reflection, compared to the limited reading I have conducted regarding cross-curricular and blended approaches to teaching and learning. Therefore, to continue developing my pedagogy going forward, I will engage with a wider repertoire of reading across these three pedagogical principles, as well as the other 9 proposed by Donaldson (2015).

Furthermore, a common suggestion for development raised throughout this reflection is to initiate and engage in greater discourse with my class mentor. Therefore I will endeavour throughout the observation week of PTE part 2 to initiate more discussion with my class mentor than during PTE part 1, to develop a comprehensive understanding of pupils' current learning, as well as what behaviour management strategies are already established and working effectively in the class. Their experience is invaluable and had I sought their advice more frequently, it is possible my difficulties when applying a cross-curricular approach to numeracy could have been addressed much sooner.

Despite the difficulties I have experienced across each of the three pedagogical principles, the evidence of effective learning available makes it clear why Donaldson (2015) deems them to be of such importance to teachers to help successfully deliver effective teaching and learning in Wales' new curriculum.

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