

# Overview

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Assignment title: A portfolio which illustrates a critical reflection of the progress made on the planning and implementation of the three pedagogical principles

Pathway: Primary PGCE

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# Assessment for Learning

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Using AfL has been shown to cut working time in half over time as learners are able to make adjustments to their work. This is because AfL offers timely feedback that is relevant to each pupil's work and provides suggestions on how they can improve. By providing advice for improvement rather than grades, the pupil may learn to self-assess (Hall & Burke, 2003).

Prior to AfL, pupils were often not being given constructive feedback, for example, work was graded on *completion*, summative assessment. and too much time was spent on teacher-led instruction (Grigg, 2010). By making the change to formative assessment, offering feedback and effective questioning *during* the task (Black and Wiliam, 1998), closes the gap between higher and lower attaining pupils by not letting those lower attaining pupils fall behind through lack of understanding. AfL has, therefore, been highlighted as a major factor in raising the standards for those pupils who are lower attaining.

AfL perpetuates the concept of a 'growth mindset,' as opposed to a 'fixed I.Q.' This means that teachers should not think of a learner's potential as being constrained by inherited intelligence that cannot be changed by education and experience. Instead, teachers must recognise the 'un-tapped potential' (Black and Wiliam, 1998) of their pupils and adjust their practice in order for pupils to strive for improvement and meet their full potential.

Using AfL also helps teachers avoid fall into traps such as the 'curse of knowledge' (Weinstein et al., 2019) whereby a teacher's own pre-attained knowledge can cloud their judgment and understanding of how pupils process new information. For example, new concepts and terms can be delivered too quickly and without explanation because it simply does not occur to the teacher that they are not self-explanatory. Sadler (1989, 1998) refers to this phenomenon as knowledge becoming 'lore.' Teachers must realise that in order for their judgments on pupils work to be fair, they must share with them *what* they are. Judging, what is the *success criteria*.

In an article from Estyn (2018), a school's incorporation of AfL strategies is shown to increase pupils' motivation. This is because they were more involved in the setting of their personal goals and success criteria. By being involved in writing the success criteria for their work, pupils know exactly what is expected of them to achieve. This raised awareness and responsibility for their own learning improved classroom culture and overall attainment.

## Individual whiteboards

- Context of the application (Age/group/focus of the lesson)
- This was a whole class application with a year 2 class. The focus of the lesson was a follow up to the previous days lesson on leaflets. The AfL strategy was used after my opening phase at carpet time and prior to the main task.
- Rational for choices made in the application (*why* you chose to do something in a particular way and what may have informed your choices)
- I first tried this strategy as I had seen my mentor use it and knew the children were familiar with it. It was also slightly experimental for me as I had mentally questioned its effectiveness during my observation period as it was difficult to remember everybody's answers.
- The aim was to see how much the children had remembered or understood from the previous lesson and if there were any points that we needed to go over for them to be successful in the main task.
- Evaluative points related to the application
- I discovered that this method of questioning was effective as the purpose is not to remember every learners answer, but to identify mistakes, particularly common mistakes, and to identify *which* children need extra support.



### Individual clocks game

- Context of the application (Age/group/focus of the lesson)
- This strategy was used with groups of no more than eight children in a year 2 class. The focus of the lesson was telling the time with 'o'clock' or 'half past' on an analogue clock.
- Rational for choices made in the application (*why* you chose to do something in a particular way and what may have informed your choices)
- The strategy was chosen as some children had poor pen control, so it was unfair and ineffective to evaluate their understanding purely from looking at their completed worksheets. The individual clocks offered a more tactile method of showing their conceptual grasp. I was also able to listen in on conversation as pupils offered reasons for their answers when trying to help their peers.
- Evaluative points related to the application
- I found this strategy very effective; I was able to identify common comments and misinterpretations. I was also encouraged to hear the learners explain the concept to each other if someone didn't understand. Sometimes, I can explain something to a pupil many times and they may not understand but all it took was for another pupil to explain the concept from their point of view and the first pupil was then able to understand. It was very useful for me to hear other ways of explaining a concept.



# Cross Curricular Responsibilities

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In order to make education in schools truly meaningful, it must somehow reflect the world beyond the classroom. In that world, life is not broken down into separate subjects but rather we our understand and perceive the world is cross-curricular (Barnes 2015). Perception is something that I will touch upon later in this reflection, but the point here is that each learner will come from a different background and so will make different mental connections when perceiving the same object or subject. To ignore this would make school education contrived and would not reflect the world that the learners live in. This is why cross-curricular learning is so vital in education – it respects the different viewpoints and interpretations and develops knowledge and understanding that is transferable and valid. It also highlights the connections between the subjects, and how the brain functions, “learning that is linked to previous experiences and understanding, endures because it becomes embedded in the learner’s cognitive framework” (Hall & Burke 2003).

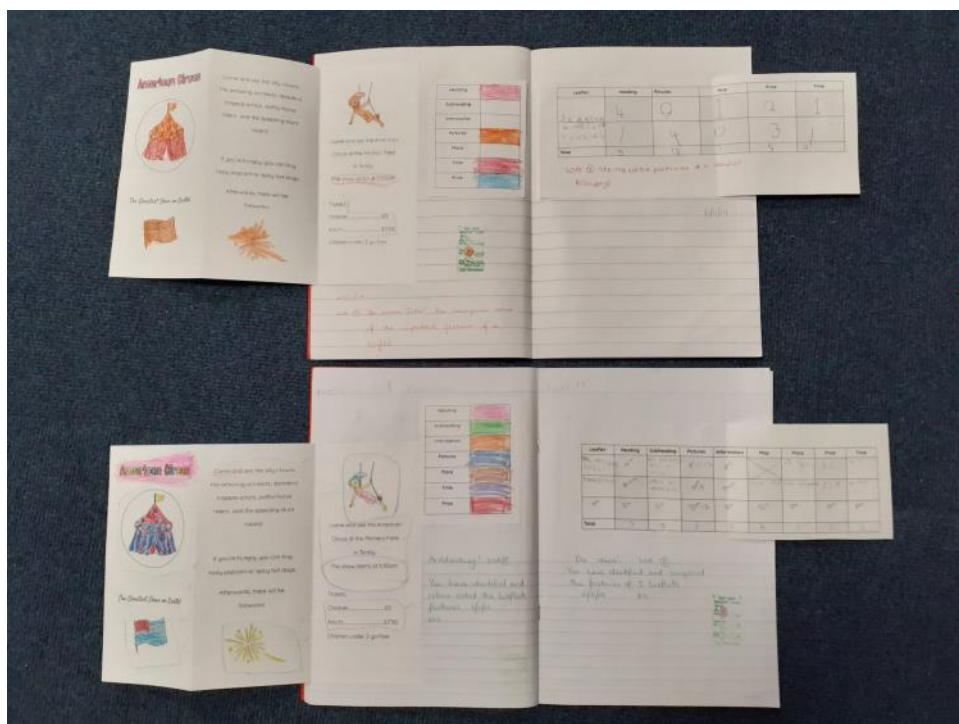
This echoes the theory that by prescribing a specific time when a specific subject is to be taught, formal education is being put before the needs and desires of the individual child (Dewey 1902). Cross-curricular learning is a way of putting the pupil back at the centre of learning and giving them – and the teacher – their voice back, rather than stifling it. Individuals are able to explore connections to prior knowledge even if that knowledge was acquired while focussing on different subject. This method of education has been shown to increase creativity and problem-solving skills as there is an openness to transfer skills and ideas from one area to another (Sternberg 2003).

Cross-curricular learning also opens the way for those students to contribute to inquiry regardless of their writing skills. For example, a history lesson needn’t only be about writing down the facts, pupils could re-enact a scene, or animate what they have been learning and narrate the video. Just with this example we can see that history need not be studied in a vacuum, it is easily possible to connect it to Digital Competence or Creative Development.

Cross-curricular learning will not always be possible for certain topics or lessons, but it should be at the forefront of any teachers mind when planning or adapting lessons. When implemented, it offers a school experience that is not only transferrable, but also “practical, forward looking and enriching for both children and teachers” (Rowley & Cooper, 2009)

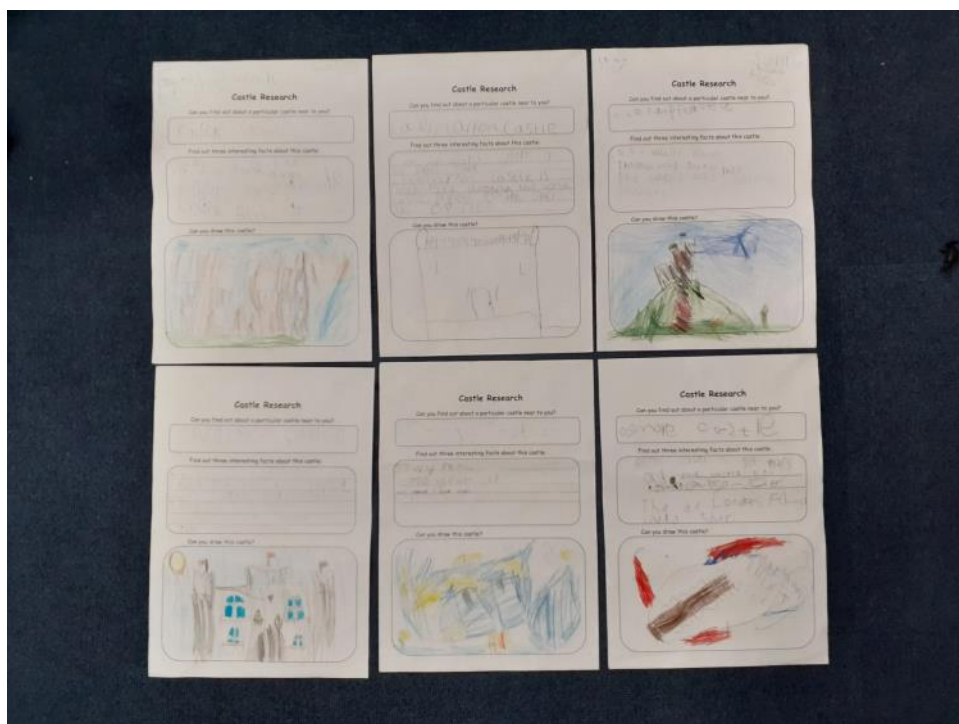
## Categorise a Leaflet

- Context of the application (Age/group/focus of the lesson)
- This was a whole class task for a year 2 class. The focus of the lesson was comprehension of a leaflet and its essential features. It was connected to numeracy as there was a counting and comparison element.
- Rational for choices made in the application (*why* you chose to do something in a particular way and what may have informed your choices)
- The task was differentiated as I knew there was a range of reading abilities which would affect the ability to complete the numeracy side of the task. The aim of this task was to consolidate the previous days learning and for me to identify any aspects that had not been understood. I also wanted to test their counting and comparison skills. This side of the task was more successful.
- Evaluative points related to the application
- I underestimated how difficult the lower attaining groups would find the task as it required more reading than they were capable of, also some of the terms were unfamiliar to them. During the opening phase of the lesson, at carpet time, all of the children had seemed engaged and willing to contribute. They were able to point on the board to the feature I had specified but were not able to complete the task independently. But, since almost all of the children were able to complete the numeracy side of the task, I was pleased that it was a cross curricular activity as the children could still feel and be successful even if they were not able to read very well.



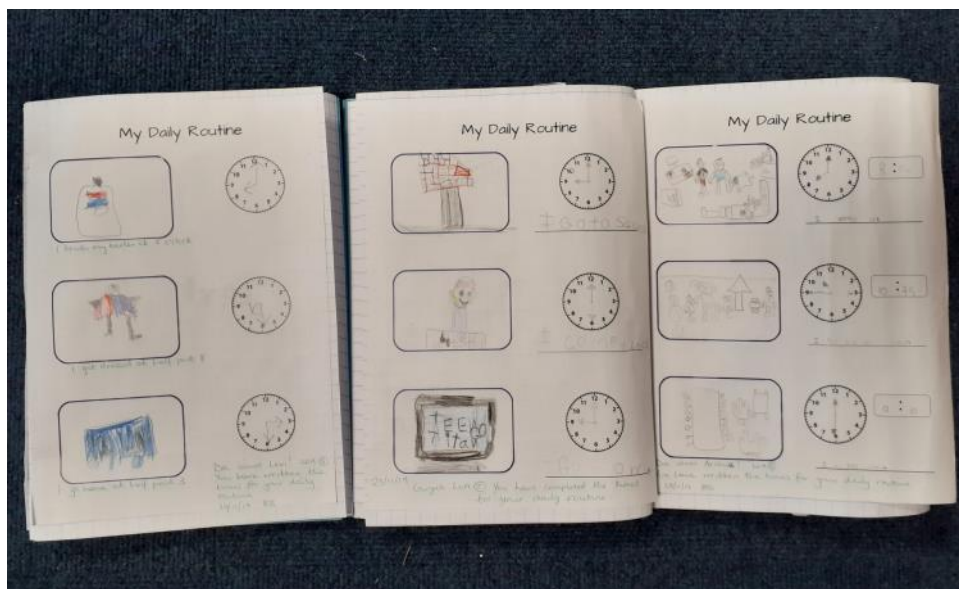
## Castle Poster

- Context of the application (Age/group/focus of the lesson)
- Year 2 class broken up into mixed ability groups of 6 children. The focus of the lesson was knowledge and understanding of the world, learning more about castles of Wales. It was connected with DCF, creative development and literacy.
- Rational for choices made in the application (*why* you chose to do something in a particular way and what may have informed your choices)
- I chose to mix the groups in terms of ability to encourage conversations that may not have happened in groups separated by ability. Since this was a strong cross curricular task, it was possible for all children to contribute and feel valued in different ways. I wanted the children to understand how they could use the iPads for research rather than just games.
- Evaluative points related to the application
- The children seemed very interested in apps like Google earth and the fact that they could use them to improve their work. This lesson seemed to also bolster the confidence of the lower attaining students as they actually chose to take on the writing element of the task and were willing to accept help from their peers when unsure of a spelling or how to write a letter.



## Daily Routine

- Context of the application (Age/group/focus of the lesson)
- This was a whole class activity for year 2, broken down into attaining groups. The focus of the lesson was numeracy - telling the time. The lesson was connected with knowledge and understanding of the world and literacy as they could see how time applied it to their own lives and they then had to write about it.
- Rational for choices made in the application (*why* you chose to do something in a particular way and what may have informed your choices)
- Since telling the time is a notoriously difficult concept to learn, I felt it essential that learners understand why they need to learn it, this is where the knowledge and understanding of the world element came in. By writing about the time and what they do at different times, the children could also understand how they can incorporate mathematical knowledge into their written work.
- Evaluative points related to the application
- This proved a popular and inspiring task which prompted a lot of discussion and reflection. Prior to this, many of the children had not been aware of what time school started, what time we ate lunch etc. The day after this lesson, several children looked at the analogue wall clock throughout the day and passed comment on the time and what we should or should not be doing at that time.



# Problem Solving, Creative and Critical Thinking

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Just as education must offer cross-curricular learning to reflect life beyond the classroom, so must it train pupils in the problem solving skills needed to succeed in a world that has moved beyond the “traditional industrial base to the knowledge era in which learning and innovation are central” (OECD 2008).

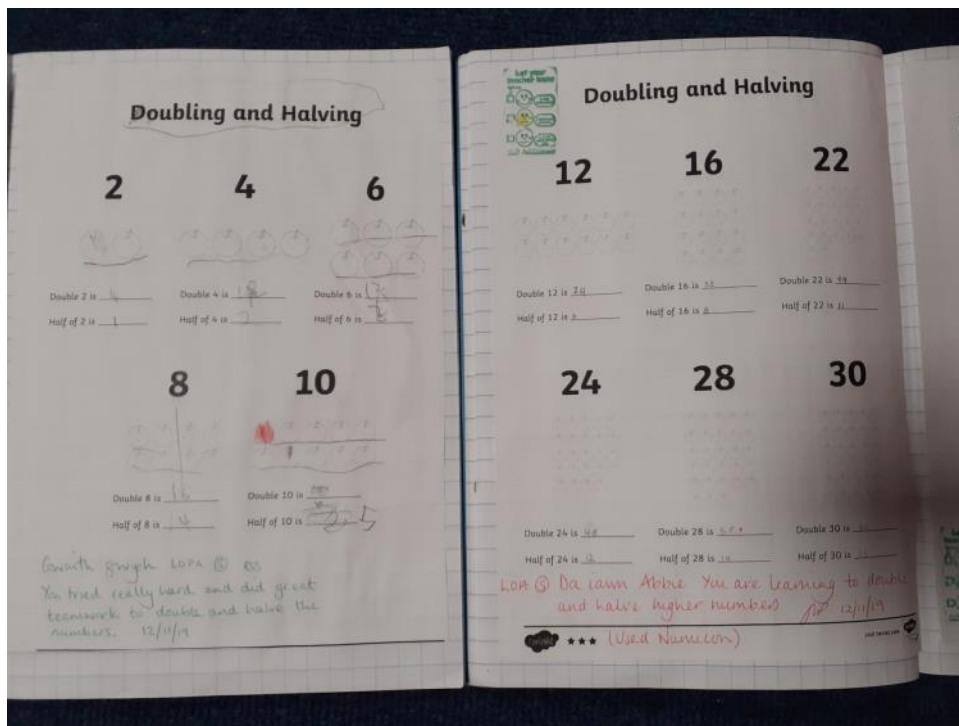
Critical and creative thinking best take place in a ‘safe space,’ an atmosphere in which pupils are welcome to test out theories without judgement or ridicule, and curiosity and hypotheses are encouraged (Johnson & Johnson 2013). Working in this kind of environment also builds confidence and resilience as the pupil’s contributions are championed and should their hypothesis prove incorrect, there will be no repercussion. These types of topic related discussions also improve conceptual grasp for the individual as they must explain the thinking behind their theory (Tolmie et al. 2010). To this end, learners also develop the habits of mind set out by Costa & Kallick. (2009), 16 life related skills that help individuals function successfully in society and that we, as educators, have every possibility of developing at school. Habits such as ‘striving for accuracy,’ ‘questioning and posing problems’ and ‘thinking interdependently’ to name but a few. When ‘thinking interdependently,’ learners are required to respectfully work with others, listen to their input and abide by group decisions. The social skills required to work collaboratively have been shown to increase self-esteem, motivation and learner attainment (Tolmie et al. 2010). A further benefit to developing critical thinking in relation to the curriculum is that it is not tied to one subject but can be applied to all.

We must champion the individual and their place within a team as every child brings something unique to a task. By this I mean, each learner comes from a different background, be it in terms of experience, attainment, culture etc. Their perception is built upon these factors and it is their tool for understanding the world. This means that a child having a different background to another may perceive or *interpret* information quite differently (Goldstein 2009). Such differences are essential in order to solve problems creatively.

The world and workplace are changing fast, it is impossible for us as teachers to know what it will look like by the time our pupils finish formal education. By training pupils these transferrable skills, we are preparing them to realistically contend for jobs that do not yet exist.

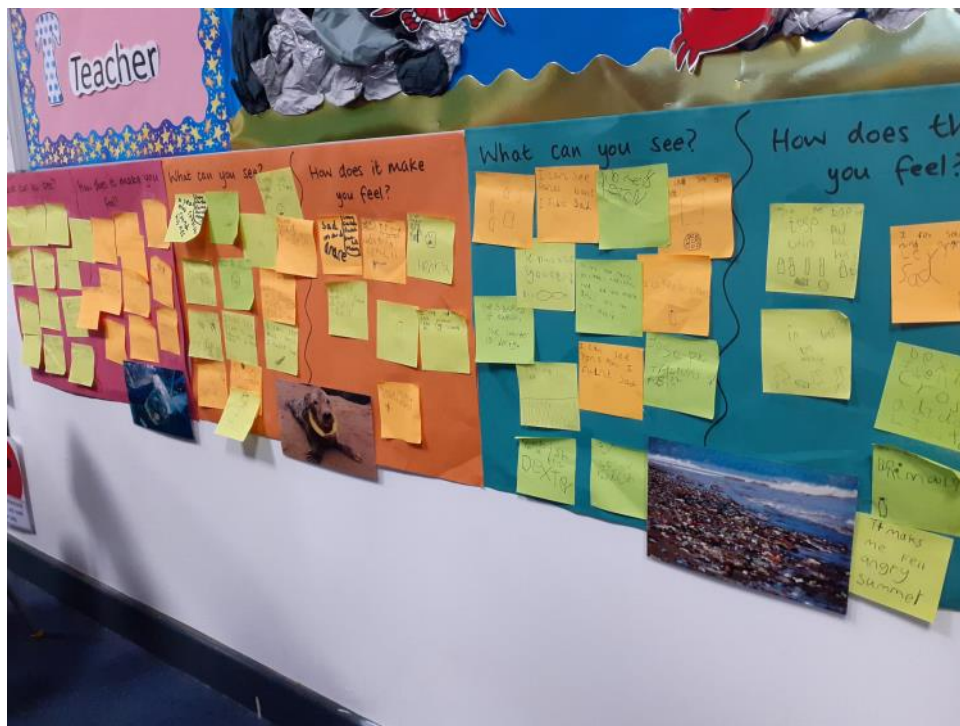
## Worksheets – Doubling and Halving

- Context of the application (Age/group/focus of the lesson)
- This was a numeracy (doubling and halving) lesson for all of the year 2 class.
- Rational for choices made in the application (*why* you chose to do something in a particular way and what may have informed your choices)
- The class was split into attainment groups. I decided to give the learners worksheets as this is what I had observed they were familiar with to evidence their understanding. The worksheets displayed images of the amounts they needed to double and halve. I had hoped that the images would be a useful scaffold even for the lower numbers, as this mathematical concept was new to many.
- Evaluative points related to the application
- I discovered that, even with the images on the worksheets, the concept of halving numbers was still too abstract for many of the children. In future I would offer blocks and/or Numicon to aid their understanding.



### Ocean Pollution Posters

- Context of the application (Age/group/focus of the lesson)
- The focus of this year 2 lesson was knowledge and understanding of the world – ocean pollution. The groups were mixed attainment.
- Rational for choices made in the application (*why* you chose to do something in a particular way and what may have informed your choices)
- I chose for the children to work in mixed attainment groups as the lesson involved oracy and imagination and I believed all the children were capable of participating and being successful. I also believed that mixed attainment groups would produce different dialogue, and therefore solutions, due to different perceptions and previous work completed in their attainment groups.
- Evaluative points related to the application
- I was very pleased with the different conversations and reasoning going on at each table. As this was group work, each child's ideas were then being developed or questioned by other members of the group. The learners were able to provide ideas and solutions that were very imaginative.



# Critical Reflection

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In this essay I aim to outline how I have implemented and developed three of Donaldson's pedagogical principles (Donaldson, 2015) in my own practice as well as providing key points from literature on each of the three. Hattie's scale of contributors to improvements in learner outcomes (Hattie, 2009), ranks several concepts explored in the following three principles in the top 20. It is important to understand that to move forward and develop our educational system into one where learners are inspired and can flourish, we are not just rebranding old ideas. The world has changed, and we have to prepare pupils for their future within it. The three principles that I focus on in this essay, emphasize why learning can no longer take place 'in a vacuum,' but must become more organic, inclusive and meaningful.

As I began my observation period on PTE 1, I was keen to find out which *Assessment for Learning* - AfL - strategies the class were familiar with in order to incorporate or adapt them for use in my own practice. I observed that the learners were asked to self-assess by colouring a traffic light stamp on their work on completing a task as part of a topic. During carpet time questioning, learners were asked to hold up individual whiteboards with their answers. I wasn't convinced that this was the most effective method of gauging where each pupil was with their learning at the time as it is difficult for a teacher to see and remember the answers of every learner.

During my lessons, I requested that the learners use the *think pair share* strategy. They were already aware of how to do this and the majority kept their conversation topic related. The only issue was when certain children did not wish to speak to each other. The advantage of this practice was that, after discussing answers with peers and being given extra time to think (Black & Wiliam, 2002), quieter pupils then seemed confident to answer in front of the entire class. As mentioned earlier, I wasn't convinced of the effectiveness of the individual whiteboard technique following questioning. However, during my own time of leading the teaching in the class, I could understand its merits. While I was asking the entire class to show their answers, I could, in fact, quickly spot incorrect answers or pay special attention to the answers of specific children who I'd suspected may be struggling. It helped me tailor the following task accordingly and offer extra support where needed.

I made sure to involve the learners in setting the success criteria, either by modelling an example of a preferred outcome and asking the pupils to comment on what they thought made it a good example, or by referring back to a lesson or idea and asking the children to reflect on that to come up with the success criteria.

Another strategy I chose to employ, was to use mini games as a form of AfL. By doing this I was able to pose several meaningful questions at a time in a fun and casual atmosphere. One of these was a time telling competition between two teams. The premise: I would call out a time and they had to display it on their individual clocks. The children were highly engaged and posed the questions themselves. Prior to this the children had been evidencing their learning by drawing hands on the clocks on worksheets that had been differentiated (Bethune, 2018). I observed that those children whose pen control was not strong were, firstly, getting bored and frustrated with worksheets. Secondly, their pen control affected their answers, so worksheets were perhaps not a wholly valid way of displaying conceptual grasp.

To improve my practice, I aim to implement more peer reflection and assessment, such as using the *two stars and a wish* method to create an atmosphere of positivity and growth. I also need to be more mindful of how much thinking time I allow the children as it is sometimes too short.

During a reflective discussion with the lead mentor at my PTE 1 school, and in direct relation to the ideology behind AfL, I decided to establish the 'what, how, why' approach at the forefront of my practice (Wiliam, 2009). This meant that I should make sure that the learners are aware of *what* they are learning, *how* they are learning it, and *why* they are learning it. By illustrating that the skills and knowledge attained in each lesson could be applied to many others, I hoped to achieve this. The lesson I had previously found most difficult to reinforce cross curriculum responsibilities in – numeracy – was my target for this area later in my placement.

During my first teaching week, I connected a literacy with numeracy in a lesson where the learners had to read and comprehend a text (in this case a leaflet) and then categorise and compare the features. The higher attaining were able to complete the task, but it proved to be very difficult for the middle and lower attaining groups due to the literacy element of the task which was set at a level just beyond their grasp. During the second week of my placement, I taught all numeracy lessons. I found it very difficult to make connections with other subjects on the curriculum and identified this as an area for me to focus on in order to improve.

I chose a digital competency task that I could blend with knowledge and understanding of the world as well as creative development. In this lesson, the learners worked in small groups and used iPads to research a castle, write down three facts about it and draw a picture of it. The children chose the roles within the group themselves. What was particularly exciting for me in my teaching capacity, was seeing the currently lower attaining students request to take on the trickier tasks, such as writing, when they generally shied away from this in other lessons.

In a numeracy lesson, I connected knowledge and understanding of the World and literacy. In this lesson, the pupils were asked to think of several aspects of their daily routine, write them down, draw a picture of the action and label a clock to illustrate at which time the action occurred. As mentioned in the opening paragraph, the This task had a direct correlation with life outside school. It was also a valuable exercise for one child who gets distressed when routines are altered, this merging of subjects improved his understanding of how his school day would look.

I would like to connect digital competency to more subjects. Examples I have envisaged are pupils researching a topic or using the learning tablet to create a quiz on the topic being covered. I would also like to develop connecting science to other subjects as that opportunity did not arise in my first placement on PTE 1.

The final principal for reflection is that referring to problem solving, creative and critical thinking. As I observed the class, I saw problem solving activities such as making 10 using different combinations of whole numbers on worksheets. Outdoor lessons were run by a local organisation who planned lessons in which the children would be split into groups to work collaboratively to solve problems. During these lessons they could build small scale houses, bridges etc. out of recycled materials.

I began by providing the children with differentiated worksheets on the topic of doubling and halving. I felt that they were getting tired of this method of evidencing their learning and it seemed a little demotivating to those children who were not able to read or write at the level required. I wanted to think of a way in which they could still be successful in the task without having to write down answers.

Since many of the children – across all attainment levels – still struggled with the concept of halving, I decided to plan an activity using blocks. Before the lesson began, I was curious whether this would be easier or more difficult. The blocks are a tangible resource that the learners can move around and manipulate the layout of. Would this, in turn, make the task more complicated as they were not laid out in neat rows as they were on the work sheet? The result was as mixed as with the worksheets, showing that different children solve problems in different ways.

Later in my placement, I began the lesson with an open-ended question about ocean pollution. I asked the children to *think pair share* to get a feel for their knowledge of the subject. The children were then split into groups of six to complete a task. The task was to complete 'what do you see, what do you feel' posters on the subject of ocean pollution. They then had to come up with a solution that they could present to the class. Since each learner comes to the task with a different perspective (Goldstein 2009), The answers were varied and the groups of individuals could build upon each other's ideas to solve the problem, they then presented their solution to other members of the class. I had specified that the class work collaboratively as this would increase topic related discussions which deepen understanding; as learners explain their ideas and feelings on a concept to cohorts, this in turn improves their own conceptual grasp. (Tolmie et al. 2010).

I think it is important for all learners to feel valued and know that they capable of quality contribution and so I will include more practical elements to lessons with problem solving. On observing my next placement class, I have identified that literacy is still an issue (many having difficulties to write). I aim for my lessons to be as inclusive as possible while still challenging to help the learners achieve their full potential.

In conclusion, as I develop my practice, I will be able to use PTE 1 to inform my planning and decision making. I believe that practical, real world applications of the knowledge and ideas being developed are essential, following a constructivist school of thought, where the learners can physically apply the theory that they are learning. I have also witnessed how well the children's reasoning and creativity – and essential social skills – are developed in group work (Vygotsky, 1978), I aim to plan more lessons to be undertaken in this way. Finally, a key theme throughout the literature, and my experiences thus far, is that the learning should be led by the students, they should have more responsibility and ownership of their learning. This can be achieved by learners having the knowledge of what is expected of them and how they can improve their results on an individual level (Black and Wiliam, 1998).

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