Technology Unit
Plan, Expectations and Assessment

Title of task:

Digital Media

Final Due date:

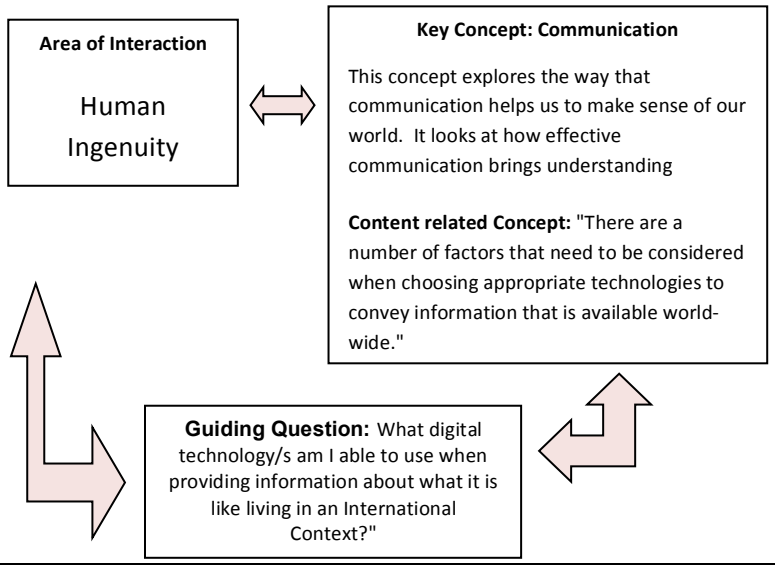
Thursday 13th December

Criterion Stage Dates listed under each criteria below.

Level:

MYP 4&5 (Grade 9 and 10)

Name:



Student NETS Standards Allignment:

Throughout this unit,

- Student NETS 1b - Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes using technology. Students create original works as a means of personal or group expression.
- Student NETS 2b - Students use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the learning of others. Students communicate information and ideas effectively to multiple audiences using a variety of media and formats
- Student NETS 3a, b, c, d - Students apply digital tools to gather, evaluate, and use information. Students plan strategies to guide inquiry, they locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and media. Students evaluate and select information sources and digital tools based on the appropriateness to specific tasks and, students process data and report results.
- Student NETS 4b - Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make informed decisions using appropriate digital tools and resources. Plan and manage activities to develop a solution or complete a project

Outline of task:

You will be expected to find "online" ways with which to communicate a specific body of information so that it can be readily accessible anywhere in the world by anyone who has an internet connection and computer hardware. **Consequently, our AOI is Human Ingenuity**. For the purposes of this task then, the information you convey is almost secondary to the method (TOOL) you eventually use to communicate the information. The emphasis must be on **how** your COMMUNICATION can bring better UNDERSTANDING, as opposed to what it is that you are communicating. The information is, however, prescribed and expects you to convey knowledge about "what it is like to live in an International Context". This may involve describing the phenomenon of Internationalism, which according to Wikipedia, "teaches that the people of all nations have more in common than they do differences" and, reflecting on what that means for you as a student living and working in an international context **OR** it could be an "Idiots Guide" to living internationally **OR** both.

Your final product needs to be presented in 2 parts:

Part 1 - Must comprise of **a log/blog/doc "Report"** that discusses and reflects on the various phases of the design cycle you went through in order to answer the Unit Question. Of course this part must also clearly indicate what you found and show a clear answer to the question. Be as explicit as possible. It would be good for this part of the task to literally start with the Unit Question as part of its introduction. You are encouraged to explore a different format to present this part of the product.

Part 2 - In order to show how you came to your answer to the Unit Question (possibly also, to prove your answer by giving evidence), you will be expected to actually provide information/knowledge on what it is like living in an International context, using **some form of digital technology (a TOOL).** This information will be accessed by your peers, your teacher and an additional person of your choice (not related to this class), each of whom will be expected/asked to evaluate how effectively they felt that the information was communicated. You, of course, will also be expected to evaluate your work using the information gleaned from everyone else.

The following criteria will break down the task for you:

Investigation
In the investigation stage you will need to research in two parts

Firstly (and most importantly), you will need to investigate various online "tools" that exist in order to present your knowledge. At the same time you will need to start to ascertain which "tools" are most appropriate and eventually establish the most appropriate method of conveying your knowledge. With this "method/tool" in hand, you will need to familiarize yourself with the tools and techniques that it offers. In essence you will need to answer, for yourself, what "tool" is best and how can I best use this "tool" to present my knowledge. All this information needs to be recorded in your log/blog/doc, and you will need to make sure that you justify your choice. Remember also to include as many pics/screenshots and references as possible to docunment the process you went through.

Secondly, you must find information that has to do with Living Internationally. Part of this should be referenced from your own experience and part should be from information that you have found elsewhere. Whenever you find information, remember to keep the "address"/link/etc so that you can cite everything in what you present. Start by searching for websites that deal with the subject. A simple Google search throws up such sites as :

http://www.tckworld.com/ or http://enjoylivinginternationally.com/

Have fun … try to reflect on how this describes your experience (or not)

You also need to include an **evaluation** on what you accomplished during this stage of the design cycle where you **explain** and **discuss** your findings. This should be included in your Report (i.e. Part 1).

Your investigation is due by the **Thursday 1 November**

Design
By the end of this phase you will need to have described/created an outline of how you will use the specific Tool you have chosen. By this stage you will need to have:

- A proposed name/title/heading (maybe a range of possibles) for what you are designing
- an "address" for how anyone can access this tool

- A range of colour themes/schemes, eventually settling on one.
- An appropriate layout – where things like text boxes, illustrations/pics, activities, widgets, logos, references, etc go
- Consideration of how to compartmentalize various forms/aspects of your information (Tabs, folders, etc.)

In this stage you will also be required to develop an adequate form of EVALUATION for your final product (Part 2). This evaluation should request consideration of all stages of your design process and should be accessed in/through your final product (Part 2) – i.e. it should be in a digital format. I would suggest looking at something like www.surveymonkey.com to help you to create your EVALUATION. You also need to include an evaluation on what you accomplished during this stage of the design cycle. This should be included in your Report (i.e. Part 1).

The design stage needs to be completed by **Thursday 8 November**

Plan

In the plan stage of the task you will return to the **content** of your Tool and you will need to collate all the **details** of your knowledge/research into usable, **logical** parts. Sift through what you found in the Investigation stage and allow the "important bits" to bubble to the surface. Then you should start to categorize your findings so that you can present them in a way that effectively COMMUNICATES and brings UNDERSTANDING. (Remember that these two words sit at the heart of your Key Concept).

Time through this stage will also be dedicated to taking the two aspects of your product – That being the **CONTENT** and the **MEDIUM** by which you present the content – and planning how best to fit them together. This will necessitate a description of how you will best use your time. A Timeline.

You also need to include an evaluation on what you accomplished during this stage of the design cycle. This should be included in your Report (i.e. Part 1).

The plan stage needs to be completed by **Thursday 20 November**

Create

To create your product, you need to bring all your investigation, designing and planning together. You will now create Part 2 of your task, displaying a **competent** use of the TOOL you chose and **appropriate** knowledge/information about what you believe best describes/shows/explains "what it is like living in an international context". You must also **justify** our choices in your log/blog/doc report. At the end of this stage, you will then present it to your peers, your teacher and an additional person of your choice (not related to this class), each of whom will be expected/asked to evaluate how **effectively** they felt that the information was **communicated**. You should expect feedback by the day after the product "goes live" (give them that deadline). This CROWD-SOURCED feedback should also be made available to me so that it can form part of my final evaluation of your Task.

You also need to include an evaluation on what you accomplished during this stage of the design cycle. This should be included in your Report (i.e. Part 1).

Your need to have your create stage finished by **Tuesday 11 December**.

Evaluation

Your final evaluation of the task will be the most detailed one, and will explain in detail your journey

through the design cycle. Some questions that you may want to ask yourself:

- What problems did I have during this design cycle?
- How did I fix these problems?
- What did I do really well during the unit?
- Explain some new things that you learnt during the unit and how you learnt them
- Did your finished product look similar or different to what you had designed? Why?
- What would you do differently if you had to do this project again in the future?
- What advice would you give someone else who was about to start this project?
- Remember when you write your evaluation, don't just answer these questions. You are using them as a guide to create your extended evaluation. This final evaluation must also consider the evaluations/feedback given to you by others.

Please insert your Final Evaluation after Create stage of your Part 1 Report.

Attitudes

Personal engagement and independence, attitude towards technology and cooperation and respect for others will be evaluated by your teacher.

The final completion date for this task is **Thursday 13th December.**

Criterion A **Investigate**		**Task Specific Clarification.**
0	⌗ Does not reach a standard described by any of the descriptors given below	• No evidence of achievment
1-2	• The student **states** the problem. • The student investigates the problem, **collecting** information from sources. • The student lists some specifications.	• You have partially explained the problem. • You have investigated the problem and gathered your information from a limited variety of mediums and sources. • You have evaluated some of the information you have collected. • You have not described how you can test to evaluate your product designs.
3-4	• The student **describes** the problem, **mentioning** its relevance. • The student investigates the problem, **selecting and analyzing** information from **some acknowledged** sources. • The student **describes** a test to **evaluate** the product/solution against the design specification.	• You have explained the problem and its relevance in some detail. • You have investigated the problem and gathered your information from a variety of mediums and sources. • You have evaluated all the information you have collected. • You have described how you can test to evaluate your product design.
5-6	• The student **explains** the problem, **discussing** its relevance. • The student critically investigates the problem, **evaluating** information from a **broad range** of **appropriate, acknowledged** sources. • The student describes **detailed** methods for appropriate testing to **evaluate** the product/solution against the design specification.	• You have explained the problem and its relevance in great detail. • You have critically investigated the problem and gathered your information from a wide variety of mediums and sources. • You have critically evaluated all the information you have collected. • You have described in detail, how you can test to evaluate your product designs.
Criterion B **Design**		**Task Specific Clarification.**
0	• Does not reach a standard described by any of the descriptors given below	• No evidence of achievment
3-4	• The student generates **a few** designs • The student **justifies** the choice of **one** design • The student **evaluates** this against the design	• You have designed 2 different designs that can all work for the intended purpose. • You have evaluated each design.

	specification.	• You have given an explanation as to why you have chosen the design that you did. • Your evaluation tool for the CROWDSOURCED assessment is adequately designed
5-6	• The student generates a **range** of **feasible** designs. • **Each** design is **evaluated** against the design specification. • The student justifies the chosen design and **evaluates** it fully and critically against the design specification.	• You have designed at least 3 different designs that can all work for the intended purpose • You have evaluated each design critically • You have given a detailed explination as to why you have chosen the design that you did. • Your evaluation tool for the CROWDSOURCED assessment is appropriately designed.
Criterion C **Plan**		**Task Specific Clarification.**
0	• Does not reach a standard described by any of the descriptors given below	• No evidence of achievment
1-2	• The student produces a plan that contains **some details** of the steps and/or the resources required.	• You have collated a basic content for your product. • You have created an incomplete timeline of the unit and how you will organise your time • You have not stated any changes that needed to be made in your planning.
3-4	• The student produces a plan that contains a number of **logical** steps that include resources and time. • The student makes some attempt to evaluate the plan.	• You have collated a detailed content for your product. • You have created a timeline of the unit and how you will organise your time. • You have stated any changes that needed to be made in your planning. • You show preparation for communication and understanding.
5-6	• The student produces a plan that contains a **number** of **detailed, logical** steps that describe the use of resources and time. • The student critically evaluates the plan and justifies any modifications to the design.	• You have collated an extremely detailed content for your product. • You have created a logical timeline of the unit and how you will organise your time. • You have justified any changes that needed to be made in your planning. • You have clearly and effectively shown preparation for communication and understanding.
Criterion D **Create**		**Task Specific Clarification.**
0	• Does not reach a standard described by any of the descriptors given below	• No evidence of achievment
1-2	• The student considers the plan and creates at least **part** of a product/ solution.	• You have shown partial use of your chosen tool to produce your finished product. • You have mostly followed your plan and mention some changes that needed to be made. • You have expressed content in your product that communicates in a manner that promotes partial understanding.
3-4	• The student **uses** appropriate techniques and equipment. • The student follows the plan and **mentions** any modifications made, resulting in a product/solution of **good** quality.	• You have shown use of your chosen tool to produce your finished product. • You have followed your plan and mention some changes that needed to be made. • You have expressed content in your product that communicates adequately and promotes understanding.
5-6	• The student **competently uses** appropriate techniques and equipment. • The student follows the plan and **justifies** any modifications made, resulting in a product/solution of **appropriate** quality using the resources available.	• You have shown a competent use of your chosen tool to produce your finished product. • You have followed your plan and written detailed explanations about any changes that needed to be made. • You have expressed approprtiate aned excellent content in your product that communicates competently and promotes understanding.
Criterion E **Evaluate**		**Task Specific Clarification.**
0	• The student does not reach a standard described by any of the descriptors given below.	• No evidence of achievment
1-2	• The student evaluates the product/solution **or** his or her own performance. • The student makes some **attempt to test** the product/solution.	• Incomplete evaluation: o of the quality of the finished product, using some of the data collected from the target audience o of the own performance at all stages of the design cycle o of some improvements or modifications to the product that have been suggested in feedback

3-4	• The student evaluates the product/solution **and** his or her own performance and suggests ways in which these could be improved. • The student **tests** the product/solution to evaluate it against the design specification.	• A moderate evaluation that attempts to: o Evaluate the quality of the finished product, using some of the data collected from the target audience o Evaluate own performance at some stages of the design cycle o Evaluate some improvemevts or modifications to the product that have been suggested in feedback
5-6	• The student evaluates the success of the product/solution in an objective manner based on the **results of testing**, and the **views of the intended users**. • The student provides an evaluation of his or her own performance **at each stage of the design cycle** and suggests improvements. • The student provides an appropriate evaluation of the **impact** of the product/solution on life, society and/or the environment.	• A thorough and well set out evaluation that comprehensivley and critically: o Evaluates the quality of the finished product, using the data collected from the target audience o Evaluate own performance at each stage of the design cycle and suggests improvements that could be made o Evaluates improvements or modifications to the product that have been suggested in feedback
Criterion F **Attitudes**		**Task Specific Clarification.**
0	• The student does not reach a standard described by any of the descriptors given below.	• No evidence of achievment
1-2	• The student **occasionally** displays a satisfactory standard in **one** of the aspects listed above.	• The student displayed an inconsistent level of ; o Appropriate working habits o Involvement in the learning process o Respect for others o Working independently o Organization
3-4	• The student **frequently** displays a satisfactory standard in **both** of the aspects listed above.	• The student displays; o Appropriate working habits o A good level of involvement in the learning process o Respect for others o An independent approach to the written work o A good level of organization
5-6	• The student **consistently** displays a satisfactory standard in **both** of the aspects listed above.	• The student always displays; o Appropriate working habits o A high level of involvement in the learning process o Respect for others o An independent approach to the written work o A high level of organization
Teacher Comment.		

A Brief Explanation:

Recently (literally two weeks ago), I planned a unit for a combined grade 9 and 10 Technology class. The subject Technology works by means of a series of Units throughout the year. Each unit is allotted a specified period of weeks. In each unit, students are posed with a "problem" or issue that needs to be solved and are expected, through a process or cycle of inquiry, to solve or find ways of dealing with the "problem". This could be anything from a woodwork-oriented unit where students are tasked with researching, designing and producing a comfortable chair, to what I describe in my plan described above.

For the purposes of this task, and with Erica Hamilton's guidance and suggestions, I have submitted this Unit plan and assessment expectations instead of a lesson plan. (This will also explain my deviation from the expected lesson plan layout.) I do, however, concentrate most of my reflections on the first criterion (Investigation) as I already have some feedback from my students regarding this stage. Although the students and I are in class together, we mostly communicate through the class Wiki where students are able to show me their progress and discoveries on a laptop or on their iPads.

What technology did you choose for this lesson and why did you choose it?

I am fortunate to have a 1-1 iPad policy at my school and therefore am able to explore different ways that the iPads can be useful in conducting this unit. My unit was designed to incorporate technology into the way the class is facilitated and, at the same time, to give students the opportunity to explore what technology they can utilize to process their learning. It is "concept" based and attempts to comply with the International Baccalaureate (IBO.org) planning expectations. All classwork/research/discussions and submissions are conducted and completed with the use of the student's iPads and Laptops and everything is accessed and/or uploaded through the class Wiki. I have only just started using a Wiki for my classes and find it a very helpful way of communicating class expectations and lessons.

What was the role of TPACK in helping you shape/create/implement your lesson?

Towards the beginning of the course, I found myself reflecting that my Technological knowledge was lacking and needed to be spruced up in order to contend with the expectations of teaching in the 21st Century. Thoughts like, "this is too big a mountain to climb" and "how on earth will I eat this elephant" sprang to mind but I have found it surprisingly easy to start to think about what technologies to use in the classroom. The light and intuitive iPad (together with its frustrations like how to view Flash Videos) necessitated an exponential growth in my technological knowledge. On the other hand, where I had assumed that my twenty plus years of teaching had the synergy between the Content and Pedagogical aspects of my knowledge all sewn-up, these two aspects have now been called into question. From the outset, I had to explore different ways of implementing this unit. Old pedagogical methodologies needed to be morphed (maybe "retro-fitted" is a better word) so that I could facilitate the student's learning through digital technology and more, specifically through a Wiki, which necessitated me being a learner now that I was the "Creator" of the Wiki. I had to understand the "new way" of teaching/ facilitating the class using the iPads and wiki. It constitutes quite a paradigm shift to step aside and rather let the "interwebs" provide the content. My pedagogical and content knowledge had to focus on teaching my students ways of filtering, summarizing, distilling and presenting their learning through the technology they have at hand.

What was the response of your learners to this lesson? What were the affordances? What were the constraints? (If you are not currently teaching, please predict the kind of responses learners might have to your lesson, as well as, the potential affordances and constraints).

My students, having already completed several other units in this subject have become used to responding, reflecting and evaluating their progress through each unit. Up until now they have simply typed out their work, using their iPads on a Pages document and emailed it to me (or any of their Technology teachers). What they have had to do is get used to using a Wiki. We are a relatively small school and to the best of my knowledge, I am the only teacher in the school that uses a Wiki. This does mean that they have to adjust to my approach and use of technology. This seemed to have taken a short while, predicated on the fact that in my experience and, contrary to popular belief, teenagers can be notoriously inflexible when it comes to working with something with which they are unfamiliar, and especially with something that they did not propose. Now, I think they prefer the fact that the Wiki gives them ready access to all their work.

They can view each other's work with ease and never have to wonder if an email got through or not. Their submissions for the Investigation phase of their assignment were clear, logical and utilized several functions of the iPad (including screenshots, whiteboard/handwritten work shots and video) in order to record their information. Some used a pages doc, which they then inserted into a new page on the Wiki, others, wrote directly onto a wiki page and one has now decided to continue his reflections on a blog (for which he has provided a link). All of this then, I was able to collate on a relevant Lesson Page using a "list of Wiki pages" widget. I am also now using the "Projects" facility on a Wikispace, which allows students to work in privacy (but with my – the Wiki Creator's - access) until such time as it needs to become public to the class. The Projects facility also allows group collaboration, depending on how you set it up. I have yet to find any insurmountable constraints using the Wiki but do notice that if I (or whoever creates hyper-linked text) neglect to make the text large enough (the 100% default text size is quite small), it becomes quite hard to touch the appropriate place on the iPad screen in order to the hyper-link to activate. Fingers are a lot stubbier than an onscreen mouse pointer, which of course the iPad doesn't use.

What other ways might this technology be re-purposed (this can be related to other topics or subject matter)?

I also teach English and have found the same functionality with both the iPad hardware and the Wiki application. What I am exploring more with the iPads is the ability to create and access iBooks. More and more "books created with iBooksAuthor" are available either at a cost or for free and provide a wonderful shared community of book lovers. They are available in all subjects, but I have found that the offerings for English are very good. In addition to novels, I have found textbooks that fit perfectly in with the age groups I teach. This is where the iPad starts to come into its own. My students are now able to keep all their novels and textbooks in their iPad and have ready access not only to the books themselves but any notes they make, highlights, references, dictionaries and much more. Admittedly, iBookAuthor will not work on an iPad (for it you need a Mac computer) but the iBook "reader" is great. I have already had a grade 10 class plan and develop their own iBooks on their iPads, including recorded videos and voice-overs and then, when they were ready to publish their work, I arranged for them to be on Mac computers to format and upload their iBooks. The next stage is to publish their iBooks on the iTunes store. At the beginning of the year I did something similar when I needed a specific novel, which would have taken quite a while to order. I simply found the text online (pre/out of copy-write) and made an iBook out of it, including the pictures I wanted to include and made it available to my students to download onto their iPads from a link to my Dropbox, where it was stored.

How did this lesson aid your professional development and teaching practice?

The convenience of the iPads and the ease of access to the class wiki allow me to easily use technology to "Flip" the classroom and explore different ways of exploring and inquiring to advance learning. Through the creation of this Unit and the several lessons that it has already brought, I found

(and still find) myself constantly striving to create the best connection possible between for what my students learn in the classroom and what their life experience is and possibly will be. For me Cathy Davidson's inspired concept of the Cartwheeled classroom is something to which I aspire. "The Cartwheeled classroom" she says, "not only connects text books and classrooms to the real world, but it also inspires, uplifts, and offers the joy of accomplishment. Transformative, connected knowledge isn't a thing--it's an action, an accomplishment, a connection that spins your world upside down, then sets you squarely on your feet, eager to whirl again. It's a paradigm shift." (http://www.fastcoexist.com/1679807/why-flip-the-classroom-when-we-can-make-it-do-cartwheels) My increased access to Digital technology over the last few months coupled with a fascination for "all that flickers", has started to create positive paradigm shifts for me in my teaching because I have been able to see connections between my Pedagogical, Content and Technological knowledge.