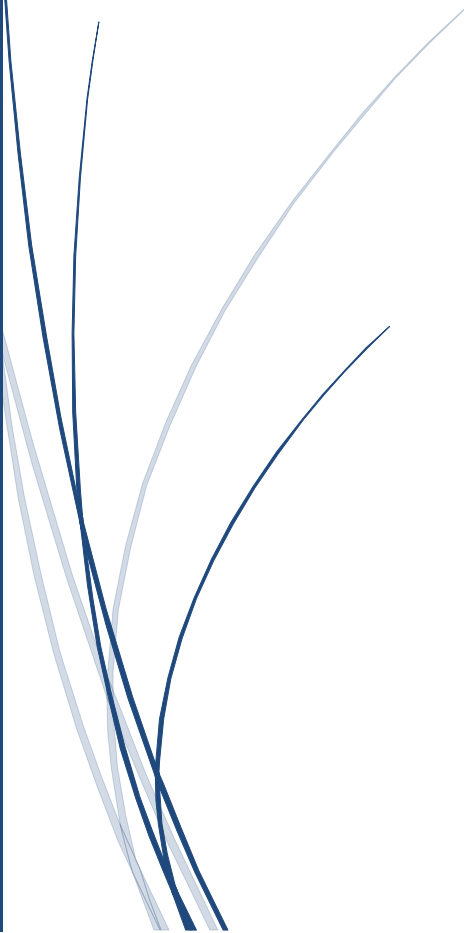




M7X2152

Do defined roles in collaborative learning improve the learning outcome?

The Enquiring Teacher Module,
Lesson Study Research.



STUDENT NUMBER: 1700928
WORD COUNT: 6516

ASSIGNMENT DETAILS AND FEEDBACK

SOUTH WEST WALES CENTRE FOR TEACHER EDUCATION

*Sections marked with * should be completed by module lead*

Student name:	Nyree Moody	Student P number:	1700928
Programme: *	PGCE Primary		
Module: *	The Enquiring Teacher	Module Level (6 or 7):*	7
Module code: *	M7X2152	Contribution to Overall Module Assessment (%): *	100%
Module Lead:*	Catherine Morgan		
Assignment Title:*	Write a critical and analytical essay that discusses your practitioner research 'lesson study' in relation to a chosen field.	Assignment No (x of x):*	1/1
Start date:*	09/01/18	Submission deadline:*	16/04/18
Return date of provisional marks & written feedback:*			

Referencing:	In the main body of your submission you must give credit to authors on whose research your work is based. Append to your submission a reference list that indicates the books, articles, etc. that you have read or quoted in order to complete this assignment (e.g. for books: surname of author and initials, year of publication, <u>title of book</u> , edition, publisher: place of publication).			
Submission:	All assignments must be submitted to Turnitin unless otherwise instructed by the Lecturer. Note: the Turnitin version is the primary submission and acts as a receipt for the student. Late submission of the electronic version of the assignment will result in a late penalty. Penalties for late submission: Up to one week late, maximum grade D. Over one week late, Refer. Only the Extenuating Circumstances Panel may grant an extension.	Date:	16/04/18	
Module lead to tick to indicate if a hard copy version of the assignment must be submitted.*			YES	
			NO	✓

Student Self Evaluation Form

This section repeats in brief the common assessment criteria detailed on previous pages. The *extent* to which these are demonstrated by you determines your mark. Using these criteria, tick the box that best indicates the level of achievement you feel you have achieved with regard to each of them.

Common Assessment Criteria Applied	REFER		D	C	B	A
	OUTRIGHT FAIL	UNSATISFACTORY	SATISFACTORY	GOOD	VERY GOOD	EXCELLENT
1. Subject Knowledge and Understanding (which includes using research-informed literature and knowledge and understanding of the subject)	☐	☐	☐	☒	☐	☐
2. Intellectual Skills (Analysis)	☐	☐	☒	☐	☐	☐
3. Pedagogic and Professional Applications (Practical Application and Deployment)	☐	☐	☒	☐	☐	☐
4. Key Transferable Skills	☐	☐	☐	☒	☐	☐

PLEASE COMMENT ON AREAS IN WHICH YOU FEEL THAT YOU HAVE PERFORMED WELL	PLEASE COMMENT ON AREAS YOU FEEL THAT YOU NEED TO DEVELOP
I feel I have researched my topic well and really enjoyed linking this back to my question. We worked well planning the lesson collaboratively and reflecting on these.	I feel I could develop my critical analysis skills and being more focused in my essay.

Student's Name	1700928	Date	15/04/2018
Student's Signature	1700928		

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Aims, Focus and Purpose of the Research.

The issue that interested me was the subject of collaborative learning within the primary school. One of the benefits of collaborative learning is how it improves social skills, this is one of the most important parts of growing up (Baines, *et al.*, 2009). Children learning from each other was very interesting because it allowed them to feel more at ease and engaged with the task. However, I also witnessed how group work could become rather chaotic or limit the learning of the children. In my class I saw how arguments would arise when they were left to decide who would take on what responsibility in the group. This meant time was wasted and they weren't working as successfully as they could in order to reach their learning outcomes. Moreover, I wanted to see if I could avoid this happening and thought about using roles within group work. I will be carrying out the 'lesson study' approach in order to research whether having defined roles will in fact improve the children's learning outcome. This approach will be useful as it allows two teachers to explore, analyse and modify the lesson at greater depth (Dudley, 2015).

Research Context

I discussed this research topic with my partner and we both agreed that it would be a subject which could improve learning in each of our schools. We decided on the research question: 'Do defined roles in group work improve the learning outcome in KS2?' The children we are focusing our study on are both from Year 5 and 6, this means they will be at similar levels. The first school we are carrying out our lesson study in is a small school in a rural area, this is an amalgamation of two schools. The second school is large and situated in the city centre, roughly 90% of pupils are from ethnic minority backgrounds (Estyn, 2016). In my class, collaborative learning was a key component of teaching and the use of talk partners was often used. I discussed this with my research partner and we want to improve learning

outcomes for group work in mixed abilities. This will allow all group members to equally help each other and for individual's strengths to show.

Relevant Literature

After delving further into this field and researching collaborative learning, it was found that there has been much research surrounding the topic of group work in the primary school. Key information surrounding this debate can be found in many books, journal articles, government documents and online material. One author stated how group work was very important as it included the vital skill of learning how to properly interact with others (Baines, *et al.*, 2009). Baines, *et al.* (2009) expresses the opinion that the skills needed for successful group work are often taken for granted. Children are taught how to behave appropriately but are lacking occasions where they can learn how to work in a team (Baines, *et al.*, 2009). This emphasises the importance of children gaining these social skills so that they can gain more from future opportunities (Baines, *et al.*, 2009). Moreover, this notion is agreed by many and it is apparent that the learning which takes place in our daily lives is mainly social (Reid, *et al.*, 1989).

Furthermore, using groups within the classroom allows for children to generate more collaborative ideas and they can learn from each other (Reid, *et al.*, 1989). Collaborative learning has become very significant and children can become more engaged than just learning through the teacher's instruction. It is a pedagogical practice which promotes social skills and learning across the curriculum (Gillies and Ashman, 2003: 50). Our research question was chosen because we wanted to find out how effective and engaged children became through group work as the literature suggests.

However, some children don't enjoy group work and this could mean it wastes time (Galton and Williamson, 1992). This is very significant as it is an approach which requires interaction between pupils, it won't work if they don't enjoy working socially. It is also

possible that some group members may not get on with each other and the teacher must be relied on to avoid these conflicts (Baines, *et al.*, 2009). Literature also demonstrated how group work could be a negative learning experience for some children or very difficult for teachers to get right. It is not possible to create an effective group environment just by arranging the furniture in the correct way (Reid, *et al.*, 1989). Gillies and Ashman (2003) support this view by explaining you cannot put children in groups and expect them to work together co-operatively. Nevertheless, if time is spent properly preparing the children for group work and explaining how they can learn a lot from each other, it will be very effective for their learning.

Learning doesn't always take place during group work and this is because of the teacher pedagogy (Baines, *et al.*, 2007). This author suggests that there is a lot of emphasis put on the teacher in order to make group work successful. It is the teaching styles and how the classroom is run that makes the difference. Collaborative learning might be very successful in one school but completely different in another and this is dependent on the teacher. Furthermore, it is also suggested that 'if the relationships between grouping size, interaction type and learning tasks are planned strategically then learning experiences will be more effective' (Blatchford, *et al.*, 2003: 2). Gillies and Ashman (2003) also place emphasis on the type of task. The task needs to be discovery and where the children must exchange ideas (Gillies and Ashman, 2003). This shows how important it is for a teacher to plan group work effectively for learning to take place.

It seems there is a major problem with current grouping strategies in primary schools, this is because there appears to be no specific demand for children to work together (Dunne and Bennett, 1994). This view shows how although children are being sat together in groups, they may not be all working together on the same task. Therefore, tasks and activities must be set appropriately so that children can work together to achieve the same learning outcome (Martin, 2007). The teacher must be responsible for creating activities which mean the children have to rely on each other (Martin, 2007). Martin (2007: 47) suggests this can

be done appropriately by giving members of the group a certain role to play, these must be 'complementary' and 'interconnected'. This allows children to have their own individual task which would be crucial to the group success (Martin, 2007). Additionally, the use of resources selected by the teacher can help to create a positive group environment which encourages collaborative learning. Thus, literature illustrates how vital the teacher's role is in creating successful group work within the primary school.

This literature has supported our research question by giving an insight into the positives and negatives of group work. It has been discussed how the teacher's role is very important in creating an environment that allows children to thrive when working collaboratively. The use of defined roles within group work has been suggested as being beneficial for success and to improve the learning outcome (Martin, 2007). However, collaborative learning can be difficult to achieve with primary children and the implications of this approach must be taken into account when planning activities.

Explanation of your Lesson Study Design.

The methodology used in lesson study research is a form of action research and this means that it has been carried out with knowledge of a need for improvement in a specific situation (Bell, 2010). Another reason for classifying lesson study as action research is because when the investigation finishes, the participants will continue to reflect and think of further ways to improve (Bell, 2010). Lesson study research methodology is 'a detailed study or examination of the practice of teaching' (Department of Education, 2009: 5). It involves a group of teachers working together in order to plan, observe and evaluate the learning in 'research lessons' (Dudley, 2014). There are a number of benefits for using Lesson Study and some of these include: bringing together shared ideas, it appreciates long-term learning and also allows teachers to be innovative and improve (Lewis and Hurd, 2011).

The first step in our research was to decide on the intended focus of the lesson study with a partner and collaboratively plan a lesson for this focus. This research lesson is intended to improve the learning of the pupils and develop ways of teaching, it can be very specific (Dudley, 2015). We worked as a pair when carrying out this lesson study and so taught the lesson twice in order to observe the learning. In the first lesson taught, one member became the teacher and the other observed the findings (Dudley, 2015). The observer made notes and focused on a specific group's engagement during the lesson rather than the teacher (Dudley, 2015). Research suggests that this approach has been very beneficial because it allows insight into pupils' thinking and cognition (Dudley, 2015). Following the first lesson, we will reflect together to evaluate its effectiveness and decide on what to improve for the second lesson (Department of Education, 2009).

The methods of data collection:

Non –participant observation:

The non-participant observations were captured using an observation schedule constructed by the researchers. The benefits of using non-participant observation was that the observer could fully focus on writing accurate notes without having any additional responsibilities (Papatheodorou and Luff, 2012). It is a structured observation because it is specific to what we want to collect. We decided to measure the level of involvement of each child in one group every five minutes and record the findings. Our observation schedule was constructed using the 'Leuven Scale of Involvement' because we wanted to see how the defined roles within the groups affected their involvement levels. This is a 5-point rating system, level one being the lowest level and level five meaning there is high levels of involvement with full concentration (Laeyens and Heylen, 2003). Using numbers within our observation schedule meant that the data collected was towards a quantitative type (Denscombe, 2010). This scale is very useful because when a child is showing high involvement, this means deep-level-learning is taking place (Laeyens and Heylen, 2003). We also made a space for any 'additional comments' about the pupils. This allowed the

observer to write any extra information that they had witnessed about how the children were taking part within the group environment.

Furthermore, using an observation schedule ensured we eradicated any bias from the observer and made the data more reliable (Denscombe, 2010). We used identical observation schedules so that we were looking for the same things and keeping our findings consistent (Denscombe, 2010). We expected the data to show that when the children participated in group work with defined roles, they were more involved in the activity. We analysed the data by putting the levels of involvement into line graph to see the overall change throughout each lesson. We compared the two tables and graphs for each research lesson and reflected on the results. However, Laevers and Heylen (2003) recognised how a more competent teacher would result in higher levels of involvement. This suggests how important the role of the teacher is with regards to the children's learning.

Focus group interview:

After each research lesson we held a focus group interview with three children who had taken part in the lesson. The focus group interview was used because it allowed the researcher to see if there were shared views in relation to the topic and the attitudes towards defined roles in group work (Denscombe, 2010). The focus group were chosen as a sample because it would be possible to gain the information we needed without interviewing all of the class (Denscombe, 2010). Using exploratory samples provides the researcher with a useful insight into the topic and with important information (Denscombe, 2010). It is a form of qualitative data which we recorded on our question sheet (see appendix A) and analysed in order to find common themes between the lessons (Breen, 2006). These are ideally taken with between 6-9 people but because our research project was 'small-scale' we used three children (Denscombe, 2010). We thought it was valuable information from Denscombe (2010) that using more than three pupils would have been time consuming, especially with younger children.

However, it is worthy to note that using qualitative data can be 'messy' (Breen, 2006). There are many disadvantage to consider such as: reliability of perceptions, difficulties stopping participants copying an out-spoken participant and also it can be hard to get everyone together at the same time (Breen, 2006).

Field notes:

My field notes were used to complement the structured observational data (Denscombe 2010). The observer would make notes to describe the context of the group setting and also to record any other impressions about the behaviour of the children being observed (Galton *et al.* 1980 cited in Denscombe, 2010). The data we intended to collect was anything to do with the behaviour of the children, their discussion during the activity or any unpredictable occurrences that took place such as if a child left the group for a period of time. This type of data is qualitative because it takes the form of words and observations of interactions between the children (Denscombe, 2010). This is an acceptable form of data if observer bias is avoided (Simpson and Tuson, 2003).

Reflection:

After each research lesson we reflected together in order to evaluate the lesson's successes and what could be improved. The reflections were captured using the Brookfield method of reflection. 'Brookfield proposes four lenses that can be engaged by teachers in a process of critical reflection' (Brookfield 1995 cited in Miller, 2010: 1). The four parts to reflection were what we attempted to achieve when carrying out our Lesson Study. These included: the autobiographical, the students' eyes, our colleagues' experiences and theoretical literature (Brookfield 1995 cited in Miller, 2010). Brookfield (2017) suggested how knowing how the student's experience the learning can really improve their learning outcomes. We will reflect on our focus group interviews to understand how they found the lesson and what we could improve based on the children's opinions. However, we must understand that pupils who are allowed to provide their views anonymously would be more likely to

give a truthful answer (Brookfield, 2017). Therefore, interview answers must be treated with caution as we cannot be certain that the responses provide the full truth.

Ethical Considerations

There are ethical considerations to take into account when carrying out an educational research project. I created an ethics form which was approved in order to minimise any harm or risk to participants. (ETHICS form reference). I read the university guidelines on ethical research; UWTSD research and BERA ethical guidelines on ethical research (2011). BERA (2011) understands the need for research in order to improve certain teaching strategies but this must be done with consideration for the ethical guidelines. I have followed procedures to ensure my research project follows these guidelines and there is no risk to the participants (BERA, 2011). We created a child-friendly assent form so that all participants could understand and agree to take part before the research went underway (BERA, 2011). We understood that if the children wanted to withdraw from the process, they were given the right to do this at any time (BERA, 2011). The data we collected for our project will be kept 'confidential' and 'anonymous', no names will be used at any point (BERA, 2011: 7).

Furthermore, the United Nations on Rights of the Child (1989) has been recognised when carrying out this research project. The best interests of the child must always be the main concern and also they should be allowed to express their views freely (UNCRC, 1989). Another important point to make would be that I followed the requirements in regards to data protection set by the Data Protection Act (1998) (Cited by BERA, 2011). The research project would not involve storing any personal or sensitive data. All data used in the project will be stored using password protected devices and only shared between the two researchers.

Lesson Study 1 Analysis

This lesson was successful and the majority of the pupils achieved the intended learning outcome. I observed how important the use of 'defined roles' were on group work within this setting but realised how much input the teacher needed to give. Schools tend to be unpredictable places but my partner was faced with certain difficulties which could have affected the lesson's outcomes. It would be important to take these into account before reaching a conclusion. There was an extra observer present during the lesson which could have affected the children's behaviour and 'School A' was an amalgamation of two schools and so my partner had not yet taught here or met some of the pupils.

The focus of the lesson was to learn about having a healthy diet and to design a balanced meal. This started with a picture sorting activity involving pictures of unhealthy and healthy food. This encouraged discussion and also thinking which activated their prior knowledge and skills (DCELLS, 2010). The children were all very engaged from the start but I noticed how only a select number were answering the questions. The use of lollypop sticks for questioning would have ensured more children were paying attention and given a chance to participate. The use of questioning after their picture sorting activity could have included more open-ended questions, such as using 'why' do you think that particular food belongs to that food group. This would have encouraged deeper thinking and improved their learning further. Next, a video was played to give the children a visual aid about healthy eating. However, due to technical problems the video would not play with sound and this caused a problem to the flow of the lesson. The video worked in the end and it proved to be very popular with the children's engagement. PowerPoint was a useful visual tool to show pictures and BBC video helped engage pupils. In our focus group interview at the end of the lesson, they stated how they remembered facts from the video and enjoyed watching it.

The main activity of the lesson involved bringing in our research question for using 'defined roles' in group work. The activity of creating a poster for a healthy meal was explained to the children as well as the success criteria. We let the groups have the option of deciding what meal their group wanted to do. One of the requirements included working effectively as a group, this was useful as the children knew the expectations. Time was given for the children to decide for themselves who was taking responsibility for which role. We had anticipated that this could lead to arguments but the children sorted this very efficiently.

Using the Leuven Scale of involvement (see appendix B), I observed one group in particular every five minutes. I found the pupil's involvement started quite low, increased throughout the middle and then dropped towards the end of the lesson. After discussion with the focus group interview it seemed that it took the pupil's a long time to start the activity and to decide on what meal they wanted to do. Observations of this group showed how not all members stuck to their role. The 'leader' did not suit this role and for a long period of time did not engage with the task. Eventually, the leader helped with the researcher on the computer to find out what to put on their poster. They had to use their prior knowledge and ICT to find facts for the poster. The role of the researcher was to provide these facts. This helped achieve the lesson's goal of working successfully as a group because they had to share facts collaboratively.

Furthermore, the children did achieve the lesson goal by creating a well-researched poster that all members of the group had contributed to. There are some examples of the work below:



Figure 1: Author's own photographs of the work produced in first research lesson.

The end of the lesson involved learning from each other – at the end one group presented their work to the class. This helped children to see an example and discover more facts they might not have put themselves. The lesson was very much pupil-led and they needed to take responsibility for their own work.

After reflecting with my partner on this lesson, we would improve the lesson in a number of ways (See appendix C). We would make it clearer what was required on the posters and alter the success criteria so that the children could understand. This should make the group work more efficient as the children will all know what to write and all have similar information. Group work is a skill and at this age it requires a lot of support from the teacher. To make it more successful, the pupils will need further input and guidance in order to complete the task. Next lesson, the teacher will decide on the 'leader' role and they will decide the rest. We will also tell each group prior to starting the task which meal they will be creating. This will ensure that the group work is more focused and no time is wasted. The role of the 'reporter' needs to be made clearer so that the child isn't waiting until the end to have a part. This was also noted in our focus group interview and one child thought this should be a 'helper' instead.

We learnt that we need to be more efficient with time management. This is because only one group got to present their work to the rest of the class. We will make sure we leave enough time to allow presentations and 2 stars and a wish for the posters. Our observation schedule will have to be more thorough under the time restraints with detailed comments about the group activity.

We have found out that the children really enjoy working in a group environment but also find it quite difficult to fulfill. In the focus group interview 'Child 3' suggested how deciding roles was difficult and one member of the group became upset by this (see Appendix D). We think that the children achieved the lesson goals through collaborative learning but did need a lot of guidance from the teacher. At this age they cannot be expected to work successfully with group roles the first time.

Lesson Study 2 Analysis

The lesson's goal was to work successfully as a group to produce a poster of a healthy, balanced meal. (See Appendix, E). Most of the children reached the skill of the lesson but whether they worked to their roles appropriately was questionable. The lesson started with the sorting of unhealthy and healthy pictures which generated group discussion and allowed access to prior knowledge. I found this class had very limited prior knowledge on the food groups and so I had to explain these with the use of the PowerPoint. Furthermore, when sorting out the pictures they were engaged but wanted to ask the teacher for help rather than discussing with peers. Deeper thinking and collaborative work was needed to move this task forwards.

'High quality questions lead to high quality talk' (DCELLS, 2010: 16). This quote from the Welsh Assembly Government (2010) was something I strived towards in this lesson and I asked much more open-ended questions to encourage thinking. Questions were asked such as 'Why do you think vegetables are good for you?' instead of just accepting that the children thought they were. The use of talk partners to get the children to discuss what they thought was also beneficial to their learning. This helped to get them prepared to work on the main activity as a group.

The main activity was started by explaining the task and also the roles that the children would be taking. We found that the 'reporter role' was difficult for the children to understand previously and so I made it very clear what this would entail. I stated their job would be to make notes on how their group worked, to help anyone that needed it and also to report back at the end to the rest of the class. This worked much better as they knew they could help with other roles as well. I showed a PowerPoint which had a slide expressing exactly what was needed on the poster and left this on the screen for the children to see. This included examples of work from the previous lesson and engaged the children to give them ideas.

The main activity worked well with the teacher giving out the leader roles and also giving each group a set meal they had to design. This meant they had less to plan as a group and could focus on getting the activity started quicker. However, evidence from the observed group showed that the nominated leader wanted to swap roles as it was too much pressure (See appendix G). Once the roles had been decided, it was apparent from observational notes that there was good discussion about how to start the poster. One example being: “we are going to draw inside and write information outside” (See appendix G).

I witnessed a lot of interesting talk in from the groups when I was walking around the classroom. One group in particular had taken to the roles well, the leader was telling the researcher to find out certain facts that they needed for the poster. They were all working as a team to transfer information and get the work completed. The ‘maker’ was drawing and designing the poster and enjoying doing so. It is worthy to note how engaged the children were when carrying out research on the Chromebooks. This group wanted to search for the facts and find out more about ‘carbohydrates’ which they hadn’t heard of before. The ‘scribe’ wrote down notes in a format suitable for everyone to read and the ‘reporter’ was taking notes on how the group was working.

Mixed ability groups worked well as there were a lot of New to English in the class. This meant they could help each other and those confident with English could take the role of the ‘scribe’. The children behaved well to begin with but this depleted throughout the lesson. The sizes of the groups could have been a problem here because they were larger than our previous research lesson. However, the children did achieve the lesson goal and there is evidence from our focus group interview of this (See appendix E). Child 2 said ‘the lesson is to share ideas and work in groups’, this suggests how they understood the necessity of sharing information during this task.

I ensured that there was enough time for the pupils to share with the class their posters and to explain how they worked as a team. The children achieved the lesson goal here by showing the class how they worked in a group. Collaborative learning is very important and learning from each other is better than simply listening to the teacher.

We reflected on this lesson together and evaluated its successes (See appendix F). The lesson could be improved and revised for the future by having less roles so that it is easier for the children to follow. The role of the 'reporter' and 'scribe' could have been confusing for younger children and therefore we discussed having a helper, researcher, maker and leader instead. Another aspect worthy of consideration would be the talk within the groups. There needs to be further encouragement with peer discussion, we could provide the learners with sentence starters for talk (DCELLS, 2010).

Moreover, we should have planned some strategies for noise reduction (DCELLS, 2010). The groups were very large and we discussed how having smaller groups would have been easier for the children. This would have meant more focused roles and responsibility. We also could have used more positive reinforcement to praise good group work. This would mean the learners understood what the teacher wanted of them.

We learnt that working collaboratively with lots of different roles is difficult for primary children. It is hard for the children to achieve if they haven't had much practise working as a group. Therefore, we would like the opportunity to use this approach during our NQT role and track the difference it makes on the pupils. We gathered useful evidence to share with others from our research methods. However, it was difficult to record all of our observations in the time frame of the lesson. There were a lot of changes with the involvement of the pupils throughout the lesson and it was hard to track this every five minutes. It also would've been beneficial to make observation notes on each role within the group instead of merely the level they were. This would've given us a greater insight into which roles were more successful.

Discussion of research findings in relation to related literature and research

This research project found that when using 'defined roles' in collaborative learning, the learning outcome did improve. It gave each member of the group a purpose and apparent engagement was witnessed in both classroom settings. However, it was not easy for the children to do this and it did take a while for them to understand their roles before starting the task. It would be necessary to use this approach regularly within the classroom to achieve a better learning outcome and more effective collaboration between the pupils.

Reid, *et al.* (1989) backs up this view by suggesting how it is not easy to create a successful group environment simply by arranging the furniture. In our first research lesson we arranged the furniture appropriately for group work but the teacher still had to give a lot of support to the children. It took them a long time to get settled and did need reminding on what the lesson outcome was. Moreover, Galton and Williamson (1992) state that some children don't enjoy group work and this could mean it wastes time for them. This was apparent in one group in the second research lesson, a child would not engage and did not want to contribute with discussion. Pupils who are also shy or argumentative might not gain the full benefits of collaborative learning. The teacher will have to support and encourage these children in order to improve their learning outcome.

Despite this, Gillies and Ashman (2003: 50) do state how 'co-operative learning is a pedagogical practice that promotes socialization and learning across different curriculum areas and classroom settings'. Observations from our lessons showed the children working together whilst using different roles in order to contribute to the same activity. There was lots of group discussion and the sharing of ideas witnessed which would improve social skills for the children. However, it is important that the children engage with necessary training in order to achieve their full potential in group work (Gillies and Ashman, 2003). This is an important point to make in relation to our research lessons. We felt that even

with the defined roles, the children had not had the required experience in group work to excel. If the children had the training and use of defined roles we feel the learning outcome would really improve.

The methods we used to gather our data can be analysed as having both strengths and limitations. Using the focus group interview was beneficial as it allowed us to see if there were shared views in relation to the topic and what the children's attitudes were towards defined roles in group work (Denscombe, 2010). Nonetheless, it must be recognised that qualitative data obtained from focus group interviews can have disadvantages. The researcher must question the reliability of the data. In one of our interviews, it was difficult to judge whether the views were copied from the other participants or their own. This is listed as a disadvantage in a 'Practical Guide to Focus-Group Research' (Breen, 2006).

Moreover, the observation-schedule we used which featured the Leuven Scale of Involvement was very beneficial in giving detailed notes on the pupils. It was useful to have a commentary of one particular group over the course of the lesson, this allowed for closer analysis after the lesson. A limitation we faced with this approach was that the children found it difficult to not ask the observer questions. Papatheodorou and Luff (2012) suggest how non-participant observation is meant to allow the observer to fully focus on writing accurate notes but we found this difficult as the children want us to be involved.

Conclusion

To conclude this research, the methods used to collect data and the number of lesson studies carried out was not enough to come to a full, conclusive answer on our question. It is visible from our observations that having 'defined roles' gives the children a structure to their group and more focus. However, the involvement level has not been consistently high for all of the roles and therefore we would need to change these in future practise. It was evident how important group work was for developing social skills and learning how to work successfully as a team. The defined roles allowed the children to have their own individual part to play but also were working together to achieve the same outcome.

The methods to collect the data had a number of limitations which we believe had a negative impact on our findings. They weren't fully reliable and therefore you could not base your conclusions on this data alone. The main concern with regards to our observation notes would be the issue of bias (Simpson and Tuson, 2003). Although we had a strict observation schedule, you cannot guarantee that each other's interpretations of events are correct. More prior discussion of what we were looking for in regards to involvement would be necessary to make this more efficient.

In the same way our data from the focus group interview had both its strengths and limitations. However, I believe this data provided us with a very useful insight into how the children experienced the learning. They explained what they thought about having roles, what problems they were faced with and what they thought could improve the learning. Focus group interviews can therefore give the researcher an insight into what the participants thought and also why they had these views (Denscombe, 2010). Denscombe (2010) states how it essential to provide a calm environment for the participants and we successfully did this. We started by asking the children how their day had been in order to make them feel at ease. This meant our answers were more honest instead of feeling pressurised.

The lesson study approach was useful as it allowed me to reflect on a lesson with a partner. This allows for teachers to share opinions and work collaboratively to enhance pupils' learning (Dudley, 2015). In particular, it was very useful in refining a particular lesson which we can both use again. The lesson study approach meant that we didn't need to be experienced teachers or have advanced technology (Dudley, 2015). It was a simple approach which I hope I can use again in the future.

Conversely, it must be considered that this method does not give a whole perspective. We did find that having two lessons did limit the data collected. We could not strongly conclude our question as to whether defined roles in collaborative learning improve the learning outcome because there was not enough data for this. We feel that to fully examine the use of defined roles, you would have to use them over a longer period of time. I hope to continue to use defined roles in group work during my NQT year and to see if involvement improves as the pupils get used to having these roles.

After reflection, this research project has taught me the importance of 'taking risks' and changes to the way you teach (Dudley, 2015). It seems that no class or pupils will be the same and the use of one approach may work for one class but not another. This is shown to be true after analysing data from our two research lessons in different schools. We could not expect fair results if the two schools were entirely different in size and location. Therefore, the use of the lesson study approach would be more beneficial if used in the same school as you can improve teaching specifically for those pupils.

In my next school experience I would like to continue to use collaborative learning and roles within these group work exercises. This gives more responsibility to each individual and stops those who are more vocal taking over the group work. However, expectations must be clearly stated and group work must be practised first. We have realised how important the group size, task and types of roles are for primary children. If I

did this lesson again I would use less roles, simple titles and smaller groups. I would make sure there was enough time to present group work and for the pupils to reflect on their learning.

Another important point on reflection would be that younger children need help with exploring talk (DCELLS, 2010). DCELLS (2010: 14) suggested the use of sentence starters such as 'I think, I agree, because' and I would like to promote the use of such language in my future class. This would allow the children to improve their social skills, thus improving their learning outcome (DCELLS, 2010).

Recommendations

This research has helped move forward my reflective skills, teaching and knowledge on this topic. I am excited by the prospect of using these new skills in my future teaching practise. If I was to use lesson study again I would try to do it with a more experienced teacher. Our results, as two student teachers, would not be as valuable as with two experienced teachers. Dudley (2010) suggests how teachers with less experience can learn from the experienced. This would be something I would find very beneficial as you can share good practice and gain experience. Moreover, the use more research lessons would give more reliable data and also having these lessons in the same school.

The findings of this research project show how important group work is for improving social skills in the primary school (Gillies and Ashman, 2003). However, we observed how difficult it was for the children to make decisions, discuss information and complete the task together. Giving the children defined roles did improve focus and gave them direction but more practise with this is needed.

To summarise, the children needed less roles with more simple titles, they need to practise using these roles within normal lessons involving group work and also smaller

groups would be beneficial. The defined roles did improve involvement but the number of lesson studies we carried out was not enough to gain efficient data.

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Appendices

Appendix A: Page 1 of our focus group interview questions.

Focus group interview

Introduction questions to encourage a relaxed environment, ask children how their day has been etc.

Questions	Answers
What 3 things have you learnt today? Can you tell me how?	Child 1
	Child 2
	Child 3
What have you enjoyed most about this activity? What makes you say this?	Child 1
	Child 2
	Child 3

Appendix B: Observation of group work using Leuven Scale of Involvement.

Level of involvement	Child 1 (reporter) Had to go out.	Child 2 (researcher)	Child 3 (scribe)	Child 4 (maker)	Child 5 (leader)
1- Little activity					
2- Intermittent activity					
3- More or less consistent activity		x			x
4- Consistent and sometimes intense activity			x	x	
5- Continuous intense activity					
Comment Researcher is typing and looking engaged. Occasionally is distracted, looks away at times. Scribe – Looking at laptop, really engaged, discussing what is good for you. Writing notes and helping the maker. Leader – Not taking role on but is helping researcher. Is engaged in task and looking up healthy meals. ‘Girls, we can have jacket potatoe, cheese and beans’. Is giving ideas for group but not making sure all are participating correctly. Maker ‘C – we’re working together!’ Messing with pencil. Then both maker and scribe are really engaged and motivated to complete the task.					

Appendix C: Annotations on lesson plan after first research lesson.

Resources: Large sheets of paper, Pens, Chromebooks, laptops, iPad, Badges for group roles, Websites to use, Pictures of foods to sort.		
Key websites http://easyscienceforkids.com/what-is-healthy-food-for-your-body/ http://www.bbc.co.uk/bitesize/ks2/science/living_things/health_growth/read/1/ http://www.bbc.co.uk/northernireland/schools/4_11/uployou/healthy/foodfacts.shtml		
↑ put links on google classroom		
Time	Session activities, organisation and management	Key questions & Assessment for Learning opportunities
5 mins	Introduction Explain the purpose of today's research lesson and gain children's informed assent ✓ Explain the skill for today – we are learning about how to have a healthy lifestyle based on our diet. Give the groups food packaging or pictures of food and ask them to put them into groups (do not specify how many of which groups) Discuss their groupings. ✓ This will allow us to find out what they already know. ✓ Show video from Bitesize 'Five types of food'. https://www.bbc.co.uk/education/clips/cvp76sg ✓ Children to discuss the video 'think pair share'	Prior knowledge evident from sorting activity Questioning: What do we mean by healthy lifestyle? Why do you say this? What is a healthy diet? Why have you chosen to group your food in this way?
45 mins	Main activity As a class discuss what makes a varied/balanced diet and why we need different types of food (E.g. bread/potatoes for energy, meat for growth.) <i>Stress balanced and proportions (maths link)</i> Explain that today we will be working in groups, each group member will have a certain role to play. Give out badges/labels and tell children their responsibilities for each team member. They must stick to these roles and work as a team to all contribute to the activity. <i>Give roles - nominate reader to other roles</i> Activity: Design and describe a poster for a healthy meal in groups. Give breakfast, lunch or dinner. <i>Give the group the meal to do to save time, leader has final say.</i> Support: Provide a list of websites to guide research. For further support provide individuals with a fact sheet and visual aids. <i>1:1 to support ALN to complete their roles</i> <i>won't need with group work as much</i> Extension: online interactive activity to engage children and further their understanding of a healthy diet- http://www.foodafactoflife.org.uk/CreatorActivity.aspx?siteId=17&sectionId=93&contentId=620 http://www.bbc.co.uk/bitesize/ks2/science/living_things/health_growth/play/	Questioning: What is a balanced diet? Why do we need different types of food? What is the importance of healthy foods? What are the benefits of healthy eating? What is a healthy balanced diet? Children to 'scaffold' each other's learning working in mixed ability groups. Teacher to support group work
7 mins	Plenary Recap with children that there are 5 main food groups Ask the groups to share and Compare research with peers; their healthy meals and explain why they are an example of a balanced and varied meal. Hold up and show their posters to the rest of the class. Emphasise learning from each other. the reporter of the group should express the main ideas. <i>more input from reporter on presentation</i> Self-assess and peer assess against success criteria using 2 stars and a wish <i>Groups reflect on what worked well and what didn't</i> Group interview with 3 pupils	Ask children to summarise what they have learnt to the class. Self-assess and peer assess through 2 stars and a wish

* rewards

Appendix D – Focus Group Interview 1

Focus group interview

Introduction questions to encourage a relaxed environment, ask children how their day has been etc.

Questions	Answers
What 3 things have you learnt today? Can you tell me how?	Child 1 A. Healthy lifestyle you'll live longer. → & All of it except friends
	Child 2 Fat 60% of food is carbs. → From video you showed ↳ Visual easy to learn from.
	Child 3 Beans are actually quite healthy. Dad said there was sugar. P.e chart. Beans on picture.
What have you enjoyed most about this activity? What makes you say this? Groups lost members/roles. Had to fit in what they lost. One was distracting.	Child 1 Group but ran out of time. Not enough colour. One person from group had to leave.
	Child 2 Enjoyed working as a group to complete task.
	Child 3 Enjoyed colouring.

What has been the most difficult part of this activity? What makes you say this? How could this have been overcome?	Child 1 finishing it. Didn't have enough time was a rush. better predecide what doing on poster before (teacher give this) Child 2 Deciding how to start was difficult this took a long time. time to decide this before work. Child 3 deciding roles was difficult friend with autism became upset better if teacher decided roles, but this might upset people
What was your role in the group? Did you enjoy having this role? If we did this lesson again, would you prefer a different role? Reporter and Scribe The same? needed practice time or time to discuss. Give 5 mins to decide, but if not decide teacher decide. I was like a utility person	Child 1 Scribe I liked writing but did help with making could do with a helper role in the group. difficult with team members leaving Child 2 maker - I liked colouring and getting to design it but other people helped too. found it difficult with no leader + reporter Child 3 argument over roles Leader enjoyed being leader, helping out others with their role others struggling with tasks, role
Do you think having roles within your group helped with the activity? How?	yes roles helped. would like to decide what the roles could be

If no roles could give tips to allocate own roles but things to consider for group leader to hand out.

Did you work better as a team? Than on own	Rather do job on own so I could have ~~own~~ all roles know own skills, discuss with group to discuss but make own poster. - Don't usually work in groups so not used to it.
Did all children carry out their roles successfully? Can you give an example?	Child 1 no - People didn't stick to roles. Child 2 no - 1 pupil did own thing (ASD) Child 3 yes everyone eventually did what they were meant to do by the end. got used to it.
What would you do to make this activity better? What makes you say this?	Child 1 Longer time. add more videos bbc websites Child 2 Have roles decided give a fact sheet

Science for kids useful
and usual.

Appendix E – Focus group interview for the second research lesson.

Focus group interview

Introduction questions to encourage a relaxed environment, ask children how their day has been etc.

Questions	Answers
What 3 things have you learnt today? Can you tell me how?	Child 1 Eat less chocolate and more healthy food learnt from teacher <i>Researching</i>
	Child 2 The lesson is to share ideas, working groups and learnt from teacher and each other + comebooks. <i>Leader</i>
	Child 3 To eat a little bit unhealthy and more healthy learnt from everything <i>Scrubie</i>
What have you enjoyed most about this activity? What makes you say this?	Child 1 enjoyed helping my group and researching
	Child 2 enjoyed sharing ideas, working in a group and researching
	Child 3 enjoyed helping my group

What has been the most difficult part of this activity? What makes you say this? How could this have been overcome?	Child 1 Nothing hard people snatching the crimebook and arguing
	Child 2 Nothing hard arguments in group The task was suitable
	Child 3 Standing at the front.
What was your role in the group? Did you enjoy having this role? If we did this lesson again, would you prefer a different role?	Child 1 Researcher. Enjoyed this role because I got to use the crime book. Next time I would want to be reporter to report on the group.
	Child 2 Leader. Enjoyed this role. I like helping out and sorting stuff out. Would want this role again. ~~Reporter has to wait until the end so waiting around.~~
	Child 3 Scribe - enjoyed this role, next time I would like the reporter Don't want to be leader.
Do you think having roles within your group helped with the activity? How?	Yes - because if there was no roles people would keep stealing jobs. The badges were good.

Did you work better as a team?	yes helped because people put Their mind into Their role They participated and helped out.
	yes because some people didnt want to do other Things. Decided to do what they wanted.
Did all children carry out their roles successfully? Can you give an example?	Child 1 yes but sometimes other people wanted by role to research on The crime book (typing random things)
	Child 2 me as The leader helped. The researcher was good and The scuber again Reporter already had good ideas (Reporter and scube swaped roles to get a go at both)
	Child 3 I dont know because The reporter didnt do anything. Everyone else did.
What would you do to make this activity better? What makes you say this?	Child 1 all good. more reporters.
	Child 2 More roles: helper Bit more time 5 mins more amazing

Appendix F – ARC reflection for second research lesson.

Assisted Reflective Conclusions (ARC) Model

Date: 27.03.2018

Critical incident (focus): To design and describe a healthy meal taking consideration for the main food groups. Our second TET lesson.

<i>Experience</i>	
Feelings “What are your feelings regarding the experience?”	The lesson went well and we gathered all of the information that we needed. I didn’t realise how much the children wanted to know about ‘healthy eating’ and many didn’t know all of the food groups prior to this lesson. All groups reached the skill of being able to design and describe a healthy meal but whether they all worked equally to their roles was questionable.
Remember and Understand “Can you list the aspects of the learning experience that went well?” “What were the elements of the learning experience that were disappointing?”	• The sorting activity worked well to begin as this got children engaged and thinking about what they already knew. It allowed the children to effectively communicate with their groups and debate why different foods were healthy or unhealthy. We then moved to discuss this as a whole class where I tried to use open-ended questions. • Not all children put their hands up to answer questions and so discussion as a whole class was limited. • Some children didn’t engage fully in their groups. • It took a long time for the children to start their group work and activities. • I added a slide to our PowerPoint to explain what was needed on their posters. This helped the children as when we did this lesson previously the children didn’t know to write facts down on their posters. • Having the websites on google classroom saved the children time as they didn’t have to type the website in the search bar. • Worked well to give out the leaders from the teacher as this saved the children time deciding.
Evaluate and analyse “What will you keep the same to ensure effective teaching and learning in the future?” “What was the cause of the most important disappointing element?”	• I will keep using roles within group work but perhaps keep to more simple titles. • Keep using group discussion and collaborative learning within the classroom. • Allow children to present their work to the class more regularly as this will help them improve speaking and listening skills. • The cause of the most disappointing element would be that some children didn’t engage because they perhaps didn’t understand their role or like engaging in group work.
Conclusions and actions “What are your possible solutions to the disappointing issues identified?” “What will you do next?”	• Keep to simple roles within group work in the primary school and have smaller groups so everyone has to contribute. These roles could include: maker, leader, helper and researcher. The ‘reporter’ role confused a lot of children and would work better for older children. • I will keep researching collaborative learning and during my next placement/NQT focus on putting this into practise. Make sure children get opportunities to present their work and ensure they listen to each other. Group work is difficult but if I regularly integrate it into my lessons the children should improve at this skill.
<i>Transformed experience</i>	

Appendix G: Observation Schedule for second lesson – Leuven Scale of Involvement.

Level of involvement	Child 1 Researcher	Child 2 Leader	Child 3 Scribe	Child 4 Maker	Child 5 Reporter
1- Little activity					x
2- Intermittent activity					
3- More or less consistent activity		x		x	
4- Consistent and sometimes intense activity	x		x		
5- Continuous intense activity					
Comment Start time 1:50 Group gave all responsibility to the leader, this was too much pressure for the leader and she decided she didn't want to be a leader any more. Group arguing about roles well into the beginning of work one group member refused every role Other group members working well to decide on the layout of their poster					

Level of involvement	Child 1 Researcher	Child 2 Leader	Child 3 Scribe	Child 4 Maker	Child 5 Reporter
1- Little activity					
2- Intermittent activity					x
3- More or less consistent activity		x			
4- Consistent and sometimes intense activity	x		x	x	
5- Continuous intense activity					
Comment Group discussion good on layout of poster “we going to draw inside and write information outside” Group worked hard to try and engage group member who did not want to participate. “What would we have for dinner” “Um I would have fish” Teacher: what does fish do for our body?					

Level of involvement	Child 1 Researcher	Child 2 Leader	Child 3 Scribe	Child 4 Maker	Child 5 Reporter
1- Little activity					
2- Intermittent activity	x				
3- More or less consistent activity		x			X Working on own
4- Consistent and sometimes intense activity					
5- Continuous intense activity			x	x	
Comment Children making the poster working well together, leader maker and scribe					

Level of involvement	Child 1 Researcher	Child 2 Leader	Child 3 Scribe	Child 4 Maker	Child 5 Reporter
1- Little activity		x			x
2- Intermittent activity					
3- More or less consistent activity	x				
4- Consistent and sometimes intense activity					
5- Continuous intense activity			x	x	
Comment Leader needed prompting to come back to group. Engagement improved then “ we have 10 minutes left, what we doing” Reasearcher finding good facts for the group “look look what I have found” That’s good look write what meat does for us”					

Level of involvement	Child 1 Researcher	Child 2 Leader	Child 3 Scribe	Child 4 Maker	Child 5 Reporter
1- Little activity					x
2- Intermittent activity					
3- More or less consistent activity	x				
4- Consistent and sometimes intense activity				x	
5- Continuous intense activity		x	x		
Comment “why is dairy healthy? Research it” Maker helping researcher to find the relevant information. Leader and scribe helping colouring					

Level of involvement	Child 1 Researcher	Child 2 Leader	Child 3 Scribe	Child 4 Maker	Child 5 Reporter
1- Little activity					
2- Intermittent activity					
3- More or less consistent activity					x
4- Consistent and sometimes intense activity	x	x	x	x	
5- Continuous intense activity					
Comment All group engaged in activity now that there is not much time left however not doing jobs assigned to them. All appear happy and engaged					

Appendix E: Lesson plan for lesson 2.

Learning Objective: To design and describe a healthy meal taking consideration for the main food groups.		Success Criteria: * I can work effectively as a group to design a healthy meal. ** I can work effectively in a group to research and design a healthy meal, explaining why I chose certain food types. *** I can work effectively with my given role to support my group and produce a detailed and well researched healthy meal including the main food groups.	
Skill: Classify food by group and understand the characteristics of a broad range of ingredients, including their nutritional, functional and sensory properties, e.g. meat, fish, fruit, vegetables.			
Links to previous learning: Healthy eating, taking responsibility for keeping fit and healthy.			
Curriculum coverage (range, skills)			
Personal and Social Development: - Contribute to class discussions and take part in debates. - To understand the features and physical and emotional benefits of a healthy lifestyle, e.g. food and fitness.			
Design Technology: - Use a range of information sources to generate ideas for products. - Classify food by commodity/group and understand the characteristics of a broad range of ingredients, including their nutritional, functional and sensory properties, e.g. meat, fish, fruit, vegetables.			
ICT: - Learners develop their ICT skills across the curriculum by finding, developing, creating and presenting information and ideas.			
Literacy (LNF) Oracy: - Listen to others, asking questions and responding to both the content and the speakers' viewpoints. - Build on and develop the ideas of others in group discussions, e.g. by asking questions to explore further, offering more ideas. Writing: - Use appropriate vocabulary, including subject-specific words and phrases		Numeracy (LNF)	
DCF: Find relevant information using different keywords and search techniques.	Thinking: - Build on existing knowledge. - Group discussion, begin to experiment with own and others' ideas.	ESDGC: - Developing knowledge of living things – healthy eating. - Develop awareness 6	YCC: Use incidental Welsh Dewch i Mewn Eisteddwch Dim Siarad Barod?
Key vocabulary (English/Welsh): Healthy living, diet, food groups, protein, carbohydrates, fats, minerals, vitamins.			
Resources: Large sheets of paper, Pens, Chromebooks, Badges for group roles, Websites to use, Pictures of foods to sort. http://easyscienceforkids.com/what-is-healthy-food-for-your-body/ http://www.bbc.co.uk/bitesize/ks2/science/living_things/health_growth/read/1/ http://www.bbc.co.uk/northernireland/schools/4_11/uptoyou/healthy/foodfacts.shtml Put websites on Google Classroom.			
<u>Time</u> 45 Mins	<u>Session activities, organisation and management</u>		<u>Key questions & Assessment for Learning opportunities</u>
Intro 8 mins	Talk about Assent form and gaining consent. Explain the skill for today – we are learning about how to have a healthy lifestyle based on our diet. Give the groups food packaging or pictures of food and ask them to put them into groups (do not specify how many of which groups) Discuss their groupings. Pictures for sorting. This will allow me to find out what they already know. Show video from Bitesize 'Five types of food'. https://www.bbc.co.uk/education/clips/zvp76sg		Questioning: What do we mean by healthy lifestyle? Why do you say this? What is a healthy diet? Why have you chosen to group your food in this way?
Main 45 mins	Show children the 'eatwell plate', recapping on the different food groups and why everybody's diet needs to be varied and balanced for good health.		Questioning: What is a balanced diet? Why do we need different types of food?

	As a class discuss what makes a varied/balanced diet and why we need different types of food (E.g. bread/potatoes for energy, meat for growth.) Tell class the five main food groups from PowerPoint before they go off. Explain that each group member will have a certain role to play. Give out badges/labels and tell children their responsibilities for each team member. Let them guess what they are first. They must stick to these roles and work as a team to all contribute to the activity. Give out leader roles and let the leader nominate other roles within the group. All roles must help with other roles as they go through.  Reporter: Also helps out with other positions, writes down notes for how the team is working. Writes a report to tell the class at the end about their group and the ideas behind their poster. Activity: Design and describe a poster for a healthy meal in groups. Give groups 2 dinners, lunch and a breakfast. This will save time. Explain and show slide on what is required on the poster. We need words as well. Will you plan your poster first? Have discussions as a group? Extension: online interactive activity to engage children. http://www.foodafactoflife.org.uk/CreatorActivity.aspx?siteId=17&sectionId=93&contentId=620 http://www.bbc.co.uk/bitesize/ks2/science/living_things/health_growth/play/ Key websites to use for groups to research: http://easyscienceforkids.com/what-is-healthy-food-for-your-body/ http://www.bbc.co.uk/bitesize/ks2/science/living_things/health_growth/read/1/ http://www.bbc.co.uk/northernireland/schools/4_11/uptoyou/healthy/foodfacts.shtml	What is the importance of healthy foods?
<i>Plenary</i> 7 mins	Ask the groups to share their healthy meals and explain why they are an example of a balanced and varied meal. Hold up and show their posters to the rest of the class. Emphasise learning from each other. The reporter of the group should express the main ideas. Re-cap on what we have learnt today.	Children to give 2 stars and a wish to presentations/posters. Ask children to summarise what they have learnt to the class.