

Flipped Learning: *Improving Attainment and Progress through Homework*

Lewis Moore, Shireland Collegiate Academy

Overview

Project Aims

Primary Aim:

- To increase students' attainment through improvements to homework.

Secondary Aims:

- To reinvigorate the attitudes surrounding homework.
- To increase the proportion of pupils submitting quality homework.
- To foster independent learning.

Rationale

- At the start of 2014 we decided to critique many facets of our Academy structures to see if there was opportunity to make attainment and progress gains.
- Homework was consistently stated by parents at Parents Evening, as a facet they would like to play a more prominent part in their child's education.
- There was a clear opportunity to reinvigorate the Academy's approach to homework. This could result in altering the existing attitudes of both staff and students to homework and effect improvements in attainment.
- Flipped Learning was a possible mechanism to make this transformation.

Project Outline

To implement successfully a '**flipped learning**' policy at Shireland Collegiate Academy that supports the progression and attainment of pupils by:

- **Attainment:** Establishing, embedding and engendering a new homework strategy that places emphasis on the quality of learning and progress of Shireland Collegiate Academy pupils.
- **Reinvigorate:** Breathing new life and purpose into the additional work outside of the classroom pupils were engaging in.
- **Evaluate:** Identifying the successes and pitfalls of the 'Flipped Learning' process at the various stages of implementation and entrenchment.

Flipped Learning

Impact

The information below outlines some of the headline measures:

- 5+ A* - C increased by 16 percentage points from 2011 of which flipped learning is believed to be an important factor.
- 20 percentage point upward shift in the number of pupils submitting homework (96% returned up from 75% return 2012/ 13)
- Increased numbers of good to outstanding lessons observed (which adopted a flipped homework approach). 62% of lessons judged to be Outstanding June 2014.
- Increased levels of engagement in class.
- Improved differentiation in class.

Student and Teacher Comments

CPD Sessions introducing flipped learning modelled the process. The focus was also on maximising the use of some of the online content we already subscribed to. This was really useful.



Andrew Collins, Shireland Collegiate Academy

Watch: <https://www.youtube.com/watch?v=3WAeBQh23AQ>



I can see just how valuable flipped learning is to the children

Staff and pupils of Bearwood Primary School

Watch: <https://www.youtube.com/watch?v=sMqCYxoitzE>

...flipped learning helped me learn about the topics more, so I didn't have to ask the teacher for help as often...

Flipped Learning

...this flipped approach allows me to target my lessons to those pupils who are really struggling with a concept....



Staff and pupils of Victoria Park Academy

Watch: <https://www.youtube.com/watch?v=OsxGNZ-O-3w>

Flipped Learning

How To...

Setting Up

How can this 'Flipped Learning' approach be adopted elsewhere?

The documents that support this overview outline:

Information	Appendix
What is Flipped Learning?	1
How to implement this strategy:	
as a school	2
as a teacher	3
Video guides that explain the concept and delivery within a school	4
Examples of it in action	5
Letter Home to families	6
Additional Reading Ideas	7

The documents supplied with this overview provide a firm foundation to explore, introduce and embed the concept of flipped learning.

Appendices

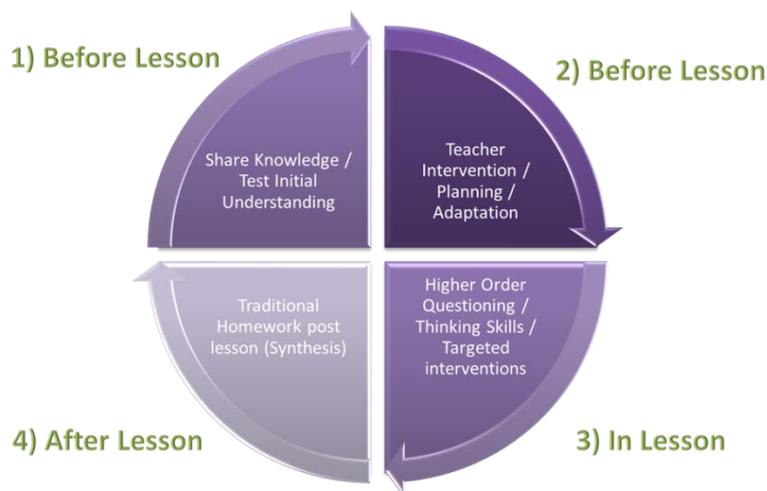
Appendix 1: What is Flipped Learning?

Flipped learning is the pre-lesson preparation, reflection and questioning that pupils undertake to help inform a teacher's planning (Mazur, 1997). Prior to a lesson a classroom teacher directs pupils towards specific resources (often online media) that they digest and respond to. This information can then be utilised by the teacher to inform the planning of their next classroom session. The effect of this is that pupils attend a subsequent lesson armed with a great deal of knowledge and questions ready to further their understanding and skill.

Flipped learning is also a means of shifting the learning that does not require a teacher presence outside of the classroom; so that class time can be spent developing areas that benefit from having direct teacher liaison (Bergman and Sams, 2012) e.g. Online activities that stimulate comprehension is an example of flipped learning in its simplest form.

The diagram below outlines the typical cycle a teacher may follow to prepare for each stage of the learning process.

The Flipped Cycle Diagram



In this cycle the taxonomy of learning highlighted by Bloom can be fully planned for and delivered.

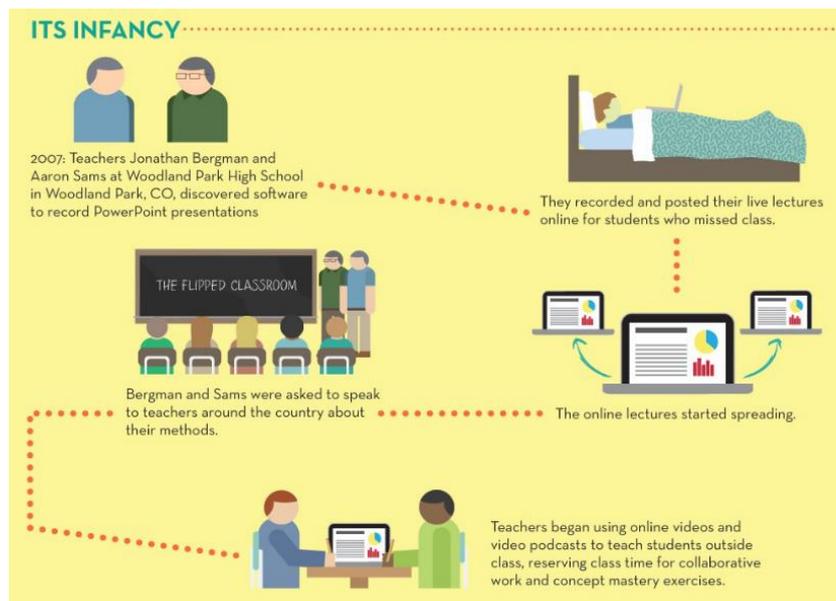
The Flipped Journey

The modern incarnation of flipped methodology owes much to the efforts of educationalists in the United States. In 1991 Eric Mazur questioned the value of the time spent with his University students in his lectures and decided to flip the content. At first his concept of 'peer learning' was as simple as instructing them to read the textbook and come prepared to his classes. This has since snowballed into a whole host of media platforms being used to eke out some pre-learning before a classroom session.

Flipped Learning

“Education is a two-step process. The first step, you need to transfer information. In the second step, the learner needs to do something with that information — build mental models, make sense of it, be able to see how that information and the knowledge embedded in it applies to the world around us.” (Mazur, 2013)

It is this idea of thrusting the importance of learning onto the student that drives the flipped methodology.



The rise of flipped learning - Bergman and Sams Infographic

Bergman and Sams, in a similar vein to Mazur, were another two converts to the flipped practice in their High School classrooms. Like Mazur they debated when their presence in a classroom is at its greatest in value. Both concluding that students need them most when they are stuck. Consequently, if pupils arrived at class already knowing which areas they need help with then they will be able to facilitate learning in a far more targeted fashion.

In the UK the appetite for homework has continually see-sawed over the last 60+ years and consequently so has the different styles and forms of delivery. From getting pupils to learn and recite poems in the 1950's ready for use in class to the recommended daily timed doses of homework post lesson in the late 1990's. These changes to attitudes and governance over time mean that the concept of flipped learning is not an entirely new one and perhaps the technology at our disposal now can aid in making it more effective than previous efforts.

Flipped Learning at Shireland (Background)

At Shireland Collegiate Academy our moves to the flipped approach came about when reassessing our homework provision across the school. We were conscious that our existing delivery was not necessarily reaping the returns we would like. In addition to this, the burgeoning arsenal of laptops, iPads, a VLE (which is well used!) and a host of educational software subscriptions led us to questions whether we were making the most of what we had. From these initial conversations amongst the senior team the idea of Flipped Learning was hit up on. Subsequently, key cohorts of staff were identified to get to grips with the model and introduce it to all. Over the following months, ideas were trialed and evaluated, successes were experienced and the expectation and attitude of staff and students began to change. Currently, the profile and status of homework has increased as demonstrated by the volume of pupils submitting and meeting deadlines. More than 90% of pupils are now regularly submitting and participating in activities, compared to 70% previously. The Flipped Learning methodology has fostered greater value on the importance of pre lesson learning and its impact in the classroom.

What is the Purpose of Flipped Learning?

Flipped learning is an aid to the education process. Its purpose is to enable the student to attempt the learning process prior to class and for the teacher to support, clear up the uncertainties and stretch pupils during lesson time. There are three primary ways we have been attempting to do this at Shireland Collegiate Academy:

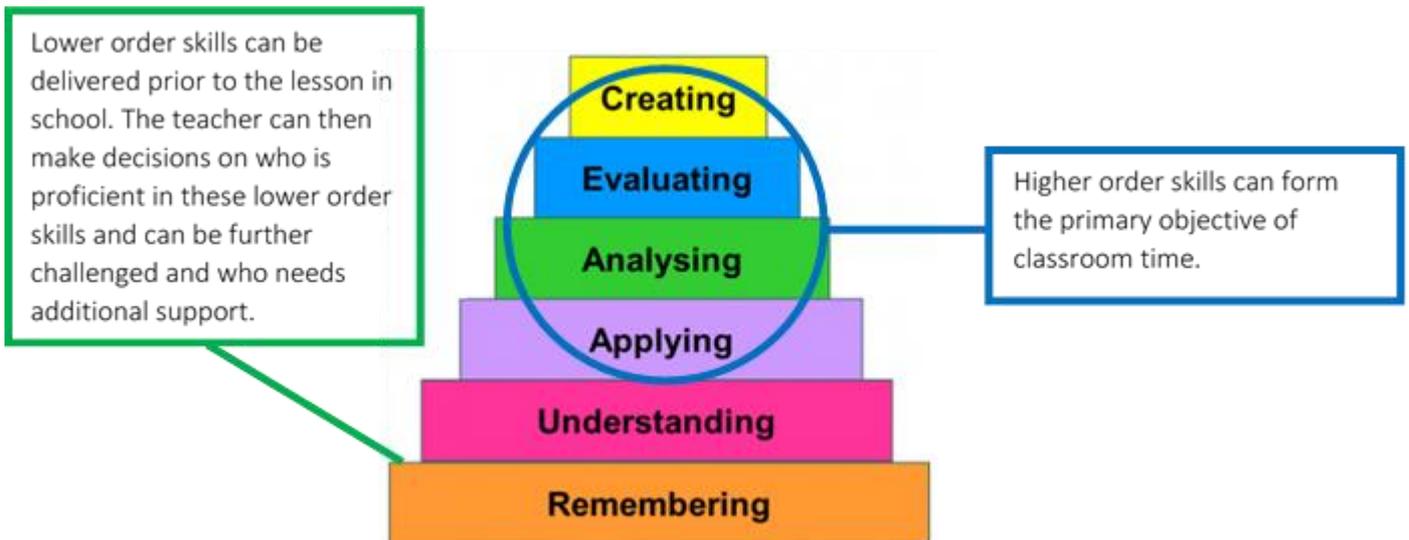
1. **Deliver lesson content to pupils prior to a lesson**
2. **Improve the quality of differentiation**
3. **Engage and enthuse our pupils in their learning**

[See the 'Idea/ Examples' section of the overarching guide for exemplar use of the Flipped approach]

For each of these approaches, and they do not need to be mutually exclusive, the use of classroom time to learn is enhanced. This practice can enable us to focus on the higher order skills of analysis, synthesis and evaluation within class time; or as a means of identifying appropriate levels of challenge for different groups of pupils within a class; or simply to introduce and stimulate initial questions and ideas before starting a topic. All of which can only act to enhance the quality of provision we can offer as teachers and the pupils can receive.

The principle of Flipped Learning links well with Bloom's Taxonomy of Learning. It is possible to remove some of the lower order learnt skills from class time and deliver pre-lesson. This allows for class time to focus on the higher order skills.

Flipped Learning



Adapted from Bloom's Taxonomy of Learning

Benefits and Challenges of Flipped Learning

Whilst Flipped Learning methodology has permitted more effective use of homework time at Shireland Collegiate Academy it is important to note the power for good and possible challenges when setting it up.

Benefits of Flipped Learning

- Students in control of their learning and performance
- Students' questioning improves
- Greater choice for students – becoming independent in their learning
- Students support each other
- Technology used to enhance the experience
- More purposeful lessons in school

Challenges of Flipped Learning

- Can take time to encourage a group to work beyond the classroom
- Important to give clear parameters on certain material/ topics
- Staff must be organised and engage with the pupils preparation prior to a lesson

At Shireland Collegiate Academy we have seen the impact of Flipped Learning to evoke a powerful change in the engagement and learning of our young people. Whether it be to simply reinvigorate the practice of assigning homework or freeing up classroom time to address the real needs of the pupils there are benefits that will only act to enhance the provision of education.

Flipped Learning

References:

Bergman, J., Sams, A., (2012), Flip Your Classroom: Reach Every Student in Every Class Every Day, ISTE, ASCD

EvoLLLution Article, 2013, The Flipped Classroom will Redefine the Role of Educators, http://www.evolllution.com/distance_online_learning/audio-flipped-classroom-redefine-role-educators-10-years/

Flipped Learning

Appendix 2: Implementation (School)

HERE'S HOW!



...to implement
**Flipped Learning as a
School!**

Learn the concept as a
Senior Team

...flipped learning is the idea of providing pupils opportunities to engage with topics pre lesson. They can then attend better and more purposeful lessons in school.

What is the aim?

...decide on the objectives or issues you hope to resolve with the flipped methodology e.g.

- Develop a more effective use of the time spent with pupils in the classroom.
- Maximise the use of the technologies available to the pupils both in and outside the school.
- Improve the provision of learning undertaken outside of school.
- Increase the number of independent and reflective learners...

Decide the scale

...consider the extent to which you wish to implement this strategy.

Do you want to trial it in certain departments and appraise its success OR simply launch it school wide?

Introduce to staff, students and parents

...now you have decided the extent of roll out, approach the necessary staff.

If whole school a great place to start is with a CPD sessions which models the expectations of a flipped approach.

Deliver and Appraise

...allow staff/ departments time to experiment and trial different flipped techniques. Provide additional support CPD or workshops to continue the expansion of flipped strategies.

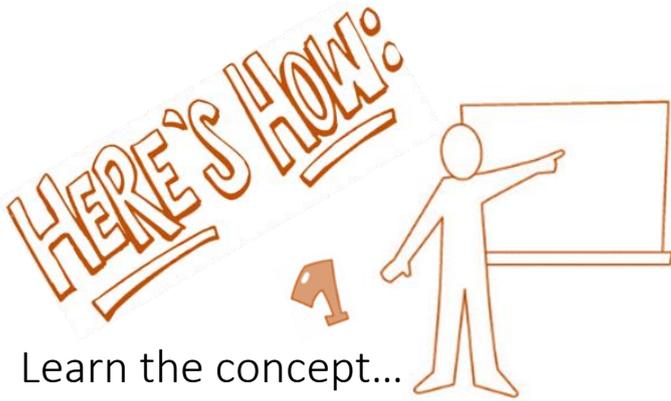
Invite feedback from staff, students and parents on the successes and failures experienced and adapt.

Quality Assure and Refine

...once there is buy-in from staff, students and parents it is important to keep the momentum going.

Flipped Learning

Appendix 3: Implementation (Teacher)



Learn the concept...

...flipped learning is the idea of providing pupils opportunities to engage with topics pre lesson. You as the teacher can then use this information to inform your lesson.

...to implement
Flipped Learning if
you're a teacher!

What do you hope to achieve?

...before diving in and creating your own flipped resources, consider what you hope to gain from using this strategy with a class. Is it to...

- ...remove content from lesson time, allowing focus on higher order skills?
- ...better differentiate for the pupils in your care?
- ...enthuse the class?
- All the above.

Select a Class or Topic

...you may want to introduce the pupils and parents to the idea first and a letter home is a good place to start.

Alternatively, you may feel there is a topic laden in fact and comprehension that is in need of a new approach.

Plan

...this doesn't necessarily mean you need to create new and bespoke resources. You may be able to find existing ones!

Plan a simple flipped homework task which requires the pupils to find out and respond to something.

Implement

...set the homework and allow plenty of time for you to receive and look over the returns.

Once you have the pupil responses adjust or plan your classroom session according to the needs identified in their homework.

Experiment

...now you have tried the basics continue to expand the repertoire of lessons and flipped tasks you set.

You will find you develop a better understanding of your classes needs and start to pre-empt learning gaps you were not aware of before!

Flipped Learning

Appendix 4: Video Library



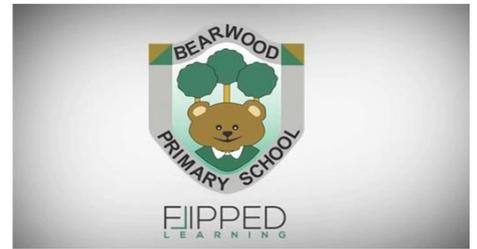
[Mr Collins \(Teacher\) Testimonial](#)

Watch: <https://www.youtube.com/watch?v=3WAeBQh23AQ>



[What is flipped Learning?](#)

Watch: <https://www.youtube.com/watch?v=RBLXjIHEyLs>



[Bearwood Primary Testimonial](#)

Watch: <https://www.youtube.com/watch?v=sMqCYxoitzE>



[Victoria Park Primary Testimonial](#)

Watch: <https://www.youtube.com/watch?v=OsxGNZ-O-3w>



[How to Implement \(Senior Management Perspective\)](#)

Watch: <https://www.youtube.com/watch?v=kjym1EOD-ug&feature=youtu.be&safe=active>



[Mrs Howe \(Teacher\) Testimonial](#)

Watch: https://www.youtube.com/watch?v=-_ojV1DQjpl

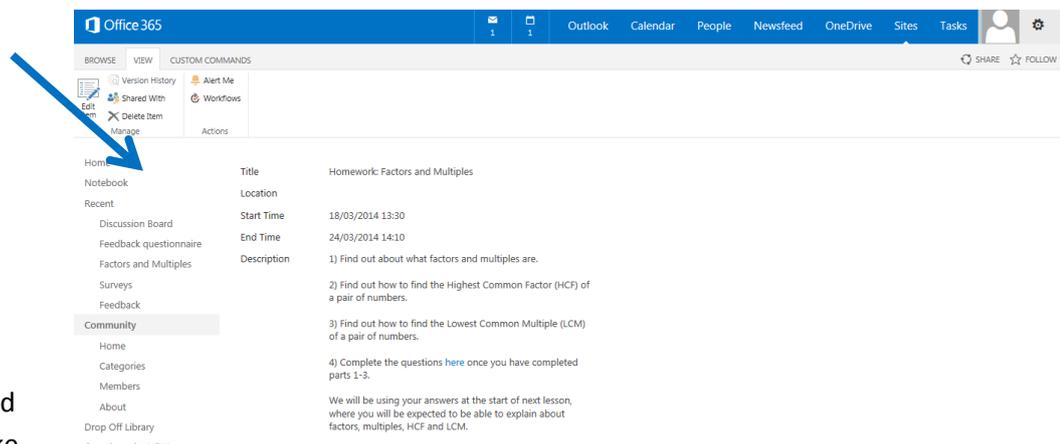
Flipped Learning

Appendix 5: Examples of Flipped Learning

Flipped Learning in Action (1. Delivery of Content Pre-Lesson/ 2. Improving the Quality of Differentiation)

Context: Teaching a Year 9 middle ability group the topic of Factors and Multiples.

1. Calendar feature on the Class Site used to create a post outlining the homework.



2. Activities 1-3 asked pupils to undertake their own independent research to try and discover how to make calculations in this branch of mathematics (factors and multiples). The fourth task directed pupils to an online survey, which had been created on the class site.

The screenshot shows a survey titled 'Factors and Multiples' for 'Mathematics 9-MA3'. The survey has five questions, each with a text input field and a 'Finish' or 'Cancel' button. The questions are: 1) List the factors of 24. 2) List the first 5 multiples of 7. 3) What is the highest common factor (HCF) of 5 and 10? 4) What is the highest common factor (HCF) of 16 and 24? 5) What is the lowest common multiple (LCM) of 5 and 10?

Activities 1-3 freed up some of the teaching time within class as the pupils had taken the time to learn the material pre lesson. To check that this learning had occurred the online survey (test questions), which were also completed pre lesson, enabled the teacher to identify the issues the pupils were experiencing.

3. During class the results of the survey were exported to Excel (this is a feature within Sharepoint). This document highlighted the questions pupils got correct and which pupils got those questions correct. This information was then used to pair pupils to establish the correct means of calculation so that someone who got the answer correct was paired with someone who made an error.

Flipped Learning

- This enabled a substantial portion of class time to move away from traditional methods of teaching a new piece of mathematics content and enabled the pupils to engage with each other more effectively to progress.

Flipped Learning in Action (2. Improving the quality of differentiation)

Context: Year 8 History Lesson focusing on the inference of information from sources related to Pompeii.

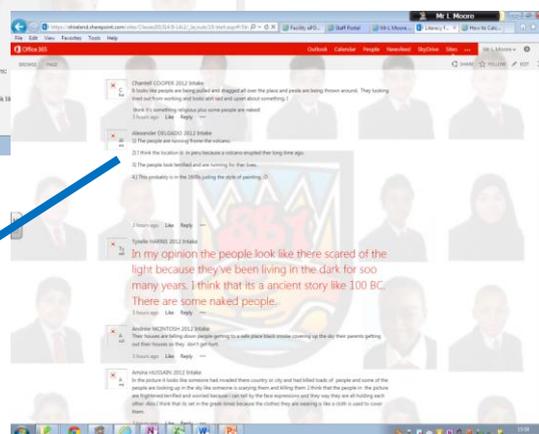
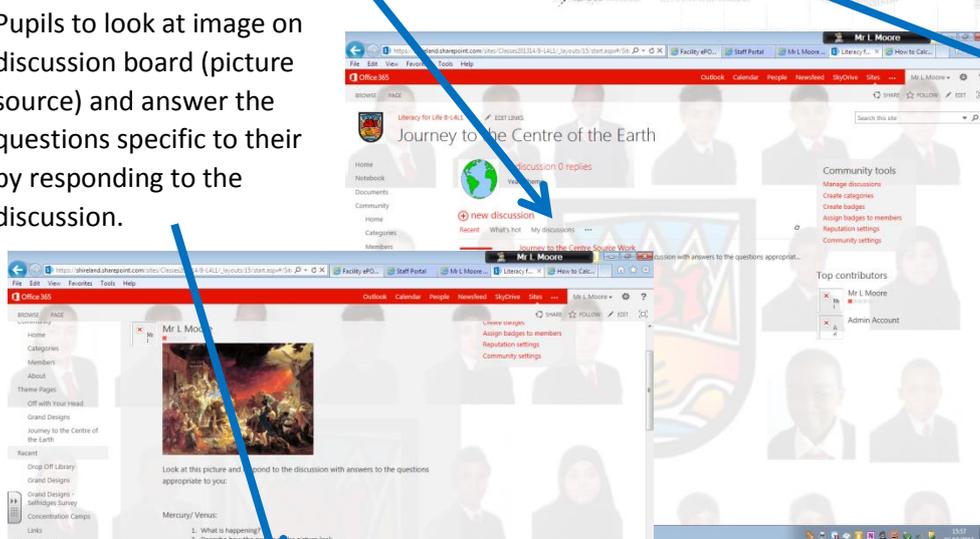
- Class Sites used to create Theme specific discussion sections

‘Journey to the Centre of the Earth’ in Year 8

- Flipped Lesson task posted
- Differentiated Discussion task.

Pupils to look at image on discussion board (picture source) and answer the questions specific to their by responding to the discussion.

- Responses used to inform planning for next lesson (2. Improving the quality of differentiation).



Flipped Learning

Lesson centres on getting the students to identify differences between primary and secondary sources and then infer and collect evidence from sources about an event in history.

Flipped homework used to give them a secondary source and see what they think it is about. In class we will further question its reliability/ usefulness/ compare it to a primary source... the responses received will determine whether pupils will be directed to more difficult source work in class, plus differentiated questions will be directed to pupils based on their report.

The screenshot displays a Microsoft Office 365 web browser interface. The main content area shows a page titled "Journey to the Centre of the Earth". On the right side of the page, there is a circular graphic with the text "Madgen & Centre of Terra". Below the title, there is a section for a "Pompeii Quiz". The quiz details are as follows:

Survey Name:	Pompeii Quiz
Survey Description:	
Time Created:	17/10/2013 07:35
Number of Responses:	0

There are two checkboxes below the quiz details: "Show a graphical summary of responses" and "Show all responses". The browser address bar shows "https://shireland.sharepoint.com/sites/Classes201314/8-L4L1/SitePages/Journey%20to...". The Windows taskbar at the bottom shows the date 17/10/2013 and time 07:47.

Pompeii quiz (survey) created on the class site. Multiple choice quiz questions based on Pompeii for use towards the end of the session to test comprehension.

The last question of the test asks the pupils to select the source they trust the most. This statistic can then be used in the subsequent work around reliability.

Flipped Learning in Action (3. Engage and Enthuse)

Context: Year 8 English lesson focusing on the conventions of creative writing. This formed part of a project that explored topics connected to the 60's and 70's and the Mr Men brand was used as a vehicle for the pupils' ideas.

1. Discussion created on the Class Site which signposts pupils to an online book (/ audio book for less able pupils) and some probing questions. The first few questions asked pupils to identify and establish elements of the conventions and structure of a Mr Men book.
2. The final question simply asked: having read the Mr Men book what would you like to find out more about?
3. The responses to this final question were then copied and pasted into Wordle. This is a piece of online software that allows words to be grouped in terms of their frequency, with the most common words featuring prominently. This software made the desires of the pupils obvious and enabled the teacher to plan accordingly.
4. The most prominent words made it clear what the majority of the class were keen to find out more about: 'where the author got their inspiration'. This information was then used to form an hour session at the start of the topic. This allowed all pupils to see that their responses to homework had been utilised by their class teacher and increased levels of engagement were observed.

Appendix 6: Letter to Families

Dear Families

I am writing to inform you about the exciting changes being made to our Academy's home based learning provision (homework!). The improvements outlined below aim to make the work your child participates in at home even more purposeful to the lessons they experience at our Academy.

In supplement to the homework your child already receives they will be expected to participate in more 'Flipped Learning' activities across all of their subjects. The basic idea of these flipped activities is to allow pupils to actively prepare for an up and coming class room lesson. The significance of this change is that it will promote more engaged students to accelerate their learning at our Academy!

One of the challenges we face when providing for the children of our community is how best to deepen their knowledge and increase their interest in a breadth of topics. This flipped approach will facilitate the learning journey and ownership your child takes in their Academy life.

Essentially 'Flipped Learning Homework' means your child will receive tasks that may be media based (e.g. a video, news article, piece of music) to view prior to a lesson. In addition to this they may be required to devise some questions that they want to find out more about or didn't quite understand, so that the teacher can make the best provision for them within class.

How can you help?

- Be willing to talk to your child about their homework.
- Help your child in accessing the different materials they will look at.
- Help your child in the skills of identifying the important information within a source, article, video...
- Encourage your child to ask questions about the areas of their learning they do not fully understand.
- Help you child in their quest to resolve some of the queries they may have about their homework e.g. searching in books, on the internet, asking experts...

To find out more information on the 'Flipped Learning' activities your child will be completing and how you can help, visit our 'Flipped Learning' page on the Family Portal. Here you will be able to explore video, literature and examples of how this approach will help maximise your child's learning experience. Moreover you will be able to access with your child ideas on how you can assist them in their studies! Alternatively, feel free to contact the Academy to learn more of this exciting change to our homework provision.

Yours sincerely

Appendix 7: Flipped Learning – Useful Links and Resources

The below list of resources are just some of the things we have used/ looked at/ read at Shireland Collegiate Academy in our development and implementation of a Flipped Learning methodology.

Bently, S., (2012), The Flipped Classroom and Peer Instruction, Teaching and Learning Institute, <http://theinstituteblog.co.uk/2012/11/19/the-flipped-classroom-and-peer-instruction/>

Bergman, J and Sams, A (2012), Flip Your Classroom – Reach Every Student in Every Class Every Day, ISTE ASCD.

Demski, J., (2013), 6 Expert Tips for Flipping the Classroom, <http://campustechnology.com/Articles/2013/01/23/6-Expert-Tips-for-Flipping-the-Classroom.aspx?Page=2>

Dunn, J., (2013), The 10 best web tools for flipped classrooms, Edudemic - <http://www.edudemic.com/web-tools-for-flipped-classrooms/>

Educause, (February 2012), 7 Things You Should Know About...Flipped Classrooms, <http://net.educause.edu/ir/library/pdf/eli7081.pdf>

Gerstein, J., (Viewed Jan 2014), The Flipped Classroom – Various resources, <http://www.scoop.it/t/the-flipped-classroom>

Mazur, F., (1997), Peer Instruction – A Users Manual, Prentice Hall.

Sams, A.,(2012), Teaching for Tomorrow: Flipped Learning - http://www.youtube.com/watch?feature=player_embedded&v=4a7NbUIr_iQ

Stayer, J. F., (2011), Flipped Class Conference – The Flipped Classroom Infographic, <http://www.knewton.com/flipped-classroom/>

Tokuhama-Espinosa, T., (2013) cited in Vogel, M., (2013), Mind, Brain and Science meets Lecture Flipping, <https://blogs.ucl.ac.uk/ele/tag/the-flipped-classroom/>

Vincent, P., (2013), Technology Enhance Learning – Flipped Classroom, <http://blog.yorks.ac.uk/moodle/2013/11/11/flipped-classroom/>