

“How does providing a real-life context for numerical problems enhance engagement?”

	Targed/Target	What I have done in this assignment.
Targed/Target 1	Engagement with literature Knowledge and understanding Cognitive and intellectual skills	Enagaged with a wider variety of literature with the aim to understand the knowledge, cognitive and intellectual skills of students and researchers.
Targed/Target 2	Could have explained as to <i>how</i> theory and practice link impacted on the learning.	Linked further between numerical practice and theory.
Targed/Target 3	Transferable skills for life and professional practice.	Talked about transferable skills for numeracy outside of the classroom.

INTRODUCTION

The aim of this assignment was to design, conduct and critically evaluate research that focussed on how providing a real life context for numerical problems, within a school context, enhances general engagement in class. This issue interested us as researcher partners as we are undertaking Mathematics and Chemistry PGCE courses, which are both numerical subjects. Donaldson (2015) stated, as one of his 4 purposes, that setting up learners to become ‘enterprising and creative contributors, equipped to play a full part in work and life’ is extremely necessary for the future. As such, the purpose of this research was to explore within our subjects how to provide a real-life context that links numerical theory with practice and impacts positively on learners, in accordance with the new Welsh curriculum.

RESEARCH CONTEXT

Both Class One and Class Two were observed within Secondary School X in Swansea. The school is a mixed gender English medium 11-16 comprehensive school, within the Swansea Local Authority. It covers five local catchment areas and currently has approximately 885

students on role (Schoolguide.co.uk, 2019). The percentage of learners with additional learning needs (ALN) at the school was reported as 25.9% (Estyn, 2018). However, the school achieved 'Good' in all their 'Inspection Area' standards, which included strong guidance and support facilities for ALN students.

A safe and secure environment was maintained for the observed classes, as we were both student teachers at the school, and were familiar with the student participants. As such focus students felt comfortable in taking part in our class based research.

RELEVANT LITERATURE

Cox and Cohen (2014) stated that Mathematics and Numeracy are important because of their real world context and that without context, it was hard to relate to the beauty and power of Mathematics. They suggested that this point was essential when seeking to engage students in numerical disciplines. Attard (2014) was also of the opinion that it is a common challenge for students to relate numerical problems to real world situations, especially in translating their learning into a format that shows a satisfactory level of understanding. She suggested that students when questioned or cold-called often think they've understood the numerical concepts, analysis, graphs or case studies, but don't necessarily bring it all together effectively when answering under timed conditions. Also students needed to know that their numerical efforts would not be in vain, as there would be 'real world' situations in which difficult mathematical concepts would have utility.

Further reading into this topic supported our research question as many authors reiterated the idea that a vital component of quality numeracy in classrooms was the provision of purposeful learning experiences (Sparrow, 2008). As such, this requires students to experience real-life, relevant or meaningful Mathematics and Numeracy in order to transport them beyond those familiar attitudes toward Mathematics as being irrelevant and boring. Although Cox and Cohen (2014) proposed that becoming more aware of mathematical pedagogy was necessary, in order to develop mathematical understanding for learners, Sparrow (2008) argued that it still remained a challenge to promote purposeful numerical tasks in many classrooms. Therefore, how do we provide relevant opportunities for numerical discussion between students and teachers, as well as amongst students?

Considering an approach to mathematical teaching that is based on drill and practice, it is challenging to recognise where important numerical conversations can occur. Such a drill and practice approach was defined by Merrill & Salisbury (1984) as a disciplined method of instruction that was characterised by repetition of concepts and examples, as well as practice problems. Such an approach is predominantly used as a teaching method to perfect

a skill or procedure. However, they failed to acknowledge the significance of an approach where collaboration is encouraged through problem solving and investigation. Attard (2014) suggested that student reflection could be an integral aspect of every lesson, regardless of the types of tasks, teaching methods, or activities enforced. Also she stated that learners need to experience relevant understanding and success, with a sense of realisation and achievement, if they are to instil a positive mind-set towards Mathematics and Numeracy. This aligns nicely with the viewpoint of Chambers and Timlin (2019) that portrayed student choice in numerical classroom lessons as an important element for engagement.

In 2014 The National Council of Teachers of Mathematics (NCTM), stated that genuine problems do arise outside the classroom vicinity for which Numeracy is extremely useful. They added that there are many social issues and situations students can learn more about through analysing a numerical condition. Furthermore, this point is expanded upon by Cox and Cohen (2014) as they stated that it was crucial for students to learn how to deal with unforeseen real-world contexts that they would rarely encounter in the classroom. Also they suggested that because of the nature of potential future open-ended problems, it is much harder to anticipate what numeracy students would need to use. As such they argued that these can cause some teachers to shy away, because of increasing pressure to address certain numerical standards within their lessons.

Cox, and Cohen (2014) inspired our research theme further with the aim to 'make Maths' visible, in various subjects. They added that often it only requires simple discussion or a quick verbal explanation to students of how numeracy can be used throughout other academic subjects. An example of this in a Mathematics class is a starter activity that asks students where they have used Mathematics in their Geography lessons or other subjects, and discussing with them where the 'Maths is visible' in various topic areas.

This further links in to our research, as Science topics are huge knowledge fields that can be utilised to point out where numeracy is useful and essential. However, Chambers and Timlin (2019) argued that it takes little effort to recognise the numerical footprints of Mathematics in all other disciplines. For example: pattern in Dance, symmetry and shape in Art, fractions in Music, time and date calculations in History just to name a few.

Our educational backgrounds, along with relevant literature, has helped us to adjust our research question to explore this theme. I looked further into this by reading books, journal articles, government documents and other on-line material. What this showed me was that as educators, there is always a familiar numerical catchcry by students. "Why are we learning this Sir/Ms.?" or "How is Pythagoras' Theorem going to help me after I leave school?". Attard (2014) mentions that objections of this nature indicate an underlying

difficulty with content and that the real question they are thinking is: “Why should I bother trying really hard? Is it going to be worthwhile at the end?” Such questions, together with providing appropriate tasks and learning opportunities for all students to succeed in numeracy, can be challenging for teachers.

LESSON STUDY DESIGN

The type of methodology used in our research was Lesson Study, which is a specified form of classroom action research which focuses on the development of teacher practice and knowledge (Lessonstudy.co.uk, 2019). Seleznyov (2018) identified seven critical components of Lesson Study. The first is to identify a research focus and develop distinct research questions which will require several research lessons to conduct. It then requires teachers to collaboratively plan, teach, observe and analyse learning and teaching in ‘research lessons’ in groups. Joint detailed planning attempts to anticipate student’s misconceptions, responses and successes for the lesson. Upon recording their findings over a cycle of research lessons, teachers may innovate or refine a pedagogical approach that will improve students’ learning. This can then be shared with others through public research lessons and/or the publication of a paper outlining their work (Dudley, 2012).

Lesson Study has been used successfully in the UK to improve teaching techniques and student progress in core subjects, as well as develop wider pedagogic approaches such as assessment for learning. As such, the methods of data collection used for our Lesson Study research were reflection, non-participant observation and focus groups.

The research lesson is taught by a focus teacher, who is a member of the collaborative group. The opposite researcher acts as a silent observer, collecting any available evidence of student learning from the focus group (Lessonstudy.co.uk, 2019). Our lesson study design consisted of two research lessons. One was a Mathematics lesson with me as the focus teacher and the other was a Science lesson, where I was the observer. We chose our focus group sample of 6 students (3 in each class) from two classes that had a total sample size of 44 intermediate level students. Specific students were chosen because of their perceived ability level in the class and whether they were a high/mid/low achiever. Cohen et al (2018) stated that such sampling is fixed, as it is rarely possible for the researcher to explore a wide sample. As a result the researcher has to decide which people would be best suited to represent the wider group (LeCompte and Preissle, 1992).

We collected qualitative data for our research from observations of the focus groups during research lessons and from interviews we conducted straight after them. The research lessons were planned to be just before lunch so the interviews did not affect students’ other

lessons. Each interview lasted up to a max of 10 minutes. Post-lesson discussion also took place between us after the first research lesson. We discussed the evidence gathered from the interviews and observational notes of the focus group. If needed, subsequent research lessons should be planned and taught that draw on the findings from the post-lesson discussions. This was done in our research, as findings from the first lesson I taught were taken and improved on for the second lesson that was taught by my partner as the new focus teacher.

As part of psychological research, there are various types of observational methods and clear differences between them. There are two key types of observation: Non-participant and participant. Participant observers take part and engage in activities where their role allows them access through their involvement as part of the study group. On the other hand, non-participant observers remain outside the realms of active involvement, and disassociate themselves from any group conversations or activities. The viewer's role is to create notes or collect data (Davies, 2007). An example of this is observing the teaching and learning interactions between teachers and students in a lesson whilst sitting within the classroom periphery. The research observer takes on the part of a passive reflector and analyser. However, it is important for them to decide what to concentrate on specifically, as it is impossible to observe everything that occurs within the environment at that time. As such, a non-participatory method lends itself nicely to the purpose of observing our specific research idea in a class situation, which we can then evaluate and reflect on in relation to informing and improving our teaching practice.

In our research lessons both sets of non-participant observational notes were taken and recorded using what Cheqdin.com (2020) proposed as the Leuven Scale for levels of involvement. Observation of student participants are rated on a five-point scale ranging from extremely low (show complete absent-mindedness and display a lack of desired motivation) to extremely high (show concentration, persistency, creativity and liveliness throughout the observation period). This allowed us to qualitatively measure student's 'emotional well-being' and 'involvement', which are two pivotal aspects of progression, learning and development for students. However, my research partner and I adapted this Leuven Scale instead for engagement to cater more to our research theme.

A reflection template was also created by myself and my research partner with reference to Brookfield's Four Lenses Reflective Model (Brookfield, 1995). In this model a specific experienced situation is considered from different vantage points and reflected through what Brookfield called "lenses". The autobiographical lens, is where you think about the situation in relation to your own previous experiences and your current reactions and feelings. The

students' view, where you try to put yourself in your students' shoes and review the situation by looking at what happened through their eyes. Your colleagues' view, as their observations of your work and practice along with their own experiences may offer you new insights into what happened and what you can do to improve your work. And finally the theoretical lens, where consultation of literature and theories will help you gain new insights and a better understanding. This will help in the planning of the next steps to take and how to put theory into practice.

ETHICAL CONSIDERATIONS

The British Educational Research Association (BERA) believes that educational researchers should operate within an ethic of respect for everybody involved in the research. Individuals should be treated with fairness, sensitivity, dignity and without prejudice, in recognition of their rights and differences (Ethical Guidelines for Educational Research, 2018).

Cohen et al (2018) added that classroom research requires consent and assent for student involvement in a study, together with transparency where researchers aim to be open and honest with participants. This ensures appropriate data collection and the welfare of the researchers/participants is not put in jeopardy. They also stated that various types of interviews have an interpersonal ethical dimension that concerns interaction and the production of individual's information. Therefore, informed consent and assent with respect to confidentiality can only be beneficiary. Mcleod (2019) also suggested that ethical research design and execution should aim to put participants at ease and avoid making excessive demands on them. However, confidential and anonymous treatment of participants' data should be considered the norm for research.

As such for our research we created our own opt-in Consent/Assent Form, in line with these ethical considerations [See Appendix 8], which students completed with their parents and gave in before the research lessons took place. The form explained the research and their participation and the data collected was kept confidential.

LESSON STUDY RESULTS AND ANALYSIS

Lesson Study with Class One was conducted with a Year 10 intermediate Mathematics class. We planned this lesson based around the idea of calculating and identifying methods for income tax, in relation to a designed Scheme of Work (SOW) for Year 10 in School X [See Appendix 5]. My role, as a 'more experienced other' in relation to Vygotsky ZPD theory (Capel, Leask and Younie, 2019), was to conduct the lesson and lesson study process, with the focus on the contextual links to real-life rather than just subject specificity. I felt this was

a valuable strategy as it prompted class discussions as a starter activity in the class, and allowed students to access prior knowledge and insight they may already know on the topic.

In relation to our adapted reflection model from Brookfield (1995) [See Appendix 1], our results were as follows. The first 'lens' was a self-evaluation by myself, where I recognised that students were engaged throughout the lesson. The focus students all had an input into the lesson through questioning and tasks, with the content fitting to the research project at hand. Our mid-attainment student was very fluent when communicating and answering questions with confidence and wasn't afraid to put forward their ideas as part of discussion. The high-attaining student mirrored this when prompted and questioned in teacher discussion, but was more open to student discussion and this was similar for the low-attaining student. On the whole the lesson fitted both the ability level of the class and the research project. I felt their overall engagement had improved since topics with a real-life context were introduced to the class, as part of the 'Real-life Finances' area of the SOW. My research colleague echoed my results in her observational notes, which showed a high level of engagement from all 3 focus students [See Appendix 4].

Our adapted Leuven Scale observation template was split into three parts to symbolise certain phases of the lesson. These were the starter, exposition and plenary phases. My research partner observed that students recalled information well from the previous lesson as part of the starter activity, and gained enough intuition to continue this enthusiasm into the exposition and plenary part of the lesson. In oral discussion, most students in the class participated steadily when communicating information about taxes and were not afraid to ask questions about aspects they were unsure of.

As part of the exposition, exam questions were used as a task for them to complete. When conversing over answers and methods used, some were reluctant to give answers when questioned about their step-by-step method, but most students wrote corrections in when instructed to do so. A common mistake found was that students mixed up the method steps. This was largely because of confusion over which tax brackets to use at certain salary incomes and deciding how much to calculate for each bracket. This could be due to gaps in their understanding and confidence with using and answering questions on this method, as it was the first lesson they had had on this. In my future teaching of this topic I would need to plan a sequence of lessons that related to and built on students' prior knowledge and ability, in order to develop better differentiated resources and activities so all students can gain a better grasp of each individual method step for income tax calculation.

Out of the 3 exam questions proposed in the lesson, most achieved 1/3 correct. The wording of the questions and how the specific information contained within them was

reordered, could have contributed to this. This was done purposefully to test student's holistic understanding of the topic. Students were asked to self-mark their own work before the end of the lesson and write in any corrections they needed to make. Work was overviewed after the lesson by myself and my partner. The level of accuracy, based on the questions, was average to high even though some didn't complete all the questions. This was encouraging in terms of their improved confidence with applying their knowledge. However, in the future I would initially plan to cover less exam questions and make less changes to information contained within them, until student learning of each method step has been adequately assessed.

Upon interview, the focus students believed they had achieved something from the lesson [See Appendix 3]. They all said they preferred a lesson that related numerical problems to a real-life context as it was more engaging and relevant. From my interview question notes, all three students collectively stated that they would love to see more lessons like this in the future and that it should be taught more often. One student stated that they would prefer more options for realistic exams that included more scope for everyday life mathematics, as they would find it more useful. The student also mentioned that if this was the case, more students could develop an affinity and willingness to improve their work effort in Mathematics lessons. Also, all the students enjoyed the plenary match up definition activity and felt the lesson explored certain misconceptions they had, especially about tax and income tax. Overall they conveyed the view that the lesson was useful in developing their understanding and numeracy skills in Mathematics.

My research partner and I used information gathered from the first Lesson Study in order to improve on our Class Two lesson. For example, one change that was made was changing the observer's position to be closer to the front of the class, which provided a wider view of all focus students instead of a restricted one. Another was collecting and viewing students books for review [See Appendix 9].

The second Lesson Study was undertaken on a Year 10 intermediate/lower Science class. We planned this lesson with an aim to link it to the previous Lesson Study in terms of a contextualised topic area and in relation to the Science SOW for Year 10 [See Appendix 7]. Hence, the lesson devised was on calculating the cost of electricity in relation to energy efficiency. My role, as a non-participant observer, was to remain outside the domain of lesson activity with my role solely to make notes and collect observational data.

Using the same adapted reflection model [See Appendix 2] and Leuven Scale, we obtained similar trends and results from our first Lesson Study. In our post lesson discussion we found that students were fully engaged with given tasks when confirmation of instructions

was clear, which prompted good communication when questioned and questioning. The three focus students were purposefully cold-called by the focus teacher, in order to ensure they made an input into the lesson through questioning. The mid-attainment student was the least engaged, needed continuous prompts to persist with tasks and was constantly on and off task. However, they were very open and willing to participate in discussion and communicated with confidence. The low-attainment and high-attainment were very engaged and completed work to a good quality. They both were also very willing to try and help their close peers out with questions and answers.

As part of the starter exercise for this lesson, a Sankey diagram was used. This allowed students a visual example of a certain appliance to see energy efficiency in the form of useful and waste energy. This helped to aid the focus teacher with student discussion in the class and prompted solid engagement for direct teaching. A common mistake discovered included one of the focus students using the incorrect energy efficiency value in calculations and substituting into the wrong equation. Largely, this was due to confusion over certain definitions and a hinge question in which students had to change time into units of hours. This was evident upon analysis of their books at the close of the lesson. Again this could be due to gaps in their understanding and confidence with using related mathematical methods and calculations, as it was the first lesson they had on energy efficiency. However despite this, most of the focus students completed the work that was available to them, with even one student asking for an extension exercise.

In the future teaching of this topic my partner would also need to consider planning a sequence of lessons that related to and built on students' prior knowledge and ability. This will be integral to the development of better differentiated resources and activities, so that all students can acquire a better understanding of the mathematical methods required for energy efficiency calculations.

My research partner discussed the experience with the three focus students by means of a semi-structured interview (Drever, 1995). From interview question data collected, the focus students also believed they had gained important knowledge from the class and that they believe that lessons of a similar vein to this can be useful in developing their numeracy skills. Again they collectively assured us that they would prefer future lessons relating to a real-life context to be included more in the curriculum, so it can better prepare them for later life. This links in nicely to Donaldson's (2015) four purposes for the future curriculum for Wales.

In summary, the ability level of the class clearly matched the lesson objectives and the research project. My research colleague echoed my observation results, which showed a good level of engagement from all 3 focus students [See Appendix 6].

RESEARCH FINDINGS

What my research partner and I discovered was that both sets of Year 10 classes preferred numerical classwork with a distinct relation and contextual link to real-life situations. The overwhelming verbal trend of results between both focus groups, was surprisingly similar, with not one of the students conveying an opposing opinion in the interviews. Across the board, the focus group in each class wanted to see more contextualised work and assessment in school, so that they can see the relevance to Mathematics and Numeracy in their learning, how it links to everyday life and their development of transferable skills. Guido (2016) mentioned many strengths and weaknesses when it comes to contextual learning. A major disadvantage is that devoting too much time to context-based learning can cause problems when students take standard tests. Whereas context-based learners develop skills related to collaboration and justifying their reasoning, many tests reward fact-based learning with multiple choice and/or short answer questions. Another limitation is that supervising a context-based learning activity is a new experience, so teachers may have to undertake more planning in order to adjust their teaching practice. Also, depending on teaching style, it may take teachers more preparation time in order to successfully implement and deliver an engaging context-based learning experience for students.

For my class going forward, I would aim to include opportunities for numerical learning using real-life contexts when possible and appropriate, as both our and other research has shown that it can aid student engagement and promote enjoyment. Giardini, E. (2016) suggested that creating real-world, relevant and purposeful learning experiences in numerical subjects for students correlates strongly with three forms of engagement: (i) cognitive - learner understanding of concepts and their applications in depth; (ii) operative - the active participation of the learner; (iii) affective - the value placed on Numeracy by the learner within their own life, as various strands of Mathematics and Numeracy are considered essential to learning and skill development beyond the classroom (Attard, C., 2014). However, affective engagement is unattainable without proper numerical learning experiences. But Giardini, E. (2016) declared that the three forms of engagement are interlinked, so when planning lessons each of them must be considered. Therefore, successful student engagement with all three can enhance their ability to have a more positive, enjoyable and successful learning experience in Mathematics.

Although, Foster (2013) agreed with this, he also supported an opposing view that students obtain a lot of satisfaction from solving repetitive problems and obtaining definite solutions. He added that some learners will only begin to enjoy a subject when they have reached a certain stage in it. As such, it may be necessary to persevere with establishing sound

mathematical comprehension for a while before enjoyment is able to rear its head. However, the literature and research reviewed so far has not mentioned learner scepticism of the education system and process. Students may “experience a great desire to leave school and make their own way in life, and questioning the curriculum and those who run it may be part of that” (Foster, 2013:7). Therefore, if lessons are unstimulating or not pitched appropriately to ability, it may illicit questions like “How?” or “Why?”, which may suggest a level of student frustration, perceived irrelevance or disillusionment. However, it could also arise from limited comprehension and apprehension with the subject over a period of time. As such, I will need to make sure lessons are planned effectively, reflectively evaluated and adjusted appropriately for ability and relevance.

CONCLUSION

Our research lessons were based on the fact that, through our own experiences in teaching so far, numeracy has been an area of difficulty for students. Providing purposeful numerical learning experiences within meaningful contexts should encourage and not hamper students’ cognitive, operative and affective engagement (Attard, C., 2014). In our Lesson Study research we endeavoured to show Mathematics and Numeracy in a positive and visibly realistic light, in order to potentially connect relevant learning experiences inside the classroom with developing students’ transferable life skills outside of school. Such contextual ideas can be modified for teaching of any subject or stage of learning or ability. Also, as future teachers, it will provide us with the opportunities to develop our own practice through more effective planning for differentiation, implementation and reflection, so that we can both address the needs of learners better, whilst also having a positive impact on their engagement, learning progression and lives.

Although we were happy with the outcome of our Lesson Study research it was carried out on a very small scale within just one school, with only two classes and 6 focus students in total. Also, just analysing qualitative data can lead to some subjectivity in how these results are recorded and analysed by different researchers in the group. Using our adapted Leuven scale to also collect quantitative data to analyse and summarise in tables and graphs would be a valuable addition. Overall, we thought that our results, analysis and evaluation were limited by sample size, number and size of focus group samples and data collection methods used.

As such our research findings could not be generalised, as they could not be extrapolated to all students in the school, or even wider to include all schools in Wales. According to Koida (2019), research based on a small number of observations tend to produce inaccurate results, with a tendency to skewed data. Therefore, there are innate challenges in analysing

small data sets, but it is sometimes required in areas where it is infeasible to collect further data. As such, it may be more sensible to use small data set research as a predictive model rather than one of generalisation.

On reflection, a larger sample and focus group size, together with the use of a variety of quantitative and qualitative methods and tools for data collection, would have yielded a higher amount of results for data analysis, from which more significant conclusions could have been drawn and generalised.

Our Lesson Study analysis revealed that both teachers and students value the role that contextualisation plays in numeracy, both within our own subject areas and other disciplines. Upon further collaboration with fellow teachers and colleagues within school X, I found that teachers overall supported the introduction of real life contexts into the classroom environment wherever possible. Mthethwa's (2007) study of this aspect also found that teachers' strategies to enhance engagement were 60% related to context and 40% related to content. However, he also contended that contexts may have some disadvantages in the teaching and learning of numeracy for both teachers and learners. For example, concerns could be raised about potential barriers to learning that English as an Additional Language (EAL) students may have, as it may affect the relevance of some contexts in relation to differences in their spoken language, culture and life at home.

There is some evidence to suggest that research lessons are better undertaken by employed school class teachers, rather than students or outside figures (Selezniov, 2018). Therefore, if I was to repeat this research again, I would still want to be the focus teacher for my own classes across the key stages. However, I need to ensure that any pre-prepared answers and questions for these lessons are not done carelessly, with just the research task in my mind, as such an approach could be unhelpful for students learning in the classroom.

RECOMMENDATIONS

The main objective of this research was to implement the use of real-life numerical problems into contextual lessons in Mathematics and Chemistry, and use the results to investigate the effectiveness of such methods in enhancing students engagement. One other limitation we faced during our research was the time restrictions on planning the introduction of a new topic. Students were unfamiliar with new information and they had limited time in a one off lesson to effectively process and learn all the concepts. Such gaps in learning ate into allocated time for exposition and plenary activities. In light of this, Chambers P. and Timlin, R. (2019) recommend that more time should be spent on introducing the students to such contexts over multiple lessons. As such, any future Lesson Study research on how to

provide a real life context for numeracy, would need to be done over a whole series of lessons, in order to yield more significant results and findings. Also this would ensure that there is adequate time for lessons to be planned, delivered and adjusted appropriately in relation to ability and learning outcomes. In addition, it would be beneficial for the Lesson Study to be conducted across all curricular subjects with larger focus groups, in order to provide better research findings into how numerical contextualisation across the curriculum can enhance student engagement and learning.

Constant engagement with numeracy during the secondary years of schooling is critical if students are to develop an appreciation for and understanding of the value of numerical learning, both within Mathematics and across the curriculum. Students who become or who are already engaged are more likely to experience learning satisfaction and achievement, find the experience of schooling more rewarding, and therefore be more likely to continue on to higher education. All teachers need to continue to develop and adapt their teaching in order to provide innovative and engaging lessons that: (i) have a positive impact on the value and relevance students place on learning Mathematics and Numeracy; (ii) contextualise and build connections with using Mathematics in students' everyday lives now and in the future (iii) support and build on their development of transferable skills for life.

WORD COUNT = 5440

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