What is the point? Understanding the importance of constructing tasks that engage students and enable them to make progress

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A Research & Development Project Submitted for the MSc Learning & Teaching 2015

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Abstract

This dissertation discusses the importance of task design when planning lessons. This action research project gave me the opportunity to think about the importance of task design and think about what is the point in the tasks as teachers we plan.

I carried out evaluation of my own personal historic lesson plans to help understand the planning of tasks and then planned two schemes of work. These schemes of work were planned and developed with the use of literature, students' feedback and my own personal reflection. Learning diaries were used in the second feedback to give students more ownership of their learning and inform me for future planning.

Findings indicated that knowledge is an important factor when planning lessons and developing task design. Knowledge should be at the forefront of planning. Knowledge has been discussed in detail (Firth, 2015b, Lambert, 2011 & DfE, 2013). The introduction of the new curriculum has allowed knowledge to be at the forefront of planning and given teachers the opportunity to think about task design centred around knowledge. Enquiry learning was also thought about with knowledge. Enquiry learning is a complex idea that needs to be carefully used in lessons to ensure knowledge is not lost.

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1. Introduction

1.1 Aim

The action research for this dissertation is concerned with task design, and specifically the importance of task design and how tasks help engage students with learning. By engagement, I mean students desire to learn. The aim of the research was to explore some of the ideas and factors that can impact on effective task design.

The fundamental idea to discuss is what is the point of the task, what are we aiming to achieve and what is the outcome we expect as teachers? As my career has progressed creating tasks has constantly played on my mind and encouraged me to carefully think about why I am planning the tasks in this way. The task should be there to engage the learner with the knowledge.

As I was embarking on writing a new KS3 curriculum it seemed an appropriate opportunity to explore task design and think about the importance of tasks that engage students and expose them to the dynamic subject geography is.

In my second year as Head of Geography I had the opportunity with the new national curriculum (DfE, 2013) to develop a curriculum at the same time as giving consideration to the design of tasks that would engage learners and that could allow me to evaluate tasks with the learners and help inform my future planning. I wanted to use my pedagogic knowledge and students' thoughts about the nature of engaging tasks to design tasks that meet the needs of learners while allowing me to reflect on the task design process itself.

The research was developed to help the Department with future planning and the school in thinking about task design across the different disciplines. As many of the

ideas I have researched can be used across disciplines and are starting points to get teachers thinking and reflecting on how they create tasks.

1.2 Rationale

As discussed by Thompson (2015), tasks are there to help students learn. I wanted to explore this idea and reflect upon my own practice from the time of completing a PGCE course until today, as Head of Department and in my fourth year of teaching.

My research would be centred on reflection of my own practice for the last four years, specifically my design of tasks and to review and evaluate the changes that have taken place. I wanted to attempt to investigate how my design of tasks has changed since my PGCE course. Using lesson plans written throughout my career, I attempted to evaluate themes of task design. I would then plan lessons and evaluate the task design of these lessons, reflecting on these lessons myself and with the help of a year 9 class.

The year 9 class I selected was a class that was disengaged and lacked independence in their learning. Choosing this class would help them take control of their learning and get involved with the design of tasks. It would also help them think about the origins of knowledge and how it is used in lessons (GA 2011a and 2011b). Students would become aware of where teachers get knowledge for the lessons. But also aware that geography is about enquiring knowledge and investigating facts. Geographers enquiring is how we are aware of the world around us today.

Enquiry learning is an idea I wanted to explore also. Enquiry learning has been an interest of mine since PGCE. Roberts (2013) explores the idea of enquiry learning and how it can be used in lessons. I wanted to experiment with enquiring learning and think about the skills of enquiring of learning and how knowledge is absorbed by pupils during enquiry learning lessons. As a PGCE student I found it difficult to sometimes

use enquiry learning and be clear about subject knowledge. I wanted to evaluate this in my lessons today and see the development since PGCE. Thinking about is there a "perfect" way to use enquiry learning and are students clear about knowledge when learning is done in this style.

The main aim was to design tasks that reflect the dynamic and ever changing subject geography is (Roberts, 2013). While thinking about the debate of knowledge within the subject (Lambert 2011, Firth, 2015 a, 2015b and GA 2011a). The nature of geographical knowledge has become an interest of mine since thinking about task design and the role of knowledge when planning tasks. With careful consideration of the transformation of knowledge from sources to the design of tasks and to the acquisition of knowledge by students in the classroom.

1.3 Research Questions

When looking at the literature I thought about the following questions:

- What is task design and what is lesson structure?
- Could also task design have an impact on knowledge?
- Enquiry Learning and the influence on geography task design
- How does task design impact on engagement?

It was important to have research questions to help begin my research into the literature and help me focus my ideas on task design.

2. Literature Review

Understanding the role of tasks and discussing what the point of tasks is a complex idea. Task design is not just about designing tasks to ensure students learn. Tasks need to be used to allow students to understand and develop knowledge and understanding. In geography, knowledge is not just facts and figures. This is explored in this chapter. Bearing this in mind this makes task design all the more complex. In this chapter, task design and lesson structure will be explored. Then knowledge, enquiry learning and engagement will be debated and discussed and the influence these ideas have on task design during lessons.

2.1 What is task design and what is lesson structure?

2.1.1Task Design

Task design considers how activities are designed to help students engage with learning. Tasks are designed to help students develop their geographical knowledge and promote learning. Tasks are there to help students learn. As Thompson (2015:3) discusses tasks and activities are ways teachers "translate the curriculum into tasks and activities that they ask their pupils to do in order to facilitate developmental or higher-level understanding of curriculum development." These tasks then help students understand and process knowledge as they work through the tasks set. These tasks should encourage students to digest knowledge.

The specific purpose of a task should be at the forefront of teachers' thoughts when planning tasks for students to complete during a lesson. As my teaching career has developed I have continually questioned the tasks I have designed for my lessons; as a reflective practitioner this is important.

Thompson (2015:5) brings some interesting ideas regarding task design. This bullet point list are ideas I think about when planning tasks:

- What matters in my subject?
- How does the task design relate to subject knowledge?
- What is meant by task demand?
- How do tasks/ activities help students conceptualise?

These points are ideas that teachers continuously think about. Teacher's knowledge of subject knowledge and pedagogy is fundamental when teachers are designing tasks. Geography is a continually changing and dynamic subject, Simmons and Mole (2014) discuss how we should use this continually changing idea to our advantage and it should engage learners. As geography teachers we also need to think about this when students are conceptualising ideas about this dynamic and ever changing subject. Geography is a subject with many concepts, however, students should be aware of the ever changing nature of them and conceptualising them is important when as teachers we are planning tasks.

The function of tasks has changed since my career began. This will be explored later, nevertheless, the literature also explores this and questions the educational point of the task. Alexander (2000), along with Doyle (1983) discuss the role of the task. Tasks are not only about content and factual information but also about how a student then takes these facts and content on board and analyses these facts to complete the task. This also links to Claxton's (2007) idea of "Split-screen thinking" which will be discussed later. Split screen thinking is the idea of teachers thinking about how students can be helped to understand knowledge, while teachers are also planning how to help students understand how to learn new knowledge and develop their ability to learn. It is clear

that a task is not just about the presentation of knowledge and then an activity to process this information. Both the information and the processing of information need to be thought about as a package when putting together a task; information and activity to complement one another to ensure the student has learnt new information and then processed this information.

As my career has progressed it is clear that how we as teachers perceive tasks and how students perceive tasks is different. Weimer (2013) thinks about this, and this also links with Kiewra (2002) and Zimmerman (2002) ideas. As teachers we need to be clear of the outcomes of tasks, this could be the knowledge that students are expected to have learned or by the final outcome of task. The clear expectations of outcomes of tasks can then support students and reassure them, students will be aware of the progression the teacher expects to be met and the knowledge students should have learnt throughout the lesson.

Students need to have the desire to learn. This is important to consider when planning tasks. Kiewra (2002) discusses how students need to be aware of how to learn. When planning tasks I have realised it is important to consider that students need to understand how to learn and how the tasks are helping them learn. Therefore, when we are presenting tasks, if the information is presented clearly then students want to learn. Planning tasks with clear instructions can determine whether students are compelled to learn and complete the tasks or not. It is therefore fundamental that task expectation is clear.

The new national curriculum (DFE, 2013) places emphasis on knowledge. Therefore in our planning it should be a focus. Students need to learn how to internalise this knowledge. The term internalise refers to how students take on board the new

knowledge and process it, then students can use this information when completing tasks. Therefore, when discussing split screen thinking while planning, we need to think about how we present knowledge but how we can also help them how to understand how to internalise this knowledge. As sometimes, as teachers we expect students to internalise new knowledge and use it. This is a skill in itself and needs to be taught to enable students use new knowledge effectively. As discussed before knowledge and task design will be discussed in more detail later on in the chapter.

The new national curriculum has given more opportunities for teachers to take control of task design and how students are presented with information. Although the geography has a more focused content, there is more freedom (DFE, 2013). Charter (2015) discusses although the content is more focused and is made clear in the new curriculum the teacher has more freedom of how to teach it. Figure 2.3 shows some of the knowledge included. When reviewing the new geography curriculum this is apparent. However, although teachers have more control of task design, there has been some concern over the knowledge based curriculum. Some have argued that teachers should also have more freedom about the content taught (Bousted, TES Union Leader), this was discussed by Charter. Although, this is being debated, there is a KS3 curriculum that is centred on knowledge, as teachers we now need to use our knowledge of pedagogy to develop tasks that show how constantly changing and dynamic this curriculum is.

Split screen thinking (Claxton, 2007) is an idea that encourages students to think about two things when thinking about the tasks during a lesson. Split screen thinking discusses two ideas: how can we help students understand content and how to help students develop their learning capacity. Claxton and Carr (2004) continue to discuss this idea also. Learning is important and tasks should be there to compliment this

learning. However, learning how to learn should not be neglected, and developing students learning capacity is equally important. Task design is not just about students using this information to complete tasks but also how students can use tasks to enable them to develop their learning capacity. This dual focus on learning can help teachers plan their lessons to encourage students to learn knowledge and improve how they learn.

Students need to be more resilient and this is clear from my own practice and through the discussion in the reading. How we design tasks should encourage and support student learning. This will then encourage resilience of their learning. This is also the view of Hargreaves (2004). Learning has to be students acquiring knowledge and then using this knowledge in life. Therefore, this is looking at skills that can be developed during lessons. Split screen thinking can link to student being resilient when learning. Students need to understand that internalising new knowledge and building upon it, is not a simple task. It is something that is a skill.

Students need to utilise this new knowledge while completing tasks to demonstrate their understanding of the new knowledge and how it is relevant to them and build upon their previous knowledge and values.

2.1.2 Lesson Structure

Since initial teacher training there has always been a question in my mind, "What is the perfect lesson structure?" As I have become more confident as a teacher, I feel I have experimented more with lesson structure and realised there is no set format that should be followed. Then what follows this is the question, "What is the perfect task?" Again as my confidence has grown as a teacher I have realised there is no real answer. Experimenting with task design is something that has become natural.

Lesson structure is where you begin as a teacher when planning lessons. The structure of the lesson can be made up of one task or several tasks. The order of these tasks make up the structure of the lesson.

There has been a range of different discussions about lesson structure. The standard structure promoted by the KS3 National Strategy was starter, main task and plenary. Edwards (2015) looked at a model of task sequencing to promote learning. The main aim of a lesson is for students to make progress. What Edwards refers to as the Quadrant Model seems a good place to begin this discussion and it demonstrates the sequence of a lesson.

Figure 2.1

Figure 2.1 demonstrates that knowledge and key concepts are displayed by the teacher in the quadrant 1. In quadrant 4 this knowledge is then displayed by students after knowledge being internalised in quadrants 2 and 3. Teachers who teach where learning capacity is not developed, a limited range of skills being developed would perhaps move to quadrant 1 to 4 according to Edwards, for example some presentation of facts by teacher, then students demonstrating they know this information. However, students moving through the quadrant have the time to digest and internalise knowledge, as well develop skills within the lesson. This agrees with Thompsons (2015) idea of teachers presenting the curriculum and students using tasks (Quadrant 2 and 3) to have a deeper understanding of the knowledge. As discussed before, students have internalised the information and they have had the opportunity to do this through tasks. The movement through the quadrant, not necessarily in numerical order gives students the opportunity to internalise information.

When evaluating this model it is clear that Edwards does not mean you have to move through all quadrants in order, however, we should look at all quadrants when thinking about lesson design and structure and moving through the quadrant in a different order.

When planning lessons myself I know I move through the quadrant differently each time. When thinking about enquiry learning, I begin my lessons looking at 3. This creates more open ended lessons where students can have more control of their learning and the final outcome of their learning. Learning enquiry will be discussed later.

The important point to take from this model is for students to take the knowledge internalise it and then use it. The quadrant model according to Edwards helps "promote *learning and develop learners*." (Edwards, 2015:p21). As a teacher ensuring students

take knowledge and use it is one of the biggest challenges. This model allows for the role of the teacher to change and at some points in the quadrant students can take more control of their learning.

The model above shows a range of different sequences available that teachers and students can move through when completing a lesson. Allowing these different stages encourages students to use a range of skills during the lesson. Also, it allows students to think. The range of different tasks gives the students the time to think about the knowledge they are learning and then consolidate this knowledge in section 3 (figure2.1) in the model.

Firth (2015) also puts together a list which suggests how tasks are thought about by teachers. These include: (Firth, 2015:74)

- *Purpose of the lesson*
- *What is to be taught*
- *The learning needs of particular students and groups of students and the desire to elicit and sustain students attention, interest and motivation*
- *The different cognitive processes involved in carrying out a task, such as listing, selecting, sequencing/ordering, ranking, comparing/contrasting, classifying, reasoning, evaluating information*
- *The geographical learning to take place within tasks*
- *And whether the task has a function in student assessment*

These ideas when completing initial teacher training are fundamental. The ideas discussed by Firth are not in a particular order, they are just key ideas that help teachers think about their lesson and the tasks that will make up the lesson. In the National Curriculum (DFE, 2013) there is a focus on knowledge. This knowledge should be the

focus of the lesson. However, as a PGCE student sometimes this is not the main focus, when there are so many other factors which in the beginning seem more important.

The learning needs of students is something Firth highlights. When planning a lesson this needs to be understood otherwise the knowledge you want students to understand will not be understood and they key understanding and concepts of the lesson will be lost, conceptualisation is an important goal when thinking about task outcomes (Thompson, 2015). It is clear that the teacher needs to think about importance of tasks to help transfer information and knowledge, as well as thinking about the sequence of these tasks in the lesson structure. If these ideas are not considered carefully then the meaning of the lesson can be lost and the final outcome will not be the intended.

2.2 Could also task design have an impact on knowledge?

As teachers we want to help our students acquire knowledge. In order for this to be successful the process needs to be engaging. Although, lessons should be all the above, the most important part is knowledge. Students need to make progress and knowledge is vital for this. Creating a range of different tasks is there to help scaffold students learning and develop their knowledge. Students need to internalise factual knowledge. However, they need to learn how to internalise this knowledge and demonstrate this knowledge when completing tasks.

The Geographical Association (2011: 2) puts forward some ideas about knowledge and the three different types of knowledge in geography and this knowledge should be taught:

- Core knowledge: the extensive world knowledge of geography
- Content knowledge: the main content of the geography curriculum: its key concepts, ideas and generalisations

- Procedural knowledge: what is described as “Thinking geographically, which it is emphasised is a distinctive procedure- it is not the same as thinking historically or scientifically or mathematical (etc.) The teacher can model this by example, but it is also learned through exposure to, and direct experience of, high quality geographical enquiry which might include decision making and problem solving scenarios

Firth’s (2015b) and the GA’s (2011:2) clarification of knowledge in the geography classroom is vital to understand task design. Task design is not simply about the core knowledge that is displayed in the new curriculum (DFE, 2013) but the wider aspect of knowledge discussed above. As head of department, it is important to consider knowledge in this wider bracket. To create a geographer, all the above need to be considered. In this investigation, when discuss knowledge, it will be the knowledge discussed by GA (2011a:2).

Nevertheless, it is important to consider that we do not want knowledge to be lost because of students values and previous knowledge. When discussing core knowledge, it is important to make it clear to the students according to Firth (2015b). Students need to be made aware of the world before the “social constraints”, the world without the impacts of humans. As a teacher this is important to acknowledge while considering geography is a dynamic subject and the social constraints on the natural world are relevant to the world today and to contemporary geography.

Ford (2010) highlights an issue with us a teachers delivering a constructivist knowledge, I will consider this as teachers’ subject knowledge. As teachers we would have researched the information and developed a lesson and tasks, contextualising the information (Puttick, 2012 &2015). Teachers would have internalised this information

themselves with the constructivist ideas around them. Then this knowledge presented to the students through a variety of tasks which would have helped students internalise knowledge and gain a deeper understanding, developing their own values and knowledge (Figure 2.2). So, as teachers are we limiting their own opinions as we have selected the knowledge, delivering a curriculum based on teachers subject knowledge. I still believe knowledge in geography is encompassing what Lambert (2011) discussed, should help deliver a balanced curriculum.

However, when tasks are designed it is important to understand and be aware of as teachers we need to deliver what is seen as core geographical knowledge, while students will be taught using constructivist pedagogy, this is acceptable, as long as knowledge is delivered in a balanced way like Lambert discussed. Students then have the opportunity to internalise knowledge and build upon their own values and previous knowledge.

As teachers we need to make geographical knowledge accessible to students. Teachers use many different sources according to Puttick (2015) to research this information. We then transfer this knowledge into accessible information for students. As teachers we need to recontextualise information for students. By recontextualisation information, it means making information as teachers we research and find, then making this information accessible and useful for students. Puttick's (2015) diagram below figure 2.2, demonstrates the contextualisation of knowledge. The diagram below is a development of Bernstain (2000)'s ideas, from the source of information originally to information that students can use and embodied in pedagogy.

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at Puttick, S. (2015) Recontextualising knowledge for lessons, ***Teaching Geography***, 40 (1), 29-31.

Figure 2.2

Figure 2.2 shows information can be changed to meet the needs of the learner. Our role as a teacher is to ensure that knowledge is accessible to all. Although, it could be argued that teachers are changing information, which is true, teachers are making geographical knowledge accessible to all learners. It could be a concern that some knowledge and information is lost in translation and especially when designing a task. As the master of the knowledge essentially and as a professional, teachers need to be trusted to select the important knowledge to present to students and for students to internalise this information while completing a task (Puttick, 2013). Lambert (2011) also makes the argument about the resources available for teachers in order to help teachers have a curriculum that is focused on knowledge. As a head of department, it is great to see a knowledge centred curriculum and this return to knowledge as discussed by Lambert, I agree with Lambert, he believes teachers need to think about where we are accessing resources and be mindful we will conceptualise knowledge from the

resources. There are many social factors that also influence the knowledge present, even if we try to present theoretical knowledge to students.

As teachers we need to present knowledge that is accessible and accurate. From figure 2.4 it is clear that the "real world" which Morgan (2013) discusses is presented by teachers, however, students values can influence how this knowledge is perceived. Also, the subjectivity of the teacher. Therefore knowledge is recontextualised but as teachers we need to present the "real world" in a balanced way.

Knowledge needs to be at the forefront when planning as this has been demonstrated in the new curriculum. The new Geography Curriculum teachers have the opportunity to ensure knowledge is at the forefront of good teaching. Our knowledge as teachers can support this through pedagogy. How teachers teach the knowledge can then give opportunity for students to evaluate the knowledge and make sense of it.

The new curriculum (DFE, 2013) is a return to a traditional geography approach (Firth, 2015b). However, there has been some neglect of the ever changing world we live in both socially and physically. When planning tasks, teachers need to plan tasks and when thinking about long term planning a curriculum that reflect the diverse environment we are a part of. The curriculum needs to reflect students' geographical interests. Students' interests of geographical knowledge may be socially constructed, however, as teachers we need incorporate these interests that students have acquired with what is considered traditional geography that has been outlined in the new national curriculum. This then will ensure students have a balanced curriculum.

2.2.1 New Curriculum

The Geography new curriculum (DFE, 2013) is heavily knowledge based as discussed by Charter (2015). There is very little reference to how this knowledge is acquired and teachers appear to have a freedom to deliver this knowledge in the way they feel best (Hopkin, 2013). Below is a table I have devised in order to think about the planning of the new curriculum. Having knowledge at the forefront of my plan and then thinking about skills and task design. I have picked out skills that have been mentioned in the new curriculum (DFE, 2013), task design is thinking about some of my initial ideas.

The focus on knowledge in the new curriculum and less focus on task delivery, as a teacher gives me the opportunity to teach the knowledge as I wish and experiment with pedagogy which perhaps was not the case before (DfE, 2011). Task design and the importance of task design is highlighted here. Tasks need to be designed to ensure knowledge is gained by all pupils in the class and tasks are suited to the learners in the class. Before starting my planning of the SOW it made me think even more about what is the point in the tasks I am giving? The table above helped me focus on knowledge when thinking about the planning of the two schemes of work for my project.

Task design and why we create certain tasks is the focus of my project. Since starting as a trainee I have wanted my lessons to be engaging and I want students to understand what a fascinating and dynamic subject Geography is.

Knowledge and deeper understanding seem to be a key focus. Within the document (DFE, 2013), knowledge is referred to in a number of ways. Knowledge, competence and deepen understanding is all refereed to. Knowledge is referred to 14 times in the document as you can see in figure 2.3. If was designed to help summarise the new document for the department. As you can see knowledge is the main focus. With skills

having little mention in the document. There is no mention in the document about tasks or how the knowledge should be delivered. This appears to give teachers more freedom and think about their individual classes and how student's knowledge they already have can be developed. Students now can use their knowledge of pedagogy to best deliver knowledge to students.

Knowledge	**Skills**	**Task Design**
Contextual knowledge and globally significant places- terrestrial/marine	Collection, analyse and communicate with a range of data gathered through fieldwork that deepen their understanding of geographical processes	
Countries- locational knowledge Africa, Russia, Asia, Middle East	Interpret a range of sources of geographical information, maps, diagrams, globes, aerial photographs, and Geographical Information Systems (GIS)	
Physical and human processes that create human and physical landscapes that change over time Interaction of human and physical	Communicate geographical information in a variety of ways, including through maps, numerical and quantitative skills and writing at length	

Geographical knowledge, approaches and concepts		
Similarities and links with different places through human and physical geography		
Physical geography- geology, soils, geological timescales, tectonics, glaciation, hydrology, coasts		
Human geography- urbanisation, population, international development, economic activity,		

Figure 2.3

Any teacher throughout any point of their career are concerned with keeping students engaged and wanting students motivated. Hopkin (2015) discusses about using geographical issues facing the world today. Based on my teaching career, this is the case. Knowledge that students can relate with or have some previous knowledge of is always a good start to the lesson. From the beginning of the lesson they are engaged as they know some background to the knowledge and can build upon some of their knowledge and then develop it. This then allow students to enter the classroom with some basic knowledge and their values on the topic if it is relevant. This will make the

learner engaged and knowledge relevant to the world around us. Therefore, constructivism is going to be an influence on knowledge and this is to be expected if students' values are going to be considered and developed when using their own knowledge and values when beginning lessons.

After evaluating this it is clear that some kind of structure like Firth (2015) demonstrated and what I discussed earlier is important. However, there can be disagreement what this structure is. Students to make progress and build upon their knowledge and leave the lesson with a deeper understanding than what they entered the classroom with. How this is done, has become less important according to the new curriculum (DFE, 2013). As professionals we have more freedom about how we deepen students' knowledge and geographical understanding. However, the knowledge teachers need to teach has become specific. The knowledge rather than pedagogy has become the focus of the new curriculum.

Knowledge should be the focus when planning. Developing students' geographical thinking and understanding should underpin task design. (Hopkin, 2015) has emphasised this, along with Roberts (2013). To help engage students with the geographical knowledge using controversial issues helps engage students. The image below was used in Hopkins article to show Geographical understanding at the centre of global learning. Figure 2.4 clearly demonstrates how geographical understanding is at the centre of learning. Although, this is with global learning, it can be used to think about tasks are designed in geography.

The figure originally presented here cannot be made freely available via ORA because of copyright. The figure was sourced at Hopkin, J. (2015) A "knowledgeable geography" approach to global learning, ***Teaching Geography***, 30 (2) 50-54

Figure 2.4

Geographical understanding is at the centre. Knowledge is part of the geographical understanding process, however, if teachers are to create well rounded geographers other aspects of geography need to be considered (Hopkin, 2015). When presenting geographical knowledge in the classroom it is important to consider that all students come into the classroom with some knowledge. Our jobs as teachers is to deepen this knowledge and enable students to utilise this information when completing tasks (Hopkin and Owen, 2015). Sometimes discussing what students already know about the topic being covered that lesson is a good way of showing the knowledge they have and then at the end, it can easily demonstrate to the student how their knowledge has deepened.

Values as showing in figure 2.4 are an important in geography. These values combine with knowledge to deepen the geographical understanding. All students come in with different values and this will have an impact on the internalisation of knowledge. Nevertheless, this is important to consider when thinking about the presentation of

knowledge and use of information (Puttick, 2015). As teachers we need to present geographical knowledge in way that values of students can be incorporated but teachers need to also present a balanced argument. Tasks that teachers give to students, should help them understand how to analyse information and appreciate that different people have different values and how as geographers this needs to considered when using knowledge and how this adds to geographical understanding.

Firth (2015b) makes an interesting point about task design and knowledge. Also, thinking about building knowledge over time. As a teacher I am concerned with the fact that sometimes knowledge is lost through tasks. Therefore, it must be a priority in Geography education to bring together knowledge and learning. The tasks must give students knowledge as they are learning. We need to bring together their everyday knowledge and disciplinary knowledge.

2.3 Enquiry Learning and the influence on geography task design

Enquiry learning was introduced to me while completing my PGCE at Oxford University. This idea intrigued me from the beginning of the course. Having open ended tasks allow students to think about learning (Roberts, 2013). I have used enquiry learning throughout my teaching career as a way to engage students and help them develop their curiosity of geography and appreciate the dynamic subject it is.

As you can see from above having an end goal is important for lessons and tasks. However, I think this end goal can still be clear when using enquiry learning. Enquiry learning allows students to explore the knowledge and build upon their own knowledge. Also, while thinking about their values and others, then using this knowledge to form their own opinions (Hopkin, 2015). Having to read a range of different sources and information can help students put together knowledge. However,

it is important that students are still supported with frameworks. This could be questions that help guide students to the knowledge.

Geography is not simply about understanding what is out there but constructing ideas is important. Roberts (2013) discusses the importance of students gaining their own knowledge and enquiry learning supports this idea. What we know about geography is because other people have gone out and found the information as they had questions about the world. What, when, where, who, why and how are questions I use frequently in lessons. Students can engage with the lesson and think about questioning the world around them. After all, this is the basis of geography.

Although, students are investigating and essentially making their own knowledge using knowledge that is presented to them during lessons through a range of tasks. Thinking about Lamberts (2011) thoughts about what makes good knowledge and how the three types are equally important, enquiry is a form of developing knowledge that Lambert considers important. This development of knowledge is essential for a balanced curriculum.

Lambert believes that "high geographical enquiry" (Lambert, 2011: 2) is vital in a geography curriculum. He thinks decision making and problem solving which is all a part of enquiry learning is needed for a well round curriculum. Therefore, this demonstrates how enquiry learning and the influence of task design is important.

However, it is important to ensure through enquiry learning we are exposing students to core geography and not just geography that is socially constructed. Sometimes with enquiry learning, as a teacher I can find the core geography is lost and that socially constructed geography is easier to convey. Nevertheless, enquiry learning is fundamental for geography; it gives opportunities for students to construct their own

knowledge. This exposure knowledge replicates how geography has always been constructed. Geography is a discipline that has been discovered and there is no reason this cannot be done in the classroom to ensure students have a curiosity of the subject.

Thinking geographically is made reference to in many documents, the Geographical Association (2012) document made reference to this idea. The procedural knowledge Lambert (2011) made reference to and is known by many teachers as enquiry learning. Lambert agrees this is important and makes up the knowledge in Geography. Roberts (2015) article about critical thinking, discusses how this is fundamental if as teachers we want to encourage students to think like geographers. This skill of "critical thinking" will encourage to investigate the knowledge more deeply and realise the complex nature of social constructed knowledge. It helps students consider people, politics and the range of other factors that can influence the traditional "real" geography.

Critical thinking has recently been discussed by Roberts (2015). It is important for students to generate knowledge through evidence. This has recently also become more relevant with the new GCSE and A Level examinations (DFE, 2014). Students need to be able to "*identify questions and sequence of enquiry, to write descriptively, analytically and critically, to communicate their ideas effectively, to develop an extended written argument and to draw well-evidenced and informed conclusions about geographical questions and issues".* (p.6) This demonstrates the importance of enquiry learning. Enquiry learning is about developing investigative skills and encouraging children to ask questions about the complex world we live in. Geography should be about students being curious and enquiry learning helps stimulate children's curiosity.

Roberts (2015) identified some of the characteristics of critical thinking and how to apply to Geography. Those that are most relevant for my key questions are (p.56):

- *Being inquisitive and asking good questions*
- *Developing reasoned arguments based on evidence*
- *Evaluating conclusions and generalisations*
- *Justifying conclusions using evidence and reasoned arguments*

These ideas for critical thinking I see as most relevant to understand the structure of lessons, students' progress and maintaining engagement throughout the lesson. These ideas all link to knowledge. Using the enquiry learning and critical thinking is to engage learners. It also ensures that a synoptic approach to geography is encouraged (Firth, 2015b). Geography is about interconnections and critical thinking encourages this skill. If this can be embedded in task design during the KS3 curriculum then KS4 and 5 curriculum will be more accessible for students. As educators, as considering task design long term planning and progression must be considered when planning.

While thinking about tasks in geography, it is vital to think about learning geography as enquiring new knowledge (Roberts, 2013). Without the ability to enquire geography would not be as it is today, we know what we know today due to people enquiring further into the subject. In the planning of tasks, the skill of investigation and the ability to enquire new knowledge is important. Once this new knowledge, it is then important to think about how students can use this knowledge, while building upon their prior knowledge and experiences.

I think with this information about enquiry geography it has made clear that task design is more crucial than ever. As professionals we need to present the core knowledge, and this should not be lost from geography. However, I believe due to the ever changing

nature of geography, students need to be aware of content knowledge and as discussed by Firth (2015b) the socially constructed geography. This demonstrates the complex nature of geography. Knowledge is not just facts as the curriculum may present (DFE, 2013), it is about creating geographers. Thinking about knowledge in Lamberts terms will ensure this happens, if this is considered when thinking about task design, especially it will encourage task design that engages the modern day students who have been exposed to a range of different knowledge from different sources and will have their own initial values (Hopkin, 2015). Teacher's job through task design is think about how we present these "knowledge's" (Lambert, 2011 & Puttick, 2015).

2.3.1 What makes a good enquiry question?

Riley (2000) thinks about what makes up a good enquiry question. Although, a history article it explores carefully the idea of an enquiry question. He asked teachers what made a good enquiry question. Here are the questions he included:

"Capture the interest and imagination of pupils?"

"Place an aspect of historical thinking, concept or process at the forefront of pupils' minds?"

"Result in a tangible, lively, substantial, enjoyable outcome activity, through which pupils can genuinely answer the enquiry question?" (p8)

When thinking about planning enquiry lessons it is important for it not simply to be a question but a question that promotes curiosity among the learners. It is important to think about not having questions that can be answered with a yes or no. Although, enquiry learning is designed to engage learners and encourage students to develop a questioning mind, sometimes enquiry learning can be difficult. Some students can find it difficult to try and question things when they have limited understanding.

2.3.2 Scaffolding

Scaffolding of tasks is fundamental when thinking about enquiry learning. Students cannot simply construct knowledge for themselves using a range of different sources. Wood et al (1976) discusses scaffolding. This term helps students try and solve a problem. When planning enquiry learning and schemes of work scaffolding has been fundamental in order to ensure all students feel supported. Wood et al thinking about ways students can be supported while completing a number of tasks. These include:

- Simplifying the task by reducing the number of steps involved in a task.
- Maintaining the pursuit of the goal and helping the learner to risk a next step.
- Noting inconsistencies between what the child had produced and the ideal solution.
- Controlling frustration and risk during the problem-solving activity but without creating too much dependency on the tutor.
- Demonstration the idealised vision.

These ideas in lessons are used in a variety of ways. Enquiry teaching and learning can be difficult for both students and teachers. Students can struggle with the initial thinking and the curiosity involved with enquiry learning. However, all geography started with questions and geographers needed questions to think about. It is important to consider this when planning schemes of work.

The steps used to implement this are important. Scaffolding can present a student from becoming disengaged with learning and feel supported when investigating the enquiry question.

Wood et al's idea about an "idealised vision," is interesting. When reading Robert's work on enquiry and as a teacher I always assumed letting students having the vision

was important and that not necessarily there was an idealised vision. However, having something students to aim for and what the end might be is perhaps vital to ensure students are curious enough to think about how to get that stage. Nevertheless, when planning a final outcome must be considered.

I believe as a geography teacher who believes enquiry learning is fundamental for well-rounded curriculum, scaffolding has to be used to ensure the geography curriculum is accessible to all. Teachers need to ensure how the scaffolding of tasks is designed to ensure that core and content knowledge is maintained (GA, 2011a), also thinking about Puttick's ideas ensuring the true meaning of geography is not lost the reconceptualising when designing tasks.

2.4 How does task design impact on engagement?

GA (2011b) "The best geography teaching is based on stimulating the curiosity of children and young people in order to ask questions and generate a need to know about the wider world" (p6).

This quote from the GA (2011b:6) clearly highlights why an engaging curriculum is vital to maintain the curiosity of the subject. This quote also demonstrates how enquiry learning can promote this curiosity of the subject (Roberts, 2013 &2015). The engagement of students is a complex idea and task design is vital to maintain or even start the engagement.

Engagement is not just about the task itself but about the knowledge that is being generated also. Firths (2015b) article highlights teachers should engage students to have awareness about when knowledge comes from, and this can help students understand the complex work we live in. Exposing students to a range a different of sources of information (Puttick, 2015) where the sources are clear can help students

transform knowledge. As teachers we transform knowledge for lessons, engagement in lessons could be developed if students have some skills to transform this knowledge for themselves if we provide the students with these skills.

Students' engagement is one of the most complex ideas during initial teacher training and it does not really get easier as you progress. However, you just have more ideas in the bag and in essence braver to try new ways of engaging students.

Edwards (2015) has thought about the engagement of tasks with "sensitive reciprocity." As teachers we need to understand students' demands of the task and think about their current understanding of the task. Then think about students motives for engaging with the task. Then as teachers we can use this and our knowledge as teachers and of the subject to construct tasks that meet their needs of knowledge and engagement. Thinking about this it appear obvious. However, knowing students understanding of the task and what keeps them engaged is difficult. The aim of this project is to discuss what the point of tasks is.

Hopkin (2015) recent article about *Global Learning* is interesting and allows you to think about Edwards ideas about "sensitive reciprocity." Global learning encourages students to understand the contemporary world. It can help us help students think about the connections around the world. Students already have perceptions of the world. We need to develop these ideas and in some case make them think differently. For example, there are many perceptions of Africa that students have. This could be based on news clips and articles they have access to at home. Teachers need to develop this knowledge and present a balanced view of Africa, Africa is often represented as a poor continent, and however, our roles as teachers it is to expose students to the information about the continent. Therefore, with this example we need to consider and develop

students values and knowledge, demonstrating to them others ideas and values. When we begin to consider this issue it becomes clear that task design is not easy. As teachers we have a complex role of help students progress and develop their knowledge as well as values and understanding others values.

Creative geographers is an idea explored by Renshaw (2011a, 2011b). This is also linked to critical thinking. However, I wanted to discuss this with engagement. Renshaw thinks creative geography is thinking about pedagogy and using these to engage and motivate students. It is also a way of encouraging students to become independent learners and reach end goals because of their curiosity of the subject. As a teacher, this is a desirable goal for all students to achieve. Also, students could reflect on sources and their own work to improve. So as well as a creative thinker there is a creative learner. This is carefully considered when thinking about task design. If students are going to be successful at KS4 and 5 geography they have to be critical and reflective learners. If tasks are going to be engaging students need to have these skills. When planning tasks for this investigation, it was important to consider these ideas and using these ideas it should promote curiosity of the subject and maintain engagement through the tasks and students should feel the desire to explore more.

Simmons and Mole (2014) think about Renshaw (2011a and 2011b) work and use creative geography to task design tasks that allow for an "Individuality of expression" (p66). Geography is a diverse subject and students can express their work in lots of ways. When planning tasks, it is important to have that allow students to do this, as students will feel they have control of their learning and therefore be more engaged with the tasks. During this investigation this is an idea that I have been mindful of. Although, this is important, it is vital that core and content knowledge is not lost. But

there more expressive tasks will allow the social constructed geography to be displayed also.

It could be argued that having goals at the end and concise tasks could actually inhibit students' curiosity of the subject. Enquiry learning approach can still encourage students to develop this curiosity but ensuring students have end goals in sight and ensuring progress has been made with knowledge being developed.

As geography teachers our job is to help students develop skills as well as knowledge, Figure 2.4 from Teaching Geography (Hopkin, 2015) explores the idea of "geographical understanding". Critical skills and enquiry learning are important to the overall geographical understanding. Geography is such a contemporary subject there is lots of opportunity to create enquiry. Sometimes consolidating tasks and creating a clear goal means students lose some of the ability to use and build upon their own knowledge if the clear end goal is there. Students will be limited and will not explore all the different ideas out there and evaluate them.

3. Methodology

3.1 Action Research

An action research model was used in my investigation. This was used as it allowed me to reflect on more than once cycle. As Punch (2014) discusses it allows for research and action to be brought together. As Head of the Geography Department it was important for me to investigate the importance of task design, as it was during a time new schemes of work were being written based on the new National Curriculum. As Head of Department I wanted to create a scheme of work that suited the learners' needs and that had a true focus on task design and the importance of tasks that engage learners.

Stringer (2004) states that action research is cyclical. This suits the needs of my investigation. It allows me to plan and reflect on ideas and then re-plan and deliver. The model allows for constant reflection, this is paramount when planning a scheme of work and evaluating lessons to inform the next stage of planning. Bryman (2008) also states that it is about identifying a problem and finding a solution based on the problem. In order to do this there would have to be a cyclical approach to the research, as a solution will not be identified without repeated reflection of ideas. With tasks that have been designed before, I knew that there was not necessarily a problem with the tasks. However, I wanted to understand the importance of how we design tasks and evaluate why we design tasks in the way we do.

3.2 Research and Design

Based on the literature review and my own teaching interests, I wanted to understand why teachers design tasks the way they do and what is the point in teachers planning lessons the way they do. The initial questions used to structure the literature review have been refined based on the review itself. The research questions are:

1. Does a teacher's understanding of knowledge have an impact on task design?
2. Can knowledge be lost through task design?
3. How does enquiry learning play a role in designing tasks that engage year 9 students?

Action research can use both quantitative and qualitative data (Gibson, 2004). My action research would use both sets of data. However, qualitative data would be used most frequently throughout the research project.

3.5 Background information on study school

All the participants involved attend a comprehensive school. There are 800 students at the school. The Geography department has two full time teachers and one part time teacher.

One year 9 class have been chosen for the study. This group is a prior mid attaining group (achieved level 4 in their SATS), with twelve male students and ten female students. This group were chosen as this class have been difficult to motivate. Taking part in this investigation would allow them to take some control of their learning and inform me as their teacher how they see the best way to learn.

Research for this investigation was carried out in three cycles. Choosing one class allowed for a more in-depth study as they would be involved in the whole process and

see how the scheme of work had evolved with the their input. The research was about developing my own understanding of task design. Therefore, this would not require more than one class unless it was needed for comparative purposes. Time constraints meant also that uses more than one class was unrealistic, as student feedback and completion of learning diaries took time. Also, due to the timing of the terms it meant that two schemes of work were needed to ensure a thorough study was completed.

The overall aim of the investigation was to plan a scheme of work that would be devoted to the process of task design and give scope for reflection by both teacher and student. As a teacher it provided me with the opportunity to develop a scheme of work that was planned with input from students and allowed me to plan and develop tasks, while constantly evaluating what is the point of the task? What is the outcome of these tasks? Students input was via informal feedback during and after lessons with discussion. Also, during the second scheme of work students completed a learning diary to inform me about the lessons. Both of these provided me as the teacher a good starting base to plan lessons to ensure students' needs were being met and helped me structure the knowledge I wanted to be covered and think about the pedagogy that would be most suitable for learners.

Before my practice would even be considered it was important for me reflect on old lesson plans- the "historical" design of my lesson planning to evaluate the changes of task design. The aim of doing this was to evaluate and reflect on my own practice, thinking about how did I design and has this changed from my PGCE until the present (4^{th} year as a teacher). Using my research questions above I would reflect upon the themes and understand how the changes in task design, if there were any changes and think about to this affect the outcome of task of students. Also, think about the impact

of task design on engagement and knowledge which were discussed in the literature review.

Another, interesting reflection will be the use of enquiry learning when designing tasks. During the PGCE this was an idea that was discussed in length and practiced during planning. It will be an interesting reflection to think about how my perception or understanding of enquiry learning has developed. As even in my lesson planning today, enquiry learning is an aspect of my planning that I find difficult.

3.4 Research Cycle 1: Investigating my own teaching practice

Reflection on my own design of tasks using lesson plans

In order to establish the point of task design it was important for me to think about my own teaching practice first.

I carried out this by reviewing four of my lesson plans from my second placement during the PGCE year. I have chosen these lesson plans because these were more detailed and contained more information about tasks and teaching. Therefore, they would be easier to reflect upon and provide more of an insight for my research.

After this I looked at one observation from each year of teaching but two in my NQT year. Using my own lesson plans I could begin to evaluate the planning of lessons from initial teaching practice to how my own teaching has developed now as Head of Department. I have only chosen one from each year as at the school there is only one formal observation with a lesson plan. This provided me with a range of evidence including lesson plans and lesson observation, which allows my research to be more thorough.

Using these lesson plans I will be evaluating the following points:

- How lessons are structured?
- What tasks are planned throughout the lesson?
- How has this changed from NQT to Head of department?
- Is knowledge at the forefront of planning?
- How has enquiry learning been used? If it has been used?
- Reflect on the engagement of tasks.

Using these lesson plans and observation feedback looked at the results and identify different themes based on the above bullet points. This information then allowed me to evaluate the changes in lesson planning that has taken place throughout my career. A table was created to help record main themes. This table then could help me consider the tasks I set, thinking about the ideas I discussed above. Using information from Creswell (2012) I read through my lesson plans several times to understand what was being said and then made notes. Once I completed this I decided on the main themes from the lesson plans. I coded the data by highlighting the main themes. I then highlighted between four and five themes from the lesson plans. I did not want lots of themes as I wanted a detailed analysis of the themes selected. As discussed by Creswell (2012) I have used overriding themes from my data, potentially this could be argued not to be codes due to the nature of them being overriding themes. However, I have tried to use broad units that can consist of several codes.

These are inadvertent sources, as the aim of these sources were not originally to be used for this investigation (Bell, 1999). These documents originally were for inspectors and observers of lessons. Therefore, there has to be some consideration that the lesson plan may not reflect the true nature of the tasks. The lesson plan could be brief and therefore not contain the detail of the tasks or show the true outcomes of the task. On the other hand it could demonstrate the task as something that was more involved than

the lesson truly reflected. This must be considered while analysing these plans. As I wrote the plans and designed the tasks, I have full understanding of the nature of the task and then this ensured my reflection of the historic lesson plans and observations was detailed.

It is also worth considering bias. The lesson plans, are plans that I designed. There potentially could be some bias when looking at these plans. As I wrote the plans and delivered the lessons I could perhaps add in detail about the tasks that did not happen. Also, may misinterpret something that was not there. Therefore, it is important to consider. I have highlighted the lesson plans to link the bullet points above and demonstrate the key themes from these bullet points.

Once this was completed I could evaluate the changes or lack of changes to task design and conclude linking to the research questions and literature review.

3.5 Research cycle 2: Investigating what students think about tasks

Baseline Questionnaire

This questionnaire was to inform to how the students liked learning and allowed them to take control of the scheme of work they would be completing in the next term. The questionnaire was given to the one year 9 class I was working with for the whole investigation. The sample was chosen as it was convenient also. Each student completed the questionnaire at the end of a lesson before I planned the scheme of work. The questionnaire was designed so it would take around ten minutes.

Cohen and Manion (2011) helped to design the questionnaire. The questionnaire was designed to be simple and gauge an idea of the tasks students enjoy and find useful and what their reasons are behind this. The first question was a closed question, however, the rest were open. Although, some suggest that open ended questions are not suitable

for students to complete. I thought this was the most suitable as it allowed students to give their opinion.

To analyse this information I will produce a graph for question 1 (Appendix 3). I can then understand some of the tasks that students enjoy. The rest of the questionnaire will be analysed by looking for themes among the answers for each question. The answers will be coded. This coding will be the same as before and broads themes were considered (Creswell, 2012). Again, as discussed before this was completed having the research questions in mind. There were only four to five themes, this would allow for detailed analysis to be completed to help understand the importance of task design and what the students see as important and engaging when they think about the "perfect" lesson.

Students did not include their names on the questionnaires. Therefore, answers cannot be traced to individuals.

The questionnaires were carried out in a classroom setting and students could discuss answers. Therefore, reliability and validity are difficult to discuss (Hammersley, 1987 citied in Opie, 2004). Students were fully aware of why they are completing the questionnaire and how it was to inform my planning of future lessons.

I tried to limit any form of bias as their teacher. I simply reminded students that the questionnaire were anonymous and they were there to help and inform future planning of schemes of work.

A concern could be that my research relied on my own practice with the use of lesson plans and observation to provide "historical" data and information from students (baseline data and informal discussions) (Edwards and Talbot, 1999). I reflected on my own practice to inform about the importance of task design. I used the information

from this reflection and evaluation and theory from the literature review (Orlikowski and Baroudi, 1999) to help me plan schemes of work that focus on task design, while bearing students' needs in mind and the research questions that arose from the literature review.

3.6 Research Cycle 3: Planning scheme of work and learning diary

From the information I collected from the baseline questionnaire I planned a scheme of work. After each lesson the class would discuss with myself about the lesson and how it went. Students and I would reflect on tasks informally and this would inform my planning for the next lesson. As you can see (appendix 4 and 6) I have highlighted my feedback in red after each lesson and students' feedback in blue. I tried to use the information given to inform my planning of the next lesson.

As the class teacher I evaluated the lesson, as soon as the lesson finished. Simply with a couple of notes of parts that went well and areas that needed improving. I focused on the tasks in the lesson as part of the evaluation, as this is the main aim of my investigation.

Students' feedback was informal. It formed part of the plenary and myself as the teacher and students discussed tasks in the lessons. I then made informal notes about their feedback on the scheme of work.

The validity and reliability could be questioned as the feedback is informal. The reliability was difficult as it was me as the observer making notes after the informal discussions after the lesson. This therefore makes reliability questionable (Bryman, 2008). The validity is strong, as the sample I selected was a class I had for the academic year and there was a good rapport between the students and myself. Also, as

the informal feedback lasted for several weeks, the prolonged nature of the research helped ensure the validity.

I carried this method out for Icy World scheme of work. However, due to this being in term 3 which is a short term and other interruptions I decided to continue the research into term 4 with the next scheme of work. This scheme of work was based on Oceans. I decided with the feedback it needed to be more formal. I decided for students to complete a learning diary. The reason for this decision was I wanted to improve the reliability of the study. Having set questions would improve the reliability, as these questions would be answered at the end of each lesson in the form of a learning diary.

The idea of the learning diary was to help students reflect more personally. It would offer the give opportunity for all students to give their opinion. Some students would not have been comfortable to give feedback amongst their peers. The learning diary was difficult to complete in the beginning and as the lesson progressed students got better at completing the diary.

The diary was designed to take 10 minutes to complete at the end of the lesson. Students completed these diaries in silence to ensure the feedback was personal. Students had to write down the WALT of the lesson and had 4 questions to answer. The questions were open. Students were required to write a sentence to explain their view about the tasks. The questions were explained to the class by myself at the beginning of the first completion of the learning diary. Then students could make notes or write sentences about the feedback.

As the diaries were kept for the whole term then they were not anonymous as the diaries were handed back to the students towards the end of each lesson. The diaries were kept in a locked draw and no one had access to them apart from myself. For the

write up of the learning diaries I have numbered them to ensure students are not named in the research project.

After reviewing the learning diaries, I selected the 6 that provided the most information. Some of the diaries were not completed and many questions were left blank which were not useful to analyse. As I wanted to conduct thorough analysis of the diaries I decided to choose 6. These selected on the bases of those students who had completed all questions for all the lessons they were asked to complete. Out of the class, there were only 6 students who had completed properly.

After I had collected the 6 learning diaries I read through them several times and made notes about the overall themes of the diaries. Once this was done I thematically coded them similar to my lesson plans. I looked at 4 overarching themes to help me use the diaries to help think about task design. This was advice given by Creswell (2012).

The main constraint of the learning diary was that students to begin with were not good at reflecting on their learning. Students needed ideas about how to reflect on the lesson and on their own learning. This perhaps could have caused some influence from myself as the teacher. However, to ensure this did not occur I used neutral ideas about reflection. For example, getting them to reflect on their lunch for example. This would help them develop the skills to reflect on their learning.

During all the lessons I made informal notes about the students' response to tasks I set in the lessons. These notes were based on observations I made about how students were working through tasks, this information I made notes of and then used them to inform me about my planning of the next lessons. The reliability again could be questioned with this observation. However, as these observations were informal and completed with other methods it helps improve the reliability (Bryman, 2013).

Triangulation means that one method is used (Bryman, 2008). I used observations, informal discussions and learning diaries to try and improve the validity of my study.

Collaboration was an important part of the action research. Once the schemes of work were written, two other colleagues delivered the lessons to their year 9 classes. There was an informal feedback session during Department meetings. This feedback was considered when planning the Oceans scheme of work. There could not be detailed feedback of each lesson, after each lesson due to time constraints. However, the feedback they provided about the Icy World scheme of work, was considered while planning the Oceans scheme of work.

3.7 Ethical Considerations

I submitted my CUREC (Central University Research Ethics Committee) form in order to gain approval for my research project. Once I had gained approval I could begin my research. However, I had to inform my Head Teacher about the project. I sent a letter informing them about the project (Appendix 7). Once this was completed I could carry out my research.

Also, to think about ethical considerations and to ensure this was an overt study I informed the year 9 class I was working with about my research and what I was planning to do with their feedback. I assured students that the information given would be confidential and it was simply to inform my planning and to help construct schemes of work that would suit the needs of the learner.

3.8 Collaboration

This is an important part of the research project. Two other geography teachers make up the department. They both delivered the schemes of work and gave me verbal feedback about the lessons during department meetings. A lot, of the feedback given to me was similar to my own observations. I have annotated the scheme of work (Appendix 6) with their thoughts. These reflections by others in the department helped me further develop the scheme of work.

4. Findings and Discussion

Task design from PGCE to fourth year Head of Department

As a PGCE student planning lessons was a long process that was reflected upon constantly and changes made frequently. Timings were thought about closely, tasks planned down to the last minute and ensuring they kept students busy and engaged were important. However, on reflection tasks that kept students busy seemed to be important to me. I did not want students off task which could then mean behavioural issues could occur. As a trainee this is going through your head constantly. On reflection, was knowledge really thought about? I knew what I wanted students to know by the end of the lesson but was knowledge at the forefront of my lesson planning and ask design. Firth and Charter (2015) talk about knowledge and the new curriculum. Knowledge should be at the forefront of planning. I believe that knowledge is considered, however, tasks and the transfer of knowledge, the pedagogy seem to take a precedent when planning.

4.1 Task design: what is the point? PGCE Lesson Plans (Appendix 1 and 2)

During the PGCE course my lesson plans went through each stage of the lesson and what students would be doing at those times. The main focus of these lesson plans is pedagogy; this both consisted of teaching strategies to promote engagement. Also, linking this with behaviour management strategies. As a new teacher, pedagogy is the key focus, this is evident from my lesson plans. I wanted to demonstrate a range of different tasks which would show a range of different teaching styles in order to meet the teaching standards. I also wanted to use a range of different tasks in order for students to use a range of different skills during the lesson. For example, tasks to get students to work independently, working in groups, discussing ideas, investigating

questions. All of these different ideas about different teaching styles took up a great deal of time while planning. The knowledge would then be used around the tasks. The core knowledge during PGCE was something I was secure about, the teaching of the core knowledge and the tasks to help students understand the core knowledge was my main focus. Therefore, I focused on tasks then using the knowledge within the tasks.

Below shows the key themes that emerge when looking at the lesson plan. When reflecting back on my PGCE lesson plans it became clear that pedagogy and engagement were the key features of the plans. I wanted to keep students busy and engaged so students would not come off task and cause behaviour issues. The lessons I planned during the PGCE behaviour management was a focus. I was aware of the importance of the planning of engaging lessons would help reduce any behaviour management issues.

Figure 2.5

The themes identified are still themes that I consider when I plan my lessons today (Figure 2.5). However, I think the priority of my lessons has changed. As I have progressed with my career and I have become more confident with behaviour management, pedagogy and the delivery of lessons, it has allowed me to think about the knowledge I want students to develop Nevertheless, it is still important to consider all the above as they are key parts to a successful lesson and are ideas that Firth (2015a) and Edwards (2015) discuss.

The key themes that have been identified above are key themes that are overarching themes when planning lessons. However, when looking at them they are perhaps focusing on key themes for a PGCE student. It obvious from a quick review of lesson plans that not all the above themes were considered in detail as the lesson plans developed throughout my career. The importance of knowledge and the transfer of knowledge becomes more of a focus. As a more experienced teacher, you have a deeper understanding of how students learn and how they internalise knowledge, in order to transfer it to a task during the lesson.

Throughout the PGCE lesson plan apart from the student learning outcomes, there is very little reference to knowledge and about the internalisation of knowledge. From the literature review and now as an experienced teacher I have seen how important knowledge is. There is, however, some reference in the lesson about benefits and expanding points. This demonstrates knowledge was important and building upon a point is essential to show in-depth knowledge. However, looking at the power point lesson (appendix 1), I am not sure the importance of the knowledge is portrayed. This lesson was created at the beginning of the second placement and towards the end of the PGCE course. The reflection of my lesson is focusing on pedagogy, *"Good range of activities, all students participating*." Knowledge was reflected upon perhaps, thinking

about giving students more answer time and good work is produced. Nevertheless, there was little specific reference to knowledge that was being taught.

PGCE Lesson, is an assessment lesson and knowledge and the opportunity to internalise knowledge is apparent due to the nature of the tasks. In the lesson students, read an article that highlights the issues of climate change and what is happening to the island and islanders (Appendix 1). As the teacher, I have researched the lesson and contextualised the information to help the students understand the knowledge (Ford, 2010 & Puttick, 2015). The knowledge for the students is based on The GA (2011:2) idea of knowledge. There is core knowledge, students looking at climate change and the impacts. The content knowledge present, is about climate change and the impact on people and this is to be discussed by the students. Finally, procedural knowledge is present, students have to think and look through information to try and understand the question at the beginning of the lesson.

The use of assessment criteria clearly highlights the core and content knowledge that needs to be included in the students' work. From this criteria it is clear that both skills and knowledge need to be demonstrated by the student. As the teacher planning this, students being able to demonstrate this knowledge was critical in order for them to meet the assessment criteria. This was one of the last lessons I delivered as a PGCE student, it is showing all the features of knowledge the GA (2011:2) and Lambert (2011) discuss. The final task allows students to demonstrate the knowledge they have internalised from the tasks throughout the lesson. Also, due to the nature of the task build on their own values and develop the knowledge they have entered the classroom with (Hopkins, 2015 and Morgan, 2013). This lesson brings together many of the ideas I have researched in the literature review. Although, this thinking may not have been at the forefront of my mind when planning this lesson as a PGCE student but on

reflecting on this lesson as a more experienced teacher it is clear that task design and the understanding of task design is fundamental if knowledge is going to be taught in a balanced way. By balanced I mean, I have fulfilled my job by helping students internalise knowledge.

4.2 Task design as an NQT and beyond.

These lesson plans were insightful to my planning of task design. When reflecting on lesson plans throughout time, it is clear how my teaching has progressed and what I see as important in a lesson. The main outcome I can see from the lesson plans is that the use of knowledge of my lesson is fundamental. It appears that I use the same knowledge throughout the lesson but want students to gain a deeper understanding of the knowledge I am presenting to them. During my 4th year of teaching this is a skill that I seem to be more aware of. Planning lessons with the knowledge I want students to understand must be secure in my planning and this will ensure students can internalise this knowledge. I am now more selective of the knowledge and can use knowledge in a range of different tasks to help students internalise the information and then demonstrate their understanding of the knowledge. Below is a table to summarise the lesson plans and the main points I have taken from each of the plans. However, this has only become more apparent to me throughout my career and the more opportunities I have had to experiment with lessons.

NQT	Year 2	Year 3	Year 4
• Pedagogy is a focus of the lesson plans. • Knowledge that needs to be taught is discussed. • Timings are clear • Lots *of tasks* discussed • Key terms • Enquiry learning is encouraged	• Enquiry question to introduce lesson • Students had to investigate • Use of a range of skills • Understanding of *key words* • Move towards the use of knowledge in *tasks*	• Enquiry learning/enquiry question to lesson • Enquiry learning introduce • and use of it has become tighter in order to deliver knowledge • Discussing information and consolidating knowledge • *Reflection and assessment*	• Enquiry learning and question • Use of enquiry learning to think about lesson outcomes • Learning knowledge. To ensure internalised knowledge, using knowledge in a variety of different ways • Consolidating knowledge using exam questions • Thinking about skills • *Reflection and* assessment

Figure 2.6

Key themes
Sub theme

From this summary table (figure 2.6) it is clear the two main themes are core and content knowledge and enquiry learning. However, on reflection this could be seen as procedural knowledge. Bringing this all together is the knowledge The GA (2011: 2) and Lambert (2011) have emphasised. . What they both discuss along with Firth (2015a and b) is how knowledge is used within the lesson.

Enquiry learning was clearly an idea I have used throughout my teaching, I will explore the development of enquiry teaching through my lesson plans later. The other key theme was knowledge. I am going to look at both of these individually in the next section. I am also going to explore and evaluate the structure reflecting on Edwards (2015) discussion.

4.2.1 Use of knowledge

This clearly links to Lambert and The GA (2011) discussion about knowledge. Geographical knowledge can be thought of in terms of core knowledge, content knowledge and procedural knowledge. This understanding of knowledge has been in my lessons but I have not necessarily understood the "type" of knowledge.

As my career as a teacher has progressed it is clear so has my understanding of knowledge and the delivery of this knowledge. In lesson plan 4 (Appendix 2) it is clear the understanding of how children process knowledge has become clear. In the lesson plan I discuss about the consolidation of knowledge. With this in mind I feel as the teacher I have recontextualised some of the information (Puttick, 2015), but have also given students the opportunity to construct their own ideas. The tasks centred on this knowledge, have given the opportunity for students to use the knowledge and internalise the knowledge due to the nature of the tasks. For example, in this lesson, the use of level marking and answering the exam question gave the students to apply knowledge. In order for them to apply knowledge they must have internalised the knowledge. In the lesson, the knowledge that was presented was the same throughout, the tasks were centred on the use of knowledge to give students time to internalise this knowledge and be confident with the use of knowledge.

The NQT lesson plan (Appendix 2) had a wide range of knowledge that was presented to students, the different types of knowledge that discussed by Lambert and the GA (2011) was planned to be used during these lesson plans. However, there was a greater amount of knowledge in the lesson than time to internalise this knowledge. As a students the range of tasks with the combined knowledge would have been difficult for students to internalise and then fully understand the core knowledge. The constant

change of task and lack of thinking time, would mean that the internalisation of knowledge and the opportunity to recontextualise (Puttick, 2015) would have been limited. As an inexperienced teacher, who has had limited experience the teaching of knowledge is difficult. Thinking time is a scary thought, as a new teacher this means time perhaps for students not to be focused on 'doing something'. Therefore, giving students lots of tasks means they are busy working. Reflecting on the lesson now, there appears to be an excess of tasks and knowledge. This demonstrates the importance of task design and knowledge need to be thought about together to ensure students can internalise this knowledge and apply it to tasks. These tasks should allow for students to construct their own knowledge. As well, as building on their previous knowledge and using their own values (Hopkin, 2015) to help internalise the knowledge.

4.2.2 Enquiry Learning

It is clear that enquiry learning has been something I have been interested in since the beginning of my PGCE. All my lesson plans have had some element of enquiry learning. Whether this was just an enquiry question or some skills that allow students to inquire more into the subject. I knew as a teacher from PGCE I wanted students to explore knowledge. After all, this is how Geography was discovered and how explorers found out about the world.

The GA and Lambert (2011) consider enquiry as a branch of knowledge. They believe that problem solving and thinking skills are all a part of a well-rounded curriculum. Having enquiry learning a part of lessons allows for this.

When reflecting upon my lesson plans I have refined enquiry learning in my lessons. If we look back at NQT Lesson Plan (Appendix 2) enquiry seems to be a huge part of the lesson, with lots of opportunity to explore. There are many tasks which allow students

to explore the idea of environmental sustainability. However, evaluating the lesson plan the knowledge part of the lesson appears to be lost, as students are consecutively completing tasks rather than discussing the idea if sustainability. For example, there is little opportunity to understand the key word of sustainability. Through the variety of tasks and the nature of exploring it feels the key message of environmental sustainability was lost. It demonstrates that enquiry learning can be difficult to execute at times and needs to be refined.

Comparing the NQT Lesson Plan to Lesson Plan 4 (Appendix 2) enquiry learning and knowledge are linked together and there is a more cohesive relationship between them both. Lesson Plan 4 gives opportunity to explore knowledge. They have to review knowledge and then organise knowledge. The answer to the enquiry question is given within the card sort. Then they continue to explore the idea of urban regeneration based on that original piece of information they were given. While they are reflecting on the information and knowledge they are internalising it. This shows how the idea of enquiry learning has shaped task design.

Although, compared to NQT Lesson Plan enquiry is not used throughout, thinking skills are reinforced. According to Roberts (2013) and Lambert (2011) decision making and thinking skills are important for a well-rounded curriculum. The sorting of information and reflecting, then putting into categories is all a part of enquiry learning. Lesson Plan 4 has a huge emphasis on this, the tasks require students to use the knowledge to deepen their understanding and then apply to an exam question. In my opinion, this is how enquiry learning is used at its best. NQT lesson plan does not allow for this deepening of knowledge, enquiry learning feels “superficial” in this context.

Critical thinking was discussed by Roberts (2015) and especially relating to the new GCSE and A-Level curriculum. Critical thinking which is reinforced by enquiry learning is important if students are going to succeed. Students need to be able to investigate. It is clear from this and the discussion of critical thinking and enquiry learning in the national curriculum show the influence they have on task design. From the evaluation of my lesson plans it is clear how influential enquiry learning has been and how it has benefited lessons. However, it must be used correctly, otherwise there is a risk of knowledge being lost through the investigation of a range of information.

4.2.3 The changing nature of the structure of lessons

The structure of lessons has not really changed and variety of different lesson structures are used moving through the quadrant model. Since my PGCE, I have also experimented with a variety of different structure to lessons (figure, 2.1), this became apparent to me while looking at Edwards (2015) work and the quadrant model. This is also important to ensure students remain engaged in my lessons.

Using the quadrant model (Fig 2.1) it helps students internalise information and the development of knowledge throughout the lesson. My lessons move throughout the quadrant but the order varies. The model is there to promote learning and for students to internalise knowledge, demonstrating their new knowledge. Reflecting on my lesson plans, it is clear the structure can vary and progress can be made. As discussed before, enquiry learning is an important part of geographical knowledge. Therefore, a majority of my lessons and certainly the ones included in this research begin in box 3, in the quadrant model. Boxes 1, 2 and 4 vary in the lesson plans. It demonstrates there is not correct way of structuring a lesson.

Firth's (2015 a) idea about structuring lessons are also important to consider. It is evident from the lesson plans that his ideas were considered (2015:74). It brings together the main elements of a lesson, maintaining geographical knowledge at the forefront of planning. Firth's ideas about cognitive processes are relevant to my lesson plans. As a teacher, students need to a range of skills in lessons to develop these skills and maintain engagement during the lesson. A range of these processes are used in lesson plans and these processes help develop the tasks in the lessons that help students internalise the knowledge.

However, something I would discuss is that in the NQT lesson plans (appendix 2), some of the geographical knowledge can be lost when there has been a heavy emphasis on enquiry learning. On reflection the enquiry learning took away from some of the knowledge. As the students were investigating, the core knowledge was lost and the outcome of the lesson drifted from what the intended outcome of knowledge was. This could have simply when students were hypothesising, some students became more involved with that and the rest of the lesson was lost. Therefore, careful planning needs to take place when planning enquiry lessons to ensure knowledge is at the forefront and students have the skills and scaffolding to continue to enquire further and build upon their own knowledge throughout the lesson.

4.3 Initial Student Feedback about Task Design (Cycle 2)

To understand what students want from a task I gave a questionnaire to students in the year 9 class I was teaching. I presented this questionnaire as a way for year 9 students to take control of their learning. This class is a class that is disengaged. Although, they enjoy geography they find it difficult to remain on task. I said this was an opportunity to tell me what they like and what tasks they like doing. Seeing tasks from a student's

perspective is something I have briefly done before. But this would help me then think about the tasks I plan and how it is suiting their needs.

The overall results from the questionnaire was that they wanted lessons to be fun (figure 2.7). The choice for the tasks that students find enjoyable, were the tasks that we had completed in the last scheme of work. I knew students then would be clear about what the tasks were. When looking further at the questionnaire some interesting ideas came out. Question 1 did not really highlight anything that I was previously unaware of. I knew group work was a favourite among the class. When walking around while students were completing the questionnaire, students said they like group work because it, *"Gives you time to think," "We can discuss ideas and check what we all think."* This was interesting as this was not what I thought they perceived group work to be. Actually was it a good opportunity for students to develop their knowledge further and deepen one another's understanding.

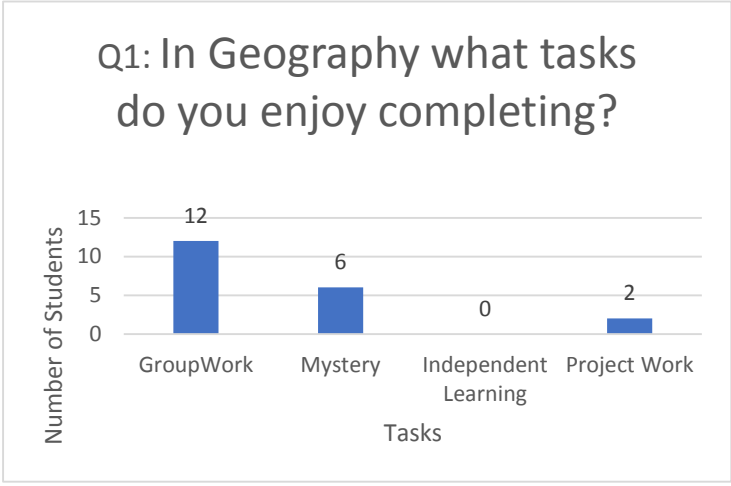

Figure 2.7

Although project work only 2/20 students said they enjoyed completing this, a majority of students said this was a favourite task from the previous scheme of work. This project work was independent with little input from me. It was a research project which

allowed them to answer an essay question as their assessment. When discussing this with students as I was walking round, they commented, *"It allowed us to really look at a place and see what happens with water," "We could see what people lives were like," "You didn't really tell us the answer, you gave hints and we just researched what interested us…obviously as long as we could answer the question."*

In the questionnaire students did not really convey their choices particularly well and why they made their choices for question 1 (figure 2.8). The main theme was that the majority chose group work as it was more fun and they interacted with other students. Below is a graph to highlight they used certain words to describe why they chose the particular type of task.

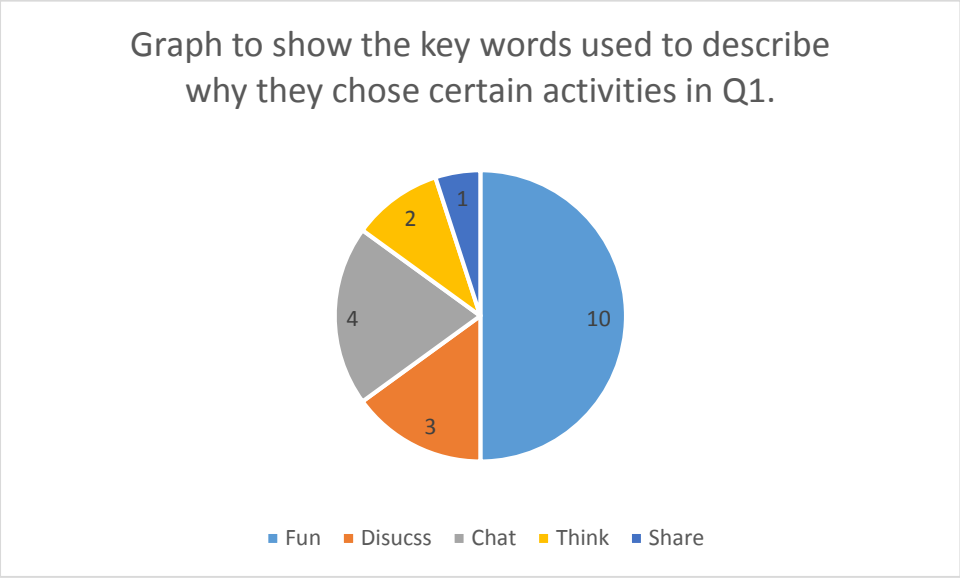

Figure 2.8

Fun came out as the key factor. When planning lessons teachers think about how lessons can be fun. However, there also needs to be a focus on the curriculum and content. Engaging lessons are important for teachers and this links to fun in the eyes of students perhaps.

Those 10 students said they chose a particularly activity because it was fun, 8 out of the 10 chose group work. Group work is a beneficial activity and allows students to discuss their ideas and build upon one of others knowledge. However, in the classroom, sometimes group work can be mistaken for an opportunity to not do much work by some students. Some students who are hardworking will complete the work and take the lead while other students complete a little amount. I wanted to bear this in mind when thinking about the scheme of work I would plan for the students.

Thinking is an important idea that needs to be mentioned. Although, not important from the data, students comment while they were completing the questionnaire they wanted more time to think while working through a task. One student said they felt "rushed," at times to complete the work and they just wanted a few more minutes to think. This is the idea of internalising information and allowing students to take on the new knowledge, internalise it and then use it to complete a task. On reflection the questionnaire perhaps limited some of the students' ideas.

Question 4 and 5 were similar questions. What tasks have you enjoyed completing and what activities would you plan for the new scheme of work if you as students were in control of the lesson planning. Out of the 20 students, 16 students enjoyed completing the campaign in the last topic. This was group work and students had to plan a campaign to save the Bengal Tiger. However, in the groups, there were individual roles that students had to complete. This then ensured students all had specific roles to complete.

What activities students would like to see in future lessons was group work and opportunities for discussion. Using this information I planned to use elements of the students' feedback and incorporated into lessons. I used group work on a smaller scale

and gave more opportunities for discussion during the lessons. This would also allow students to feel ownership over lessons.

After this questionnaire, it was clear students wanted engaging lessons with opportunities for group work and discussion. Thinking about this, students want to discuss in order for them to help develop one another's ideas. Students have a range of different experiences, therefore discussing Geography can help develop their knowledge based on a range of different experiences (Firth, 2015a).

From the outcome of this questionnaire I wanted to give the students the opportunity to explore information, they enjoy learning new knowledge but they just want more time and like to know and understand on a deeper level. This clearly seems apparent with socially constructed to knowledge, as this can be built upon based on the knowledge and values they come in the classroom with. These lesson plans will need to explore this further and experiment ways to do this to encourage learning and engagement during lessons.

4.4 SOW and learning diary results (Cycle 3).

4.4.1 Scheme of Work- Icy World

The first scheme of work I planned using feedback from students was the Icy World scheme of work. After each lesson, the students and I would reflect on the lesson in an informal manner.

Below you can see the Scheme of Work. The main themes I have identified from student evaluation were time, group work and discussion (Appendix 5). The group are not a confident group with their own ability. Group work gives opportunity to check answers and develop understanding by talking through ideas. For students this provides

clarification and an opportunity to check their own understanding before perusing a task.

Students in the group referred to time; this related to thinking time or more time to complete their tasks. When planning lessons, teachers are concerned with timings and to a certain extent keeping to these timings. As I have become a more experienced teacher, timings have become a less of a constraint and if something is going well, then I do not hesitate to allow students to carry on. However, sometimes timings are crucial to ensure all the content is covered. Both in detail and scope. I was conscious of this when completing the tasks.

The students who were helping me complete this investigation become easily distracted. A way to manage this is to have a range of different tasks to complete. However, in having a wide range of different tasks that would require different skills it meant students were not having time to complete the tasks properly. In my own reflection, I believe some of the meaning of tasks was being lost as students were not thinking about the tasks or having enough time to "get into" the tasks set. Whether this could simply be looking at pictures or a writing task giving their opinion.

Edwards (2015) discussion of the quadrant model looks towards this. Students need to take time internalise knowledge. When planning the Icy World scheme of work, I perhaps did not allow enough time for students to internalise new knowledge. As a teacher, I wanted students to take on new knowledge and use it. However, especially in lesson one in the Icy World scheme of work due to the wide range of tasks there was not time for them to do this. After my reflection and the students' reflections this needs to be considered more carefully when planning the oceans scheme of work. A structured way to think about new knowledge is crucial. Also, the group find it

challenging to take on new knowledge and process it; students need to be able to learn how to internalise new knowledge, some pointers about what they should actually be thinking about.

4.4.2 Teacher reflection

Knowledge and time seem to be a key theme when reflecting upon my own lessons. When thinking about my initial planning I wanted a range of knowledge to be covered to expose students to a range of different information about "Icy World."

While planning the lessons differently to my lesson plans in previous years, knowledge and key concepts were at the forefront of my thinking. However, on my own personal reflection, some of this knowledge was lost through tasks. I thought about previous experiences of student (Hopkin, 2015), and tried to build on this. Students would have covered very little about Icy World previously so wanted to introduce this new knowledge.

Task design was important for this scheme of work, as the content was so new for students. The range of tasks were there to facilitate learning. When planning the tasks, I wanted a range of tasks to help students build upon prior knowledge from the previous tasks. However, I do believe now due to the range of tasks students did not have the time to internalise knowledge. This is particularly relevant for the first couple of lessons.

Lesson 3 in this scheme of work which ran over two lessons is a good example of a lesson that allowed time to internalise knowledge and then apply it. Also, develop students own values and ideas about tourism (Hopkin, 2015). Students have covered the impacts of tourism before in fantastic places and adventure landscapes. This tasks allowed them to continue to develop their knowledge and make it relevant to an icy

landscape, considered the specific problems related to this type of landscape. The literacy grid was there to guide the students' knowledge and use it carefully in the tasks to show how they personally internalised the information. Also, the literacy grid allows for Claxton (2007) idea of split screen thinking, thinking about learning new knowledge and skills. Although, in enquiry lessons it is important to have open ended and opportunities to enquire further (Roberts, 2013), having an end goal and a framework of success still allowed for this open ended nature of the task but allowed the task to be scaffold to support the learners needs (Firth, 2015a and Wood et al, 1976). I wanted to use these ideas and take them forward to the new scheme of work.

4.4.3 Oceans Scheme of Work and Learning diaries.

I introduced learning diaries to help the students and myself reflect on this scheme of work. I wanted a more insightful discussion from all students. The learning diaries were completed at the end of the lesson. The questions below were the main focus of the diary and along with my reflection it help inform the planning of the next lesson.

1. Skills I have learnt in today's lesson?
2. What did I find interesting in today's lesson?
3. What tasks helped me understand the geography and why? (I wanted a question to encourage students think about knowledge as well as tasks)
4. What tasks did not help me as much to learn the geography and why?

When using the diaries for reflection the key themes that students discussed were knowledge, the tasks students were completing and thinking skill. What was clear from the learning diaries was that students are keen to learn new knowledge. This is the knowledge considered by Firth (2015b) & the Geographical Association (2011: 2).

Students thoughts of what they found interesting was all centred on geographical information and facts. Key facts and interesting facts are clearly facts and information the engage students. The interesting facts from the lesson are facts students find engaging; it supplements the core knowledge. However, when looking at this, the knowledge is often the social constructed knowledge and not the core knowledge. It could be argued that perhaps is the core knowledge being lost. Personally, on reflection of the oceans lessons, the social constructivism geography has allowed students to become engaged with the lesson and lead to the core/disciplinary knowledge. An example of this is the lessons about tides. Although, it was a media story that engaged students, the knowledge of how tides work was the key information that was developed. The newspaper article demonstrating the risk of tides allowed students to inquire further about how tides work and why they are dangerous. Students had the opportunity to engage with the core knowledge (Firth, 2015 b), as a teacher, the need to inquire more and showing an interest is one of the main aims of my lesson

4.4.4 Enquiry Learning

Understanding enquiry learning and the designing of tasks was one of the key questions I wanted answered from action research? In the oceans scheme of work, enquiry learning was the focus and each lesson was centred on a question or title that would encourage students to want to learn more.

The way the tasks were structured and the questions asked to introduce ideas that students could further explore. Students did not really discuss the in their reflection about the questions and the idea of finding the information for themselves. However, in general discussion this is an idea they find more challenging. But when they find out facts and knowledge, this is something that encouraged them to keep working.

The enquiry questions at the beginning of the lesson were also important in starting the lesson with something they would have heard of and they could build on. Looking at ocean currents is a complex idea. Using Nemo, a well-known Disney character allowed students to think about the geographical knowledge with something that is familiar to them. This builds on Hopkin (2015) idea and using students' original values and knowledge and building upon them. This was my intended tactic with this lesson. There were fewer tasks in this lesson, just the reuse of the same content to help students internalise knowledge. The final tasks was a way students could demonstrate the knowledge they had learnt about currents with a focus on direction, names of places and temperature. With these three elements in mind, students completed the Nemo cartoon strip. This was completed well and students were given most of the lesson and homework to complete. Knowledge was clearly demonstrated and the element of fun was created by using a Disney character. This lesson I felt was successful for those reasons and students outcome were positive. The pair work was not enjoyed and students did not appear clearer from this. I think students need a basis for discussion and pair work before it can be used in a positive manner.

4.4.5 Knowledge

I was conscious based on the literature and previous lesson reflections that knowledge needed to be at the forefront of planning. This was the case for both schemes of work. However, in the oceans scheme of work, the knowledge was clear and the tasks were based around the knowledge more so. I tried to base the knowledge around several tasks to help students internalise this knowledge.

Students were more inquisitive about the content as I tried to make it relevant to them and have ideas and values in the lessons they could use or build on. Or something they

even find familiar to help them become engaged with the lesson. Icy World scheme of work was a lot of content with lots of tasks. There was not the time to internalise the information.

The key message to take from this is making knowledge relevant to students. However, it could be argued that perhaps knowledge was lost due to the recontextualistation as discussed by Puttick (2015). The core knowledge being made relevant by teachers for students could mean that some of the core knowledge would have been perhaps changed and the meaning skewed through the teacher's knowledge. Some of the complex ideas of oceans I did have to make accessible for students. I ensured knowledge was at the forefront but used the knowledge in a variety of ways to ensure the learner has the time to internalise the knowledge. I was also aware that students had been exposed to ideas about oceans, with ideas like Nemo and litter. So I needed to build upon their values, however, improve the accuracy of the understanding of these topics.

This scheme of work reflected the interest of students and incorporated their ideas. Using what I had learnt from the reflection before it was clear what they wanted. The learning diaries also aided this planning. As well, as knowledge being important to teachers, students enjoy learning new ideas. As teachers we need to make this relevant to pupils.

Therefore, the main differences were knowledge being planned making knowledge familiar to students in order to help them access the information. Also, the amount of tasks in the Oceans scheme of work was reduced. The aim was to internalise information rather than take on lots of new information that is not fully understood and students cannot use their knowledge in tasks. The final tasks were tasks students could

get involved in with and this is what they appeared to enjoy. Time to use the new knowledge they had learnt.

Still, one of the issues I would like to work on is experimenting with pedagogy to encourage students to use knowledge and think critically. This is looking at knowledge as considered by the GA (2011) and Lambert (2011). However, it is a skill students need to work on and build their confidence with their use of knowledge.

5. Conclusion

It is evident from this research that task design is a complex and thoughtful process. It has clarified to me as a teacher the important aspects of task design. These questions have guided my research:

1. Does teachers understanding of knowledge have an impact on task design?
2. Can knowledge be lost through task design?
3. How does enquiry learning play a role in designing tasks that engage year 9 students?

The opportunity to research task design has been hugely beneficial to my teaching career. Tasks are not just there for students to practice knowledge. Tasks are opportunities for students to internalise knowledge. Also, opportunities to build on their own knowledge and use their own values to help understand the knowledge.

5.1 Does teachers understanding of knowledge have an impact on task design?

This research project has highlighted one main issue, teachers understanding of knowledge and knowledge is used in the classroom. Knowledge is not what I first considered as factual information. It is complex and the importance of knowledge should not be taken for granted.

The idea of how knowledge can be socially constructed is important to task design. Disciplinary knowledge as discussed by Firth (2015 b) is only part of the knowledge and the knowledge that is discussed in the new curriculum. Knowledge, core knowledge needs to be highlighted to students before the social constraints of the world. It is vital as teachers, students are aware of the world before the impacts of humans. Although this is important. Students then need to realise that geography is a

dynamic subject, that is always changing and they need to appreciate how the human and physical world work with one another. This was an idea that I had never considered before.

As teachers we need to create well rounded geographers. Hopkin's (2015) model has demonstrated how we could create well rounded geographers. Geographical understanding is at the centre of the model and lots of elements feed into this model. Knowledge being one of these elements. However, from this investigation, knowledge is not as simple as this model is suggesting. Reflecting on Firth (2015b) and Lamberts (2011) ideas, knowledge is made up of several parts. From this research, this is at the forefront of my mind during task design. I now have a deeper understanding of knowledge as a teacher. Therefore, I feel I can now teach knowledge to ensure students have a deep understanding, while making well rounded geographers.

5.2 Can knowledge be lost through task design?

The key part I have taken from this is to try and ensure students have a deeper understanding of knowledge. Students should be confident with the knowledge they have been taught. Also, it is important students are aware of where knowledge comes from. As teachers, we research knowledge and then use it on our lessons. However, there could have been recontextualisation of knowledge (Puttick, 2015) (Figure 2.4). As teachers we will make knowledge accessible to students. During this time some knowledge could have been lost or due to our own experiences and values, these could have had an impact on the knowledge we teach. This has made me more conscious as a teacher to try and ensure knowledge is not lost. Also, making it clear where knowledge has come from to help students have a deeper understanding.

5.3 How does enquiry learning play a role in designing tasks that engage year 9 students?

Enquiry learning is an idea I have been exposed to since my PGCE. However, my experience as a teacher and this research has shown me really what it is about. Enquiry learning is about wanting to get students to want to know more and have a deeper understanding (Roberts, 2013).

Having enquiry questions at the beginning of a lesson is just the beginning of enquiry learning. Enquiry learning is about encouraging students to want to investigate more. I think after Icy World scheme of work, Oceans really embraced this. As a teacher, I want students to have the understanding to construct their own ideas based on the knowledge I have presented to them (Roberts, 2013). Enquiry learning is about teaching these skills.

During the Oceans scheme of work students had the opportunity to explore knowledge. Also, they had the time to internalise the knowledge. If enquiry learning is going to be a success then students need time to explore knowledge and use it. This was evident from the scheme of work. Students enjoyed learning new knowledge.

5.4 Future Ideas

This report has given me the opportunity to explore lots of different ideas about task design. Also, made me evaluate my planning of lessons and redirect my thinking of tasks that engage the learners to learn.

Critical thinking is still an element I need to work on during lessons. I feel on my own personal reflections that students have not had the time to build up the skills for critical thinking. Planning forward, this is an idea I want to explore further and make it relevant and suitable to the KS3 curriculum, it heavily features in the GCSE and A-

Level specifications so students are going to need to build upon these skills ready for their next stage of learning.

Skills would have to be the main focus and ensure students develop these before the core knowledge becomes too difficult. As skills and knowledge would have to be developed. This again thinks about Claxton's (2007) idea. The skills and knowledge would have to complement each other.

5.5 Limitations of the Study

Time scale was a factor when completing this research. Students found completing the learning diaries difficult. Next time, I would perhaps have a term where students think about reflecting on their own learning and the tasks in the lesson. This would give the students the confidence to do this, and perhaps give some indication what reflecting learning is. However, I am going to continue on working with different classes the skill of reflecting on learning, as it can both inform my planning as a teacher and learning as a student.

Another limitation would be the ability to review old lesson plans. This was difficult as after PGCE I only had one formal observation. So perhaps, in the future I would like to build a more catalogue of lesson plans to then evaluate a wider range of lesson plans. This then would provide a deeper understanding of planning themes.

I would also consider using group interviews, as well as the baseline questionnaires. Some of the responses during interviews would have been more in-depth and insightful and would have provided me with perhaps more clarity about students' ideas (Bryman, 2008). However, due to time constraints this was difficult and the lesson diaries during the second scheme of work did provide me with more information to help planning.

5.6 Concluding points

This research project has highlighted the importance of task design in lesson planning. This is not just down to the task itself but the number of tasks in the lesson. The key message is the tasks have to clear and concise and give students the opportunity to develop their knowledge.

The importance of conveying knowledge has been highlighted as crucial when planning lessons. The importance of ensuring we as teacher teach knowledge correctly and maintain core knowledge, not allowing knowledge to be lost through the minefield of task design.

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Appendix 1- PGCE Lesson plans

University of Oxford Department of Education

Class	Date	Topic (& links to school SOW/NC/exam syllabus)
Year 9		Fantastic Places

Key enquiry questions (these should form the structure of your plan overleaf)

Why did Finn build a causeway for the giant?

Student learning outcomes: key ideas to be understood	Student learning outcomes: skills
• volcanic activity Ireland • How formed/Was the Causeway formed • to look at management issues today.	• Independent enquirer • Group work (pair) • Creative thinker
How will you assess this? * class discussion * books * formation flow diagram	**How will you assess this?**

Resources for lesson	Professional development focus (Standards for Progression)
• PP • Photo • [illegible] • Management sheet • Tool sheet	

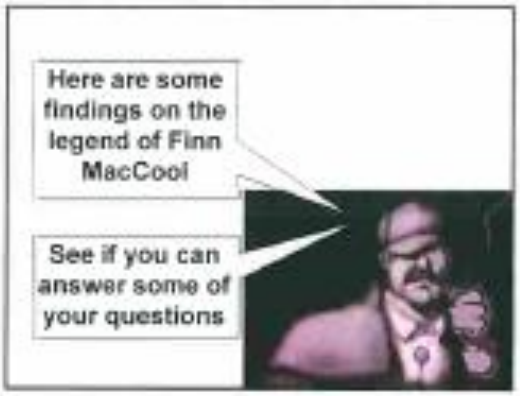
How well were the learning outcomes achieved? What implications are there for future lessons?

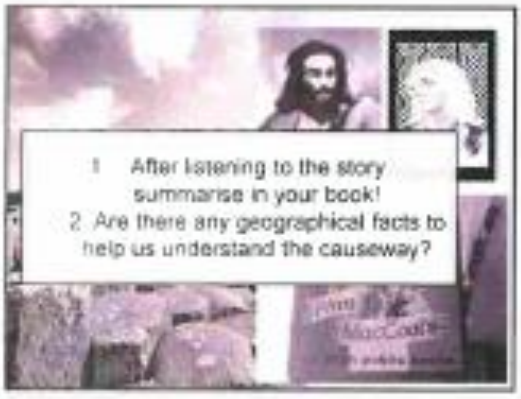
Timing	Lesson structure and activities
5mins	What do we want to know?
3mins	Describing words for this photo
10mins	Read story and see if it has answered any of their questions. Get students to summarise the key facts of the story. Are there any geographical facts.
8mins	All together go through the photos. See if we can come up with a hypothesis.
5mins	Go through other questions could ask to help understand story.
15mins	Complete sheet
10mins	Complete management sheet. (If we have time)
2mins	Have we answered the lesson objective.

Homework


Why did Finn build a causeway for the giant?
To know and understand how tectonic processes create coastal landforms


5 Describing Words


Here are some findings on the legend of Finn MacCool
See if you can answer some of your questions


1 After listening to the story summarise in your book!
2 Are there any geographical facts to help us understand the causeway?


Did Finn really build this for the giant?
If not, Finn MacCool then what?

Now you have heard the legend and formulated your own hypothesis what other types of questions is your curiosity generating on this very interesting piece of coastline

Who | How | When | What | Where | Why

Cards

- Empty the cards on the desk and see if you can work out the scientific story of the Giant's [illegible]

1. Create a flow diagram with 6 boxes.
Look at the information on the cards and create a sequence that shows how the columns of the Giant's Causeway were created.

2. World Heritage Sites are areas of outstanding beauty and of geographical importance. Write a paragraph containing three reasons why Giant's Causeway deserves to be a world heritage site.

World Heritage

Giant's Causeway

The Giants causeway is an area of amazing natural beauty and has been designated a world heritage site. This means it is protected by not only the government of Northern Ireland as well as local people but the United Nations as well.

World Heritage

Using the table you have been given think of 5 ways in which this area is managed.

Firstly what is the management?

Secondly who is in charge of this management?

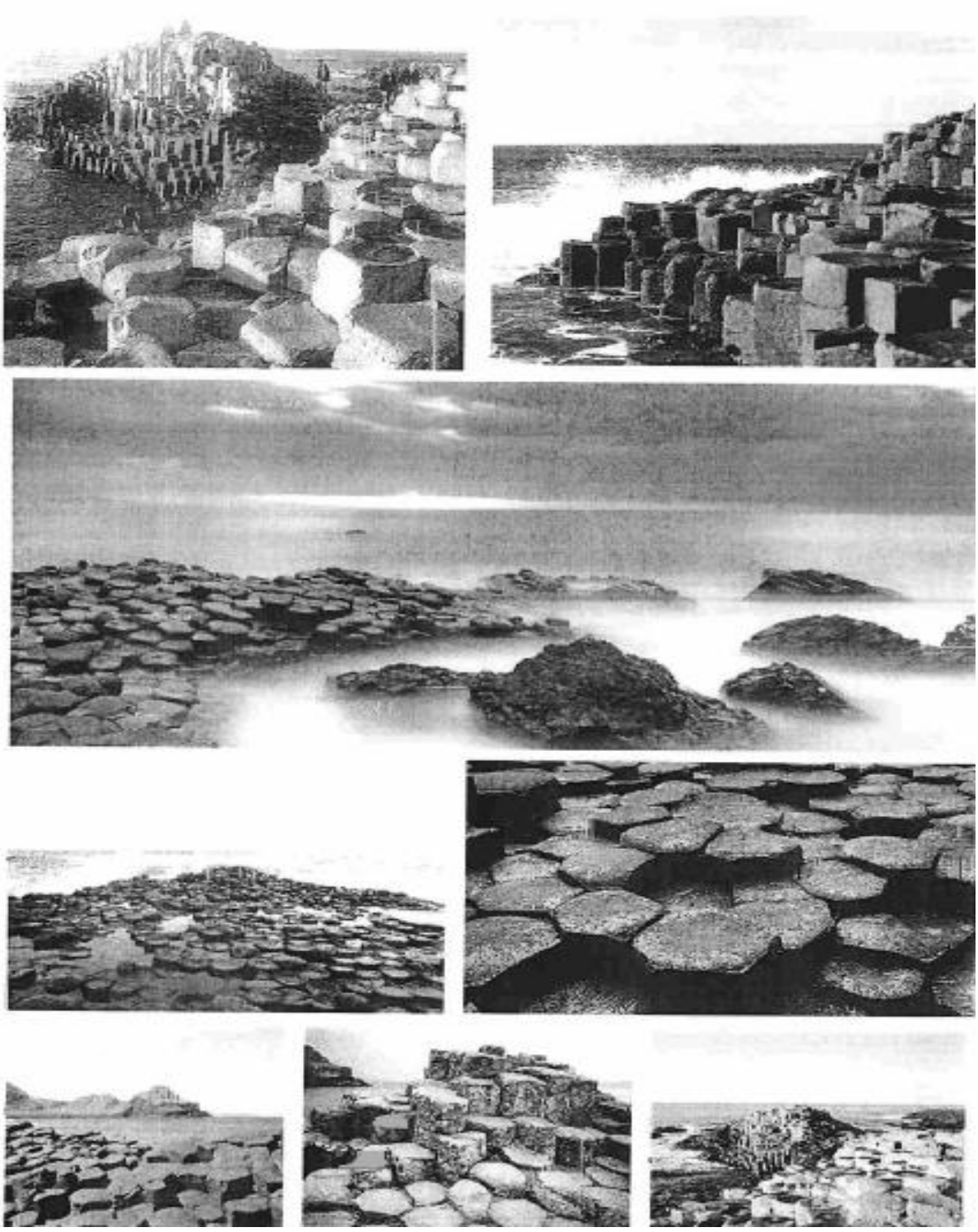
Thirdly what is it protecting?

Have you achieved today's learning objective?

Finn MacCool or not Finn MacCool that is the question?

To know and understand how tectonic processes create coastal landforms

Year 9 Geography Fantastic Places



The Giants' Causeway is in county Antrim	County Antrim is in Northern Ireland
Sixty million years ago county Antrim had volcanic activity	Molten rock was forced up through the earth's crust
The molten rock created a large lava plateau	The edge of the lava plateau met the sea
The molten rock of County Antrim is made of Basalt	Where the basalt lava and the sea met the lava cooled quickly
Molten rock came to the surface where it flows as lava	Lava erupted from the Fissures in Country Antrim
Some of the Fissures can still be seen today sticking out into the sea	The fast cooling lava created columns
The columns are mainly hexagonal in their shape	The lava columns create a rugged coastline
Basalt columns can only be created when lava cools quickly	Lava cooled super fast creating vertical columns
100,000's of people visit the Causeway every year	Fissures are cracks in the earths surface emitting lava
Lava constantly flowed from the County Antrim Fissures	The Giant's Causeway is a world heritage site

Class Year 9	Date	Topic (& links to school SOW/NC/exam syllabus) Fantastic Places

Key enquiry questions (these should form the structure of your plan overleaf)

Why are there bodies on the sea bed?

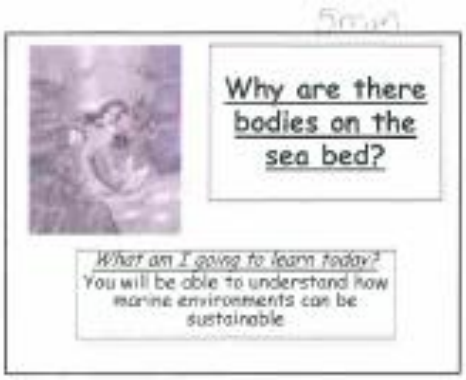
Student learning outcomes: key ideas to be understood	**Student learning outcomes**: skills
• To appreciate what is happening to our oceans • Understand about some ideas surrounding sustainability • To be aware of some of the solutions. **How will you assess this?** • Independent work (Last task) • Class discussion	• Discussion • Thinking about current issues • Developing answers further

Resources for lesson	**Professional development focus** (Standards for Progression)
Powerpoint Video questions Report sheet Atlas	

How well were the learning outcomes achieved? What implications are there for future lessons?

Timing	Lesson structure and activities
5min	Introduction to me Date, title and lesson objective.
5min	Why are their bodies on the sea bed? In pairs brainstorm ideas together. Then class feedback- write down 5 ideas and then check after the video.
6mins	Watch video (3mins) Discuss questions. Think about does it correspond to any of their answers.
5mins	Find Mexico then Cancun in the Atlas. Write a description about the location.
5mins	What are the benefits of doing this project? Get students think about some of the benefits of doing a project like this. Then use an idea and expand on it. Think about knock on effects. Go through example with them on the board.
5mins	Explain why projects like this are happening. Go through some of the pressures that are put on the ocean.
5mins	Think about some of the solutions. Show them this slide after they have all written down a solution.
15mins	Main task. (3mins explanation) Explain task. Go through sheet. Also go through mark scheme.
5mins	Peer Assessment. Show mark scheme. Give each other one star and one wish.
5mins	Discussion Information triangle. As a class complete the triangle.

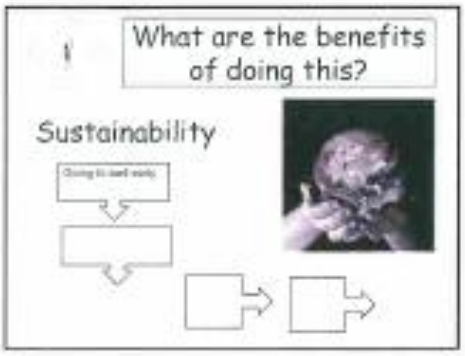
Homework


Why are there bodies on the sea bed?
What am I going to learn today?
You will be able to understand how marine environments can be sustainable


Creative Thinker
Why are there bodies on the sea bed?


Why are there bodies on the sea bed?

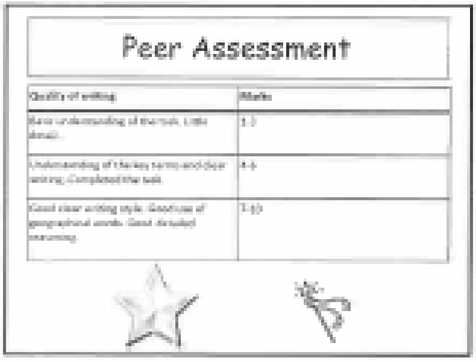

Where is this happening?


What are the benefits of doing this?
Sustainability


What is happening to the ocean?


Other solutions
What else is being done?
Protecting ecosystems
'Punta Verde'
Hotels are being made aware of their damage
Tourists are becoming more aware of Sustainable Tourism
Making Fisheries sustainable
Local people making tourists aware of their potential damage
Watch this video- How is this sustainable tourism?


Sustainable Tourism
You work for sustainable tourism in Cancun. Your job is to promote the Barrier Reef in an advert to highlight the problems and what you are doing to help this area.
Your job is to encourage people to come and visit the new sustainable area!!


Peer Assessment
Quality of writing
Marks
Basic understanding of the task. Little detail.
1-3
Understanding of the key terms and clear writing. Completed the task
4-6
Good clear writing style. Good use of geographical words. Good detailed reasoning.
7-10


Something you want to find out more about?
Something you found interesting?
What have you learnt?

Why are there bodies on the sea bed?

1. What are some of the concerns for the reef?
2. Briefly explain what is being done to help the reef.
3. What is the aim of the project?
4. How can this project benefit tourists and the environment?
5. What is the plan for the future?

Title

Prices

What is sustainable tourism?

What would happen if tourism was not sustainable?

What is happening in Cancun? What is there for tourists? Remember this is an advert sell this area. What is the new attraction? How is it helping the marine life?

Picture

University of Oxford Department of Education

Class	**Date**	**Topic** (& links to school SOW/NC/exam syllabus)
7E	9/5/2011	Adventure landscapes

Key enquiry questions (these should form the structure of your plan overleaf)
Why is Brad's jumping annoying the twitchers?

Student learning outcomes: key ideas to be understood	
To **know** that Cheddar Gorge needs to be managed To **understand** why different visitors to the gorge might be in conflict with each other To **be able to** create a code of conduct for the gorge **How will you assess this?** • Class discussion • Individual work	

Resources for lesson	**Professional development focus** (Standards for Progression)
• Power point • Conflict Matrix sheets	

How well were the learning outcomes achieved? What implications are there for future lessons?

Timing	Lesson structure and activities
5mins	Introduce myself Get students to introduce themselves
5mins	Copy down title and lesson objective. Discuss what they will trying to solve the question and look at the conflicts that occur in Cheddar Gorge
2mins	Watch clip. Explain what a twitcher is? What would you have to do if you were a twitcher?
7mins	Going through the theories and on whiteboards students have to write if they are likely or unlikely theories. Then copy down the correct theory in their book.
3mins	Show video- discuss some of the problems it may cause.
2mins	What other people may use Cheddar gorge. What other problems could these people cause? Would they have a high impact on the gorge? Go through each of the pictures and think of people who would use the gorge?
10mins 15mins	Complete conflict matrix. Discuss the answers with class. Reflect on what they think. Why have they given them these totals? Explain reasons, why do they think that particular group would have an impact? This will demonstrate their reasoning behind their answers.
5mins	Complete code of conduct signs Discuss classes code of conduct signs
5mins	Reflect on lesson. What type of lesson? What have you learnt? Go back to the lesson objective and discuss with the class.

Homework

Why is Brad's jumping annoying the twitchers?

Lesson Objectives:
To **know** that Cheddar Gorge needs to be managed
To **understand** why different visitors to the gorge might be in conflict with each other
To **be able to** create a code of conduct for the gorge

Year 7 Living Locally Adventure Landscapes

Cheddar Gorge

What is twitching?

- http://www.youtube.com/watch?v=LIRLK2IWEe0

So.....What is Twitching?

So why is Brad annoying the Twitchers?
Lets look at some theories

On your Whiteboards lets try and work out the likely reason

1. Brad has been jumping on a trampoline with his friends for an hour and it is disturbing the nesting birds

2. Brad doesn't like birds and every night he goes to jump up and down under a birds nest to disturb them

3. Brad is an athlete who does high jump and pole vault here a wood which disturbs the nesting birds during the spring time.

4. Brad enjoys jumping off cliffs and can sometimes disturb the birds as he falls

5. Brad is having a party above the bird watchers meeting and jumping is disturbing them

6. Brad loves to climb trees and then jump off them and which disturbs the nesting birds

7. Brad's favourite song is called 'Jumping' and he plays it really loud near to a famous bird watching areas

8. Brad runs a bouncy castle company in Cheddar Gorge which is very noisy

Base Jumping

•http://www.youtube.com/watch?v=IO9dFac5pE

Why else might people visit there?

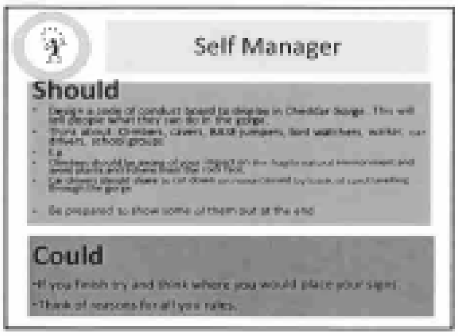
Why does the gorge need to be managed?

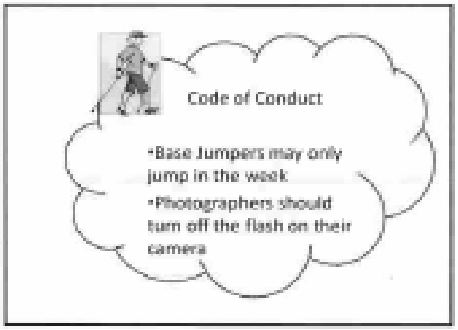
- In pairs complete a conflict matrix to see what problems different groups might cause

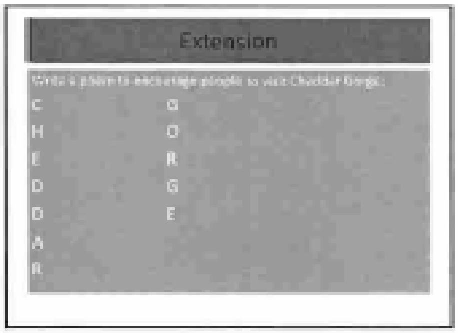
10=big problem 5=medium problem 0=no problem

	Create noise	Create stone fall hazard	Create visual pollution	Disturb wildlife	Cause erosion	Damage vegetation	Create litter	High risk of fatality	TOTAL
Walkers									
Cavers									
Motorists									

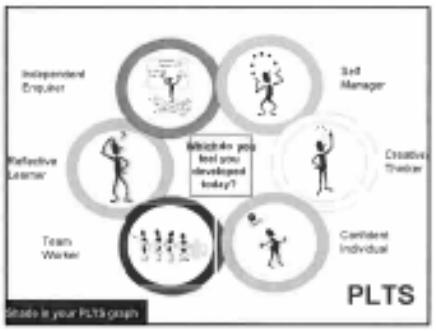
What are the conflicts?


Self Manager
Should
Be prepared to show some of them out at the end
Could
•If you finish try and think where you would place your signs.
•Think of reasons for all your rules.


Code of Conduct
•Base Jumpers may only jump in the week
•Photographers should turn off the flash on their camera


Extension
Write a poem to encourage people to visit Cheddar Gorge:
C
H
E
D
D
A
R
G
O
R
G
E


Why is Brad's jumping annoying the twitchers?
Lesson Objectives:
To know that Cheddar Gorge needs to be managed
To understand why different visitors to the gorge might be in conflict with each other
To be able to create a code of conduct for the gorge


Independent Enquirer
Self Manager
Reflective Learner
Creative Thinker
Team Worker
Confident Individual
PLTS

Class	Date	Topic (& links to school SOW/NC/exam syllabus)
Year 7		Fantastic Places

Key enquiry questions (these should form the structure of your plan overleaf)
Why is Bear so thirsty?

Student learning outcomes: key ideas to be understood	**Student learning outcomes**: skills
• Understand how to survive in harsh environments • Understand about the desert environment • Identify challenges of the desert **How will you assess this?** • Group Work • Class discussion • Individual work	• Group Work • Independent Learning • Map Skills – Key geographical skill • Creative Thinking • Independent Enquirer

Resources for lesson	**Professional development focus** (Standards for Progression)
Power point Group work Group Work Sheet Map Individual activity	• Questioning- drawing out information

Timing	Lesson structure and activities
5mins	Books out, date, title. Class settled. Explain the title slide. Getting students thinking- creating maximum engagement.
5mins	Watch the video. Give the students instructions for things to look out for. Write down five words that you feel describe this environment. Then discuss these as a class. Ask students why they have chosen these words. Develop their points.
2mins	Students are now aware we are studying the desert. Explain lesson objective. What we will be looking at today.
8mins	Look at some deserts around the world. Draw 3 deserts on their map and then name the continent. Highlighting that we will be focusing on the Sahara.
3mins	Fly over the desert. Sahara. Google Earth. To demonstrate to students how vast the Sahara is. Then quickly assess students now are aware of three challenges of the desert and why they are potential challenges. Can assess how much students understand of the lesson.
15mins	Go round and find information about the desert. Explain the concept behind the carousel. Go to each station and find information about the deserts and then write the points on the sheet (circulate around the classroom). Larger key words placed around each station (Differentiation).
15mins	*(5 mins)* Go through and each student feedback about some information about the desert. This allows me to assess what the students have learnt this lesson. Explain the task. Students plan their own trek. What I expect to be included in the task, show the success criteria to the students. *(2mins*
8mins	Students complete the task. *(13mins)* **Reflection** Which activities have helped your learning today? Make a note in their book. Feedback to the class, drawing out why this activity helped you. Then as a class reflect on whether we have met the learning objective.

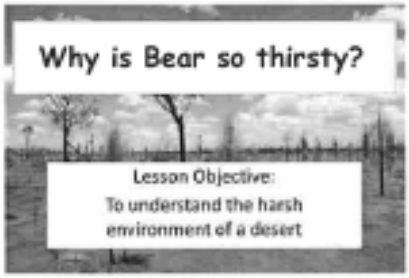
Why is Bear so thirsty?

Creative Thinker

Why is Bear so thirsty?

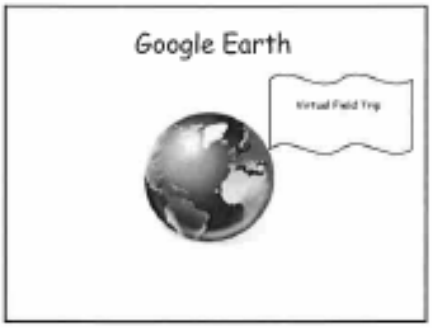
What did you think about the environment? Write down 5 words

Why is Bear so thirsty?



Lesson Objective:
To understand the harsh environment of a desert


Can you name some deserts?
Draw these on your diagram and add the continent name


Google Earth
Virtual Field Trip


Challenges in the desert
What challenges may you face in the desert?
Think of 3 challenges

Self Manager

Task

You have to find out as much about the desert as you can.

Complete your course around the classroom to find out the answers.

You must remain with your partner at all times!

Make sure you keep an eye on the clock

You have 12 minutes!!

Water

The rain in the Sahara is less than 10 inches a year. People cannot survive without water. There are few lakes. Most of these anyway are saltwater lakes. People cannot drink from them. Lake Chad is the only freshwater lake in the desert. Rivers once ran through the Sahara. We know this because dried up riverbeds, called wadis, still exist. When it does rain in the desert, these wadis fill up with water and become active rivers for a short time.

Temperature

In addition to being extremely dry, the Sahara is also one of the hottest regions in the world. The average annual temperature for the desert is 86°F (30°C) but during the hottest months temperatures can exceed 122°F (50°C), with the highest temperature ever recorded at 136°F (58°C) in Azizlyah, Libya.

Sand Dunes

The Sahara Desert has many different landforms. Parts have sand dunes. A sand dune is a mountain of sand. Some dunes can be as high as 600 feet. These dunes are found in huge areas of shifting sand called ergs. Regs are another type of landform found in the desert. regs are broad plains covered with sand and gravel. Regs make up most of the Sahara. Hammadas also make up a large part of the Sahara. These are areas of flat, raised land that are also known as plateaus. There are volcanic mountains in the Sahara in the country of Chad. Emi Koussi, a peak in the Tibesti Mountains is 11, 204 feet high and the highest point in the desert.

Storms

- **Sandstorms are very common in the desert. Brown clouds of sand cover the sky as wind blows sand everywhere.**

http://www.youtube.com/watch?v=DKiTo6J1B8

Animals

Animals in the desert must survive in a hostile environment. Intense heat, searing sun, and lack of water are just a few of the challenges facing desert animals. Animals that live in the hot desert have many adaptations. Some animals never drink, but get their water from seeds (some can contain up to 50% water) and plants. Many animals are nocturnal, sleeping during the hot day and only coming out at night to eat and hunt. Some animals rarely spend any time above ground. Spadefoot toads spend nine months of every year underground!

What happens at night?

The very dry air of the desert holds little moisture and thus holds little heat so as soon as the sun sets, the desert cools considerably. Clear, cloudless skies also help to quickly release heat at night. Most deserts have very low temperatures at night.

Your Trek through the desert

You are Bear!!

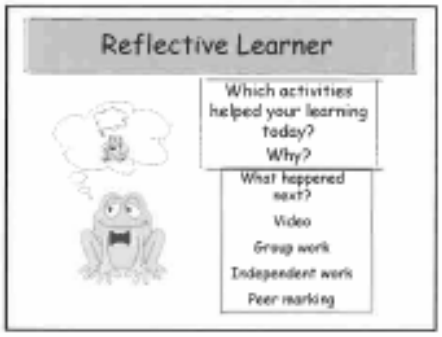
You are planning your TV programme.

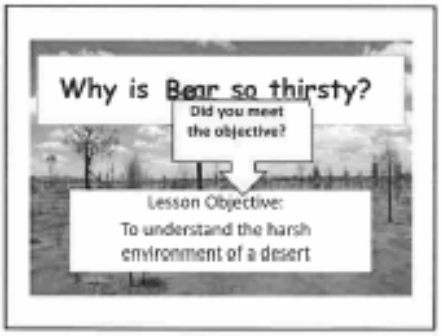
Using your knowledge about the desert write a report about your trip to the desert.

- Include information about the ch… desert
- Where you slept?
- Where did you get your food?
- Were you scared?
- What was the temperature like?

Success Criteria

- You are aware of the challenges of the desert
- There are some ways listed about how you can overcome these challenges
- You have written a diary account- using suitable language for a diary
- Good spelling
- Good punctuation


Reflective Learner
Which activities helped your learning today?
Why?
What happened next?
Video
Group work
Independent work
Peer marking


Why is Bear so thirsty?
Did you meet the objective?
Lesson Objective:
To understand the harsh environment of a desert

Appendix 2- NQT, 2, 3, 4

University of Oxford Department of Education

Class	**Date**	**Topic** (& links to school SOW/NC/exam syllabus)
10G CH	19/10	Coastal defence

WALT:

1. To understand the importance of sea defences along a stretch of coastline (Lyme Regis and Norfolk)
2. To identify the costs involved in both soft and hard sea defences
3. To be able to peer assess a set of GCSE style questions

WILF:

1. To have matched and applied 6 different types of sea defences throughout the lesson
2. To use examples of coastal management and apply them to a peer assessed GCSE set of questions (AFL)

Student learning outcomes: key ideas to be understood

- They will be aware of two stretches of coastline where coastal development has taken place or will do in the future.
- They will be aware why coastal defence is important.

How will you assess this?

- Questioning by CH (Informal Questioning)
- Class discussion
- Feedback with card sort
- AFL with exam question.
- Peer Assessment and class feedback
- Level marking of exam questions.

SEN

- Can reduce card sort to 12 if needed
- Can just match the sea defence to the name

G & T

- Whilst watching the clip can divide categories in to social, economic and environmental.
- Extension- advantages and disadvantages of sea defences

SKILLS
Numeracy
Discussion
Peer Assessment

Timing	Lesson structure and activities
10mins	Give students tests back. Quickly discuss their marks and that I need to collect them back in to write feedback on how they need to improve. Speak to the collection of pupils I need to at break time. Then move on. Go through the lesson objectives for this lesson and explain what we will be covering for the next few lessons. By the end of the group of lessons students would have completed a DME using the Happisburg coast (Next Term). Introduce the idea of coastal defence. Play the example of Lyme Regis to show the benefit of using coastal defence. How an area can be transformed can be demonstrated by using Lyme Regis as an example. Ask students to think about the social, economic and environmental while they are watching the video. Feedback CH
10mins	Explain we will now be looking at the Norfolk coast. A coastline that has many examples of coastal defence and areas that have been left to the sea. Question students about the idea of *sustainable* when discussing soft engineering. Quickly go through all the defence ideas first. Then move onto the slides that will cover them in more detail. Going through the slides with the class discussing the defences with the class. Questions to the class...how effective do you think these defences are? What would the impact be on the coastline? Think about social impact.
15mins	Go through the idea of hard and soft engineering. Introduction to the task. Card sort. 10 mins to match up the card sort (in pairs). This will help students identify the coastal defence and discuss with partners each of the defences. It will also discuss the costing implications of the defence and match up to hard and soft engineering. CH to walk around the class discussing students answers. Then give out the sheet summary. Students need to highlight the key points on the sheet. Fill in the gap and then glue into their book. *Extension activity (G&T)* Think about the advantages and disadvantages of these defences. Sort the advantages and disadvantages into the correct order.
15mins	Introduce the exam question and students can bullet point answers. What would be the key points needed in the answer.(10mins) Go over what is needed in a level 2/3 answer. Then swap with partner and students need to highlight key words used in their partners answer. Also give a WWW/EBI. (Key Words can be the focus)
7mins	Write down 2 bullet points in your about 2 key words you have learnt this lesson.

Homework

- **Ensure all sheets are stuck into their books**
- **Research on DEFRA website about the shoreline management plan. Find out what it is and where is it being used? Also what is a coastal group?**
  Due (2/11)

University of Oxford Department of Education

Class	**Date**	**Topic** (& links to school SOW/NC/exam syllabus)
		Environmental Sustainability
Year 8	15/11/11	Food Miles

WALT:

1. **To know and understand the origins of what we eat and the impact it has on the environment.**
2. **To begin to understand how you can have a sustainable meal.**

WILF:

1. Have knowledge of where their food comes from.
2. Be aware how far food has travelled.
3. Be able to make a sustainable meal with food that is seasonal in the UK.

Student learning outcomes: key ideas to be understood

- To be aware that different food is available at different times of the year.
- That food we eat comes from all over the world.
- Understand how we can make our meals more sustainable.

How will you assess this?

- **Questioning by CH (informal)**
- **Class discussion**
- **Feedback after enquiry**
- **Discuss and questioning about harvesting**
- **Questioning and discussion about how we can make a sustainable meal.**
- **WWW/EBI Sustainable meal**

SEN

- Table produced to copy down the harvesting times of vegetables.
- Map included with continents on when looking where food has come from.
- Only look at 4 of the different foods at Christmas dinner. Can do more if time allows.

G & T

N/A

SKILLS

Numeracy

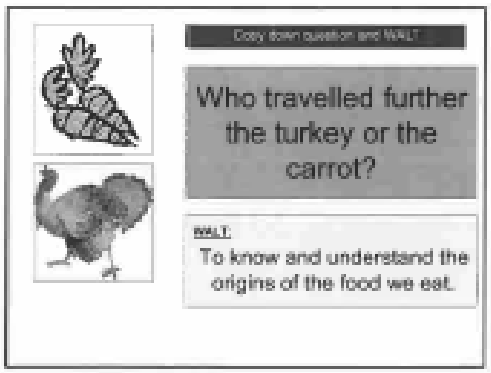
Discussion

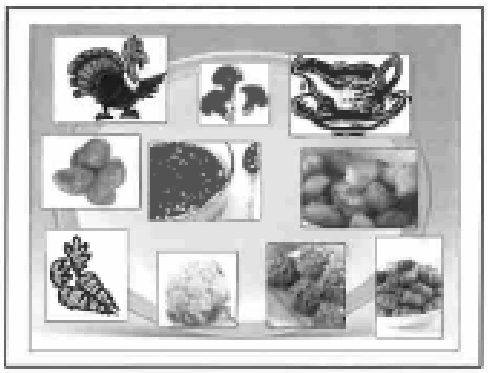
Peer Assessment

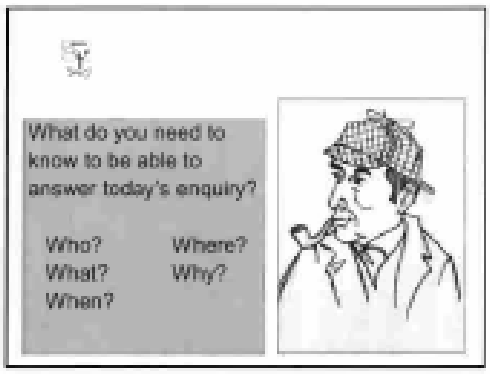
Group

Individual

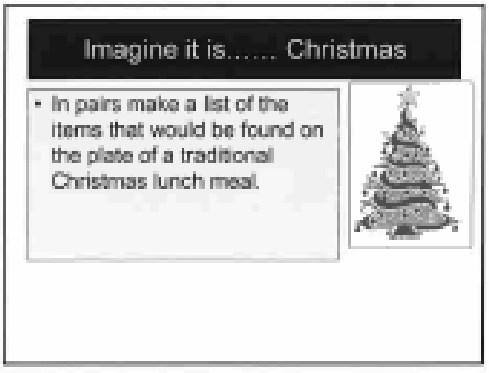
Timing	Lesson structure and activities
5mins	Write down date/title/WALT. Take register. Quick review what we have been looking at the last couple of lessons. Explain what we will be doing today.
5mins	Discuss the skills they will require this lesson to answer the question. Discuss what they would eat if they were eating a Christmas dinner. Then class feedback.
7mins	Now we have established what we are eating at Christmas. Students need to read the sheet that informs them about seasons and the food. This will show that all the food we eat at Christmas is not all in season. This will trigger the next question- Where does our food come from at Christmas?
10mins	Look at the next section of information. This shows students that Christmas dinner comes from all around the world. They add this extra information to the table. Class feedback on some the foods that they were shocked where it came from. Then using an Atlas try and place some of the food on the map showing where the food has travelled to be on our plates at Christmas. *Must do three foods.* *Could do five foods if time allows.*
3mins	Show students some of the foods that are currently in season. There job will be to create a sustainable meal. This means a meal that is only using food from this season. It demonstrates to students that having food from all over the world is not sustainable due to how the food travels and relying on other countries to provide this food. Therefore a sustainable meal means meeting all the needs of the meal and not damaging the environment as the food is all provided locally.
15mins	Using the paper plates students use the information and create a sustainable meal using the items that are currently in season. (5mins) If time allows students swap meals and WWW/EBI their partner's meal. They have to discuss with one another what makes their meal sustainable.
10 mins	PLENARY Students discuss their opinion on the issue with their partner and is it something that more restaurants should introduce.
5mins	Discuss the enquiry question and answer it. Also answer • What is a sustainable meal? • Do we know more about where our food comes from? Students pack up and leave.


Copy down question and WALT
Who travelled further the turkey or the carrot?
WALT:
To know and understand the origins of the food we eat.

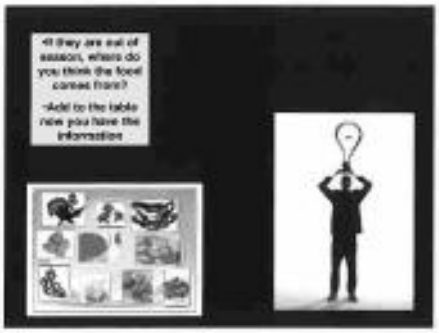


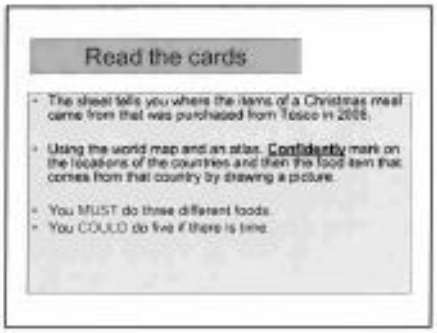

What do you need to know to be able to answer today's enquiry?
Who?
What?
When?
Where?
Why?


What parts of your meal are in season?
On your own and in 5 minutes read the information on vegetable planting and harvesting in the UK. At the end of the 5 minutes you should know what vegetables from your Christmas dinner are in and out of season.
If they are out of season, where do you think the food comes from?

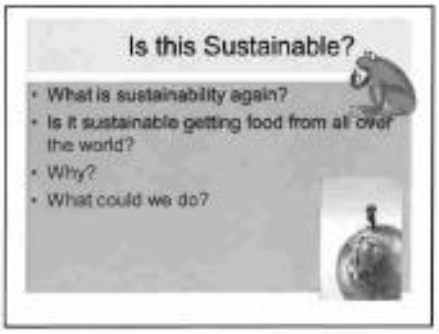

Imagine it is..... Christmas
• In pairs make a list of the items that would be found on the plate of a traditional Christmas lunch meal.


What parts of your meal are in season?
Using your table fill in the answers using your information sheets to help you.
Lets do the first one together.
Christmas Food
Harvesting
Where does this food come from?
Carrots
July


If they are out of season, where do you think the food comes from?
-Add to the table now you have the information


Read the cards
The sheet tells you where the items of a Christmas meal came from that was purchased from Tesco in 2008.
Using the world map and an atlas. Confidently mark on the locations of the countries and then the food item that comes from that country by drawing a picture.
You MUST do these different foods
You COULD do five if there is time


What if I told you the average Christmas dinner had travelled in total 33,000 miles before it got to it's plate in the UK?
That is enough to circumnavigate the world


Is this Sustainable?
What is sustainability again?
Is it sustainable getting food from all over the world?
Why?
What could we do?


What food is in season?
beetroot
broccoli
butternut squash
carrots
leeks
onions
parsnips
potatoes (maincrop)
pumpkin
swede
duck
goose
hare
pheasant
rabbit
turkey
wood pigeon

Our Sustainable Meal

Jamie Oliver has just rung me at lunchtime.

He has told me that you need to plan a sustainable meal for his new restaurant.

Use the previous slide and the sheets plan the sustainable meal. Only using food from this season and food that is available to us from this country

Lets Reflect

What is your opinion?

Can we sustainably eat food?

What should/could restaurants do?

Why was our meal sustainable?

Have we met the WALT?

What was the answer

Who travelled further the turkey or the carrot?

WALT:

To know and understand the origins of the food we eat.

Month	Planting	Harvesting
January	Broad beans Cauliflower	
February	Shallots Cabbage Parsnips	Leeks Swede Turnips
March	Carrots Beetroot Garlic Broccoli	
April	Potatoes Lettuce Peas Brussels Sprouts	Cabbage
May	Runner beans Cucumber Pumpkin	Onion Broccoli
June	Sweetcorn	Beetroot Garlic Cauliflower
July	Turnips Leeks	Carrots Shallots Lettuce
August	Swede	Potatoes Peas Broad beans
September	Onion	Runner beans Cucumber Sweetcorn
October		Pumpkins
November		Parsnips
December		Brussels Sprouts

Turkey from France	Wine from Australia
Cranberry sauce from America	Carrots from Mexico
Potatoes from Israel	Broccoli from Spain
Brussels Sprouts from the UK	Cauliflower from Italy
Stuffing from Ireland	Sausage and bacon from Belgium

Year:	Type of Grouping:	M	S		No of pupils	B	G	Total
8	(Tick one)			Set: TA		17	11	28

Context / prior learning:
Students have been studying earthquakes and volcanoes. Previous lesson we have studied primary and secondary effects of the Kobe earthquake.

[redacted]

WALT: Understand how a LEDC country responds to an earthquake and what can they learn form MEDC

WILF: A justified response about how LEDC's can respond to earthquakes.

Focus of this observation (if appropriate):

Activities:

11.20 Welcome students into the class. Copy date, title and WALT while I take the register.

11.25 Students think of one geographical question. This question will help them investigate the question of today's lesson. *"How do countries respond to earthquakes?"* Also encourage students to think about what they need to investigate themselves today to meet the WALT. Feedback from students.

11.30 A description of the location of Haiti. Students are already aware of how earthquakes are caused.

11.35 Discussing the effects of the earthquake students need to use their whiteboards and say whether effects are primary or secondary. This will be a recap of last lesson. An opportunity to assess progress.

11.40 A brief description of the data. Students independently answer the questions. Limited description from me, as students can describe and explain the data. I will circulate around the room facilitating. Feedback after (11.48).

11.50 Watch clip to inform students about Haiti and they can understand what the area is like.

11.55 Students walk around the room observing all the different ways countries respond to earthquakes. Students must write down three ways Haiti could respond thinking about the data and the fact that Haiti is an LEDC. Students just view all the responses then write down in their book the three they see as most suitable for Haiti.

12.00 *How does earthquake response vary between countries with different level of development?* Using think > pair> share students build upon their original answer. I will walk round the classroom ensuring students are explaining their ideas. Building upon their answers to show their knowledge.

12.05 Students begin written task. Using literacy grid as a guideline, students need to write report explaining the three most suitable ways students can respond to earthquakes. Think about the data, discussion and information presented around the room. This will bring together all their knowledge from the lesson. Also, they should be able to justify their choices of response. Literacy grid will encourage students to ensure they explain their choice and think about the suitability of their choices for an LEDC- focusing on description and explanation.

12.15 Students use literacy grid to assess their own work. They can tick the sections they have completed and highlight the ones they need to do.

Homework

Respond to your ebi and complete report. Keep referring to grid while students complete their report.

How progress will be assessed:

- Circulation around class
- Feedback after activities
- Peer assessment www/ebi (UN report)

How do countries respond to earthquakes?

WALT: Understand how an LEDC country responds to an earthquake and what can they learn form MEDC countries.

WILF: A justified response about how LEDC's can respond to earthquakes.

How do countries respond to earthquakes?

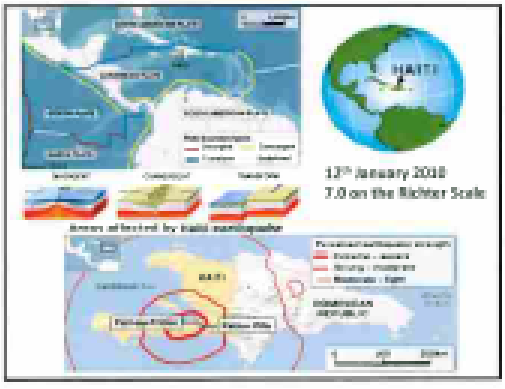
What geographical question would you ask to help the title of todays lesson?

WHO? WHEN?

WHY? WHERE?

HOW? WHAT?

Oxfam



Primary or Secondary

- 300 000 people were injured
- 100 000 homes were destroyed
- The many dead bodies in the streets and water rubble created a health hazard in the heat. So many had to be buried in mass graves.
- The Haitian tourist industry declined as 60 cruise stopped visiting.
- There were frequent power cuts.
- Looting became a serious problem.
- By November 2010 there were outbreaks of cholera.
- 220 000 people were killed.
- Road were blocked by fallen buildings and crushed vehicles.

Using Data!

	Haiti	UK
Population	10 million	61 million
Life Expectancy	62 years	80 years
Income per person per year	$1500	$36000
% People who have access to the internet	10%	80%

Other facts about Haiti:
70% of people live on less than $2 a day.
66% of people in Port au Prince were living in slum conditions

1. Describe what the data is showing
2. Is Haiti an LEDC or MEDC? Why? Explain

Why do you think this information is helpful?

Responding to Earthquakes- You Decide

You work for the *United Nations Response Team*. You need to carry out some research about how countries respond to earthquakes.

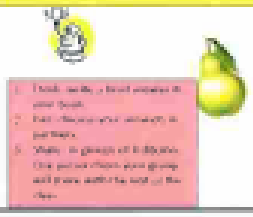
Moving around the room you will see how countries respond to earthquakes.

Individually decide on three responses you see as appropriate ways for Haiti to respond to the earthquake.

Think about the data we discussed. You need to visit every picture before you can make an informed decision.

How does earthquake response vary between countries with different levels of development? (LEDC/MEDC)

Think > Pair > Share



Responding to Earthquakes- You Decide

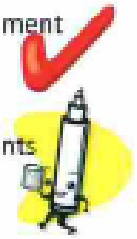
You need to make a decision.

You have to present your findings to the United Nations in New York. Use your own ideas and your groups to help you write the report. Suggest 3 ways Haiti could respond to earthquakes.

Use your literacy grid to help.

Literacy Grid

If you have met the statement in the criteria.



Highlight the improvements you need to make.

Homework

Complete your report- RESPOND to your own feedback. Use a different colour pen to show your response.

Homework

It is important that local communities are aware of how to be ready for an earthquake and are educated.

Design a leaflet informing local communities in Haiti how they can prepare for an earthquake.

Teacher: [redacted]	Subject:

Year: 8	Type of Grouping: (Tick one)	M	S	Set: TC	No of pupils Total 25

Context / prior learning:
Students have been studying tectonics. They have recently completed work on tectonics. Last lesson we looked at primary and secondary effects when studying Kobe. We also looked at writing skills that are important, especially in Geography assessments- description and explanation.
Next lesson we will look at the effects of an earthquake in an LEDC country.

LSW: N/A [redacted]

WALT: Understand the effects of an earthquake and some of the responses in an MEDC country.

WILF: to be able to understand the effects on an earthquake and some of the responses.

Activities:

2.05 Welcome class. Students copy down date, title and WALT.

2.10 Show video and hypothesis why the church spire may have fallen. Go through why New Zealand is an MEDC. Then link this to effects- the effects will be more revealed in the next task. Next lesson they will compare this with an LEDC. CH to lead discussion and facilitate questioning. Higher ability students to expand on longer answers- why MEDC effects may not be as severe as an LEDC.

2.15 Introduce group task and explain. Students get into groups and begin task. CH to walk round and facilitate learning. This task encourages independent learning and allows students to be more selective of information to help them answer the task. Stretches G & T pupils and allows them to consolidate information and present to others. CH will use a timer to guide pupils through task.

2.40 Experts return to their desks. CH discuss the task and discuss the effects of the earthquakes and responses.

2.45 Students produce postcards to inform New Zealand citizens about the secondary effects of the earthquake and some of the responses they should expect. CH to go through example. The task helps consolidate the task and expand on their answers to show the progress they have made. Experts from the task will go through and complete their sheet that the rest of class completed before. They will complete the sheet without the information cards for the first 5 mins and then can use the cards to help if needed.

2.55 Students reflect on the WALT. Also, compare the two earthquakes to bring all the information together.

If time students reflect on the skills they have learnt this lesson- team work, independent learning.

How progress will be assessed:

- Circulation around class
- Feedback after activities
- Self-assessment (Red Cross postcard)

2.10

2.15
Random questioning

The Plan

- Get into your number groups.
- Each member of the group has a question sheet.
- There are five specialists. They will teach you what you need to know for each section.
- You have 3 minutes with the specialist before they will move on.

2.15

Instructions

- When the timer goes off you must stop at the question you are on and the specialist needs to move to the next group.
- Each group must ask the specialist questions. You cannot copy off the specialist sheet. You must wait for their instructions.

Feedback 2.40

Task

You work for the British Red Cross!

Using your postcard design an information card informing the citizens of Christchurch what some of the secondary effects of the earthquake may be and how the British Red Cross are helping. At least 3 examples!

Eg.

"You may not have water for many days due to burst water pipes. The British Red Cross is supplying centres with water.

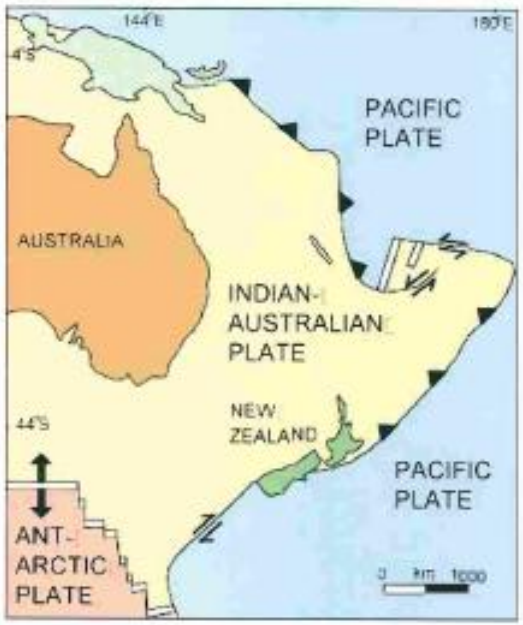
You have described and explained your idea ☺

2.45

WHERE?

WHEN?

The earthquake happened at
12:51PM on the 22nd February.



As many as 100 specific faults have been identified around New Zealand, some as close to 12 miles from central Christchurch, with modelling by the New Zealand Earthquake Commission indicating that a major seismic event could hit Christchurch once every 55 years.

New Zealand sits on the "Pacific Ring of Fire", lots of earthquakes happen here. Also, lots of volcanic activity. It stretches from Chile on one side to Japan and Indonesia on the other.

WHY?

Magnitude 5 aftershocks have also shook the city.

Fires have started due to the fallen buildings.

There was no power to the city due to the fallen power lines.

Many people are now homeless due to the damage. Many parts were described as unliveable.

Buildings collapsed

EFFECTS

Many injured people were carried out on blood-soaked stretchers or in the arms of shocked workmates and strangers.

Power and telephone lines have been knocked out, while burst pipes have deluged streets with water.

The tremor sent the spire of Christchurch Cathedral, a landmark in the centre of the city, toppling into the square below.

The quake caused some 30m tons of ice to shear away from New Zealand's biggest glacier.

The teams are working with the civil defence, New Zealand police, and local councils and agencies to assess the needs and determine how the Red Cross can best assist.

BritishRedCross

It was difficult to get emergency vehicles around as many roads were blocked or they could not move around them.

Helicopters plucked survivors from the rooftops of buildings.

RESPONSES

One evacuation centre has been opened for around 2,000 people and more temporary accommodation is likely to be needed.

The New Zealand Red Cross responded immediately, providing first aid assistance and distributing relief items to the displaced families, including 1,800 blankets, 2,000 water containers and 200 tents. Eight Red Cross response teams from across the country have been deployed as well as one team from the Australian Red Cross.

The British Red Cross has launched an emergency appeal to help survivors of the devastating earthquake that hit Christchurch, New Zealand on 22 February 2011.

The UK government responded to the earthquake with financial aid and support.

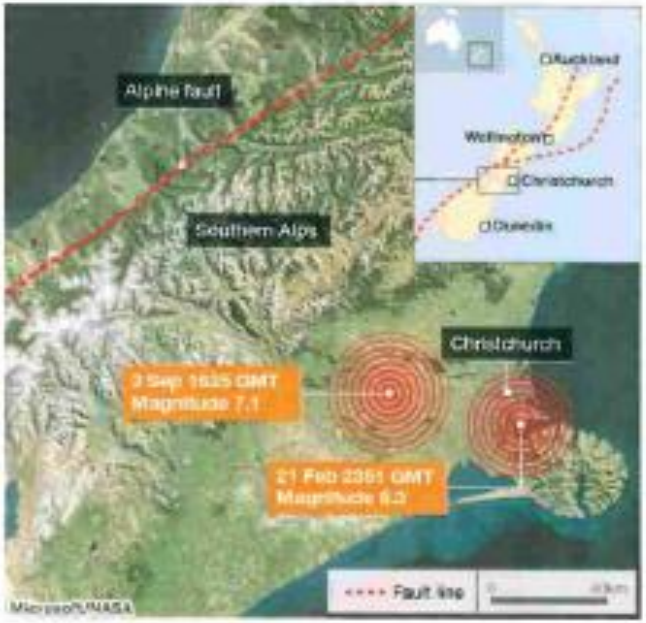
BACKGROUND- Sept 2010

An earthquake happened in September 2010 which was 7.1 in magnitude. However, no one died.

The epicentre of the September quake, which occurred in the middle of the night, was further away from the city and deeper underground, but it still caused an estimated $3bn (£1.9bn) in damage.

Timings would have been a contributing factor as well as depth and distance. During the February quake people would have been out and about. Whereas, the September quake people would have been at home. September's quake hit at before dawn, at 4:35am, on a weekend when no shoppers were in the streets, or children in school. Tuesday's event occurred at 12.51pm, in the middle of a busy weekday, with correspondingly more lethal consequences.

	2010	2011
Magnitude	7.1	6.3
Depth	10km	5km
Distance from Christchurch	40km	10km
Death Toll	0	75 (as of 23rd Feb)



Help and advice from the British Red Cross

.....

.....

.....

.....

.....

.....

.....

[redacted]
WILF: A detailed case study about a sustainable regeneration project.
Focus of this observation (if appropriate):

Activities:

- Copy down date and title. Students think about on a post it note what the answer is. This will be discussed further in the lesson. This enquiry approach will encourage students to begin thinking about the lesson outcomes.
- Intro into the lesson and a review of key words from previous lessons. They will also provide an introduction to the key words for this lesson. Students come up to the board to flip tiles.
- Card sort- students in partners look at the card sort. They have to write the answer to the enquiry question in books. Then sort the cards into three categories. This will help them later answer the exam question. They have three minutes to think of categories themselves. Then CH to give an example of the category they can use. Students have a total of 5 minutes to complete. Class discussion about the answer to the enquiry question and the 3 categories they have used with some examples of the cards in the particular categories.
- Copy down WALT.
- Information sheet- students read the information sheet highlighting the social and environmental. CH to review some examples. To develop questioning……how is this sustainable? Why is this social/environmental? What are the benefits?
- Level it up- students have ppq sheet on desk. They need to fill in their ebi's to the top of the sheet. This will provide the basis for answering exam questions and give each student a personalised skill to work on.
- Advice- students then need to use their knowledge of level marking (which is on the information sheet) to give two pieces of advice to reach L2 in this question. Then to challenge the third piece of advice is how to reach L3. CH to discuss. L2 answers the C students and l3 A/B.
- Students then have 10 minutes to answer exam question. They can use the advice they have written. Before students answer exam question discuss the importance of planning and think about how students can develop their answer eg the importance of going to bed early means…… The main focus however, is their own personal ebi from last lesson. Also, the exam question gives students an opportunity to consolidate knowledge from the lesson.
- Peer assessment- students then swap their books and their partner highlights their previous ebi's in their answer. Also give their partner a www/ebi. Swap books back.
- Raise your hand if you improved your ebi. Raise your hand if you achieved the WALT.

Why has Colin got bamboo flooring in his new home?

5 allow more reflection

What's the key word?

5 - over questions to clear

Why has Colin got a bamboo floor in his new home?

1 With your partner find the answer to the enquiry question and write into your book.

2. With your partner sort the cards into **three** categories of your choice.

Eg. Colin, social, environmental

10


Why has Colin got bamboo flooring in his new home?
WALT: Understand the importance of urban regeneration being sustainable.

5


What makes the greenhouse development sustainable?
Social
Environmental

5


Level it up
Eg.
1. Key Words
2. Connectives
3. Case studies

5

Study figure 1. Figure 1 gives information about improvements to an area in Leeds.

Explain how the improvements shown in Fig 1 are good for people and the environment [8]

Using level marking give 2 bits of advice to someone to inform them how they could reach level 2

1.

2.

Challenge:

3. Level 4 up___ could you add a third point how they could reach level 3

5

Think about what your previous EBI's were.

Study figure 1. Figure 1 gives information about improvements to an area in Leeds.

Explain how the improvements shown in Fig 1 are good for people and the environment [8]

You have 10 minutes to use Fig 1 to answer the exam question above.

1. Key Words | 2. Connectives | 3. Case studies

Think about what your previous EBI's were.

10

Study figure 1. Figure 1 gives information about improvements to an area in Leeds.

Explain how the improvements shown in Fig 1 are good for people and the environment [8]

1. Key Words | 2. Connectives | 3. Case studies

5

more time to reflect & improve

The Greenhouse development- Leeds

Fig 1

What makes the Greenhouse development sustainable?

Energy Generation

- Ground source heat pumps draw water from 80metres below the building and use heat exchange technology to provide hot water, heating and air cooling for every home.
- One large wind turbine will provide energy for every home.
- Rooftop solar panels will be used to provide hot water for every home.

Energy Saving Technology

- A super insulation system will keep homes warm in winter and cool in summer.
- Double glazing units will reduce heat loss.
- Low energy appliances are provided in every home.

Transportation

- A car club of vehicles powered by renewable energy is available for residents to use.
- Green cabs and buses use renewable energy and run between the development and city centre.
- Every home will have cycle storage and free cycle hire.

Resource Management

- Allotments are available so that residents can grow their food.
- Recycling facilities are provided.

Level descriptors:

Level 1

Use of a basic example.

Simple statements not developed.

Level 2

Clear reference to an example. Some use of key words.

Developed statements.

Level 3

Use of specific example.

Good use of key words.

Detailed development of statements.

Urban regeneration: improving social and/ or economic conditions in run down areas.

Carbon Zero: does not use resources that create carbon dioxide.

Eco-homes: homes that have a minimum impact on the environment.

Sustainability: meeting the needs of today without damaging them in the future.

My EBI was:

1.

2.

3. (Level 3)

Study figure 1. Figure 1 gives information about improvements to an area in Leeds.

Explain how the improvements shown in Fig 1 are good for people and the environment (8)

Appendix 3- Baseline Questionnaire

1. In Geography what tasks do you enjoy completing?

Group Work

Finding the answer through a mystery

Learning independently

Project work (similar to water research report)

2. Why have you chosen the above?

3. Thinking about the tasks you have covered this term what did you enjoy doing and you would like to do again? Eg newspaper

If you could design a lesson what type of activities would you plan?

Appendix 4- Icy World SOW

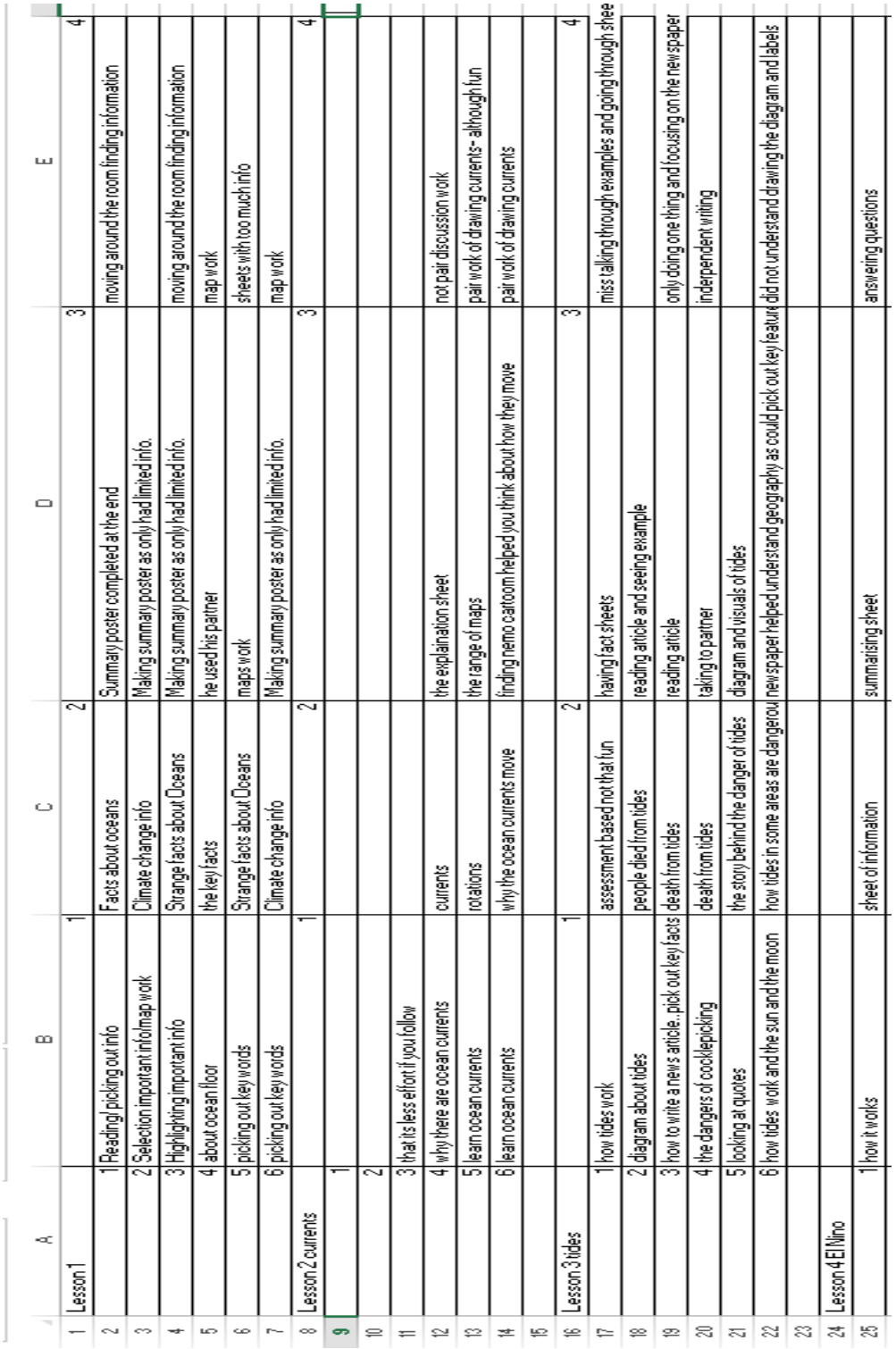
Teacher

Student

Year: 9 Term 4 Title: Icy World				
No.	Enquiry Question	WALT	Suggested activities	Teacher and student refelction
1	Why do people live in Livigno?	To understand why people live in the highest permanently inhabited village in the Alps.	• Review of key words	Improve the delivery of key words. Ensure students understand the meaning of the words and how they can be used in Geography. Too many small tasks which meant some of the understanding was lost. For next lesson allow more thinking time.
2	Why is the penguin writing a letter of complaint?	Understand what Antarctica is like and some of the issues surrounding this icy environment	• Introduction to Antarctica-quiz • Territorial claims. Read sheet and answer questions. • Look at the resources and rank them. • Video. • Letter using literacy grid.	Thinking time allowed more time for discussion, especially regarding the resources. Not enough time to complete the letter due to discussion about resources. However, this discussion allowed students begin to understand people's viewpoints and develop their own. Next lesson think about developing viewpoints more using information. *Enjoyed discussion.* *More time for writing task- only got started.*

3	Why is Sonny the seal looking stressed?	Understand and assess the impact of tourism on Antarctica and how we can manage it.	• Think about why people visit Antarctica. • Discuss linking together ideas and developing points. Thinking about describing and explaining ideas. • Use literacy grid to come up with Antarctic code of conduct. (this may lead into the next lesson).	The code of conduct allowed them to bring all their knowledge together. Working on description and explanation allowed students to work on these skills and develop further. The code of conduct was the perfect task to help this. This ran over two lessons. Peer assessment for the code of conduct with opportunity for students to improve their work in a different colour pen before I would read it. *Students wanted more opportunity to discuss their own opinions based on the information from the lesson. Also, more knowledge about the animals.* *Students liked using the literacy grid to peer assess each other's work. Also, gave them time to discuss their work. Students felt it helped them improve if they discussed how to describe and explain their ideas and use each other's examples.*
4	Add HM lesson on animals.	Understand adaptations of animals in glacial environments.	• What is life like? • Discuss animal adaptations • Use literacy grid to develop description and explanation of animals	Students loved the time to work on their animals and the independent free choice of animals. *Students commented on enjoying the design task. Allowed them to draw and research what animals need to survive. Perhaps something different to literacy grid.*

Appendix 5- Learning Diary and Results



	A	B	C	D	E
1	Lesson 1	1	2	3	4
2	1	Reading/ picking out info	Facts about oceans	Summary poster completed at the end	moving around the room finding information
3	2	Selection important info/map work	Climate change info	Making summary poster as only had limited info.	
4	3	Highlighting important info	Strange facts about Oceans	Making summary poster as only had limited info.	moving around the room finding information
5	4	about ocean floor	the key facts	he used his partner	map work
6	5	picking out key words	Strange facts about Oceans	maps work	sheets with too much info
7	6	picking out key words	Climate change info	Making summary poster as only had limited info.	map work
8	Lesson 2 currents	1	2	3	4
9	1				
10	2				
11	3	that its less effort if you follow			
12	4	why there are ocean currents	currents	the explaination sheet	not pair discussion work
13	5	learn ocean currents	rotations	the range of maps	pair work of drawing currents- although fun
14	6	learn ocean currents	why the ocean currents move	finding nemo cartoom helped you think about how they move	pair work of drawing currents
15					
16	Lesson 3 tides	1	2	3	4
17	1	how tides work	assessment based not that fun	having fact sheets	miss talking through examples and going through shee
18	2	diagram about tides	people died from tides	reading article and seeing example	
19	3	how to write a news article.. pick out key facts	death from tides	reading article	only doing one thing and focusing on the newspaper
20	4	the dangers of cookie picking	death from tides	talking to partner	independent writing
21	5	looking at quotes	the story behind the danger of tides	diagram and visuals of tides	
22	6	how tides work and the sun and the moon	how tides in some areas are dangerou	newspaper helped understand geography as could pick out key featur	did not understand drawing the diagram and labels
23					
24	Lesson 4 El Nino				
25	1	how it works	sheet of information	summarising sheet	answering questions

Year: 9 Term 4 Title: Oceans				
No.	**Enquiry Question**	**WALT**	**Suggested activities**	**Teacher Reflection**
1	Introduce why oceans are so important to us. Why are we the blue planet?	Explain why oceans are so important to humans.	• Guess the title. • Map the oceans. • Walk around the room investigating the different oceans.	Lots of reflection about the oceans. Students seemed to enjoy the freedom of moving around. Lots of opputunity for discussion. The group task and specific tasks allowed for structure in an open ended task about their ocean.
2	To be able describe the basic pattern of ocean currents. (no enquiry question due to the nature of the Nemo enquiry. Could cause knowledge to be lost).	Be able to describe the basic pattern of ocean currents.	• Looked at Nemo's current. Students attempted to follow the route. • Design a cartoon strip explaining Nemo's route. Must include temperature of oceans, places visited and direction of currents.	Students got fully involved and liked the use of novelty characters. Having the character of Nemo for the whole lesson meant students were fully involved. The cartoon strip allowed students to consolidate all the information we had been discussing all lesson. *Loved the use of a familiar character. Helped them quickly familiarise themselves with quite complex knowledge and use effectively in the final task.*
3	Understand the impacts of tides. Why can be clam picking be dangerous?	Understand the impacts of tides.	• Think about and discuss enquiry question. • Read the news article. • Watch a video and get students to discuss the	The core knowledge students found difficult. However, the opportunity to discuss and come up with diagram as a class allowed students to internalise knowledge. There was also

			tides. As class construct diagram. • Complete newspaper article- using literacy grid.	partner discussion. The opportunity to discuss complex ideas allowed students to consolidate knowledge. The newspaper article students wrote was scaffold with the literacy grid. This demonstrated the knowledge students had to show they understood. *Students were clear about outcome and enjoyed using the literacy grid to give article a focus. Liked the interesting story behind tines. All students were engaged with the lesson due to the way the knowledge was presented.*
4	El Nino What was to blame for the loss of anchovies?	Understand the impacts of natural events.	• Guess the countries. • Come up with hypothesis. • Use the mystery cards and write an answer. • Complete the worksheet. Discuss the diagrams.	Students again found the academic part of this task difficult. The mystery students found difficult due to the open endness of the task. Some guiding questions needed next time. The worksheet allowed for consolidation of the knowledge. However, students were not at all times engaged with this sheet as there was the key focus on core knowledge. *Not enough a variety of tasks. Students seem to be completing the sheet and not processing the information.*
5	Overfishing Campaign The end of the line?	Understand the impacts of overfishing.	• Discuss pictures • Watch video • Get into groups of 3- each student has a specific task.	Students liked evaluating the impacts. Having specific roles for each student in the group encouraged all members to take part and play to their strengths within their groups. Lots of thoughtful campaigns

				thinking about the use of the internet and social media. High engagement during this activity. *Students could complete the work and enjoyed all having individual roles. Made students take responsibility.*

Teacher Reflection

Department reflection

Appendix 7- CUREC letter to Headteacher

I am writing to enquire about conducting research in school this academic year. As you know, I am studying for the Master's in Learning and teaching at Oxford University, supervised by Roger Firth. In my final research project, *What is the point? Understanding the importance of constructing tasks that engage students.* The main aim of my research is to understand why as teachers why we create tasks and what is thr purpose of these tasks and what Geography is being taught. I will refect on task design using a scheme of work I am going to create. I will reflect on my practice from PGCE, NQT, Teacher and now Head of Department. Reflecting on how task design has changed and how I see task design now.

The research will take place with one year 9 class. I am developing ways of improving student's engagement, enjoyment and attainment. This will be reflected on each lesson by myself and the pupils. This will inform the task planning for the next lesson.

By participating in the research, the school would be contributing to a project that will deepen

department's understanding of task design and allow the department to reflect on their task design when creating new schemes of work. As a department, we have been working to improve the schemes of work and reflecting on existing ones.

I hope to conduct this research between February and April. I would use reflection and evaluation tasks from students. These would be completed during the lesson. I will also use my own reflection and evaluation of lessons to help me develop the scheme of work.

Oxford University has strict ethical procedures on conducting ethical research with teachers and young people, consistent with current British Educational Research Association guidelines. As practitioner research however, the University recognises that schools have the highest ethical standards in any event. Therefore only your consent is necessary, and not that of parents. Throughout the research, students and other teachers will be able to refuse to participate in any research activities at any time.

All participants, including students, teacher and the school, would be made anonymous in all research reports. The data collected would be kept strictly confidential, available only to my supervisor and myself, and not used other than specified without further consent. All tapes would be destroyed at the end of the research period, and kept in locked conditions until then.

If you feel you would like to take part in the study, or need more information about what is involved, please contact me.

I look forward to hearing from you.