Abstract: For twelve weeks during the Summer of 2013, Annie Borch and I created a scientific documentary about the geology of the Sea to Sky Corridor. This documentary is titled ‘Beyond the Barrier: The Geologic Story of the Sea to Sky Corridor’. It was funded by and created as part of the Summer Fellows Program at Quest University, Canada. This program allowed me to collaborate in the creation of this film while addressing the question “How, through storytelling, can I engage viewers in a subject that many find common?” It also helped me develop film techniques in storyboarding, shooting, and post-editing.
Introduction

The project I undertook this summer was to create a twenty minute scientific documentary about the geology of the Sea to Sky Corridor. I have a basic foundation in filmmaking from courses I took in highschool, so this project was largely intended to be a ‘learn by doing’ experience. As this was a collaborative project with Annie Borch, the work was divided between us. While she researched the geologic content of our film, I had my own goals to meet through the creation of this project: First, to address the question “How, through storytelling, can I engage viewers in a subject that many find common?” and second, to learn film techniques in and experience storyboarding, shooting, and post-editing. Through this Summer Fellows project, I was also able to learn a tremendous amount about geology, collaboration, and my own work ethic. These are skills that will remain with me throughout the rest of my education at Quest, and beyond.

Rationale

I believe that both storytelling and filmmaking are priceless skills in today’s fast paced. They are effective measures through which one can entertain while educating an audience. This multi-function feature allows an artist to satisfy an instant-gratification mindset while communicating important messages. Now, these ‘instant-gratification’ and ‘entertainment oriented’ mindsets are not necessarily bad - but there are tasteful ways to entertain that also remind the viewer of their greater context. This affects the way they treat others, themselves, and their surroundings. This chain of events can be used to influence people’s choices and in turn, shape our world. This is why I believe in the power of scientific documentaries.

Goal One: “How, through storytelling, can I engage viewers in a subject that many find common?”

This question was primarily answered through the actual development of the story for our documentary. We found that story is used to engage viewers largely by making art emotionally appealing. There were several steps that we used to accomplish this. First I will explain the general idea behind each step. Then I will explain how this idea fit in the context of our documentary. I will also address any major obstacles, and the steps we took to overcome them.

- Determine what greater message(s) you want to communicate and why
- Establish a source of tension for your story: Having something at risk makes the audience continue to pay attention. However, in a documentary, be sure to remain truthful about the size of the risk, as this can be easy to exaggerate.
- Develop a tone for your story: Tone is a way to communicate an attitude towards the subject matter, and to suggest the viewers how they should feel about the subject.
- Tie together multiple storylines, with logical transitions as you switch between them.
• Make the story relatable:
  Add a human element that allows the viewer to sympathize with the story. This is often done through adding individual ‘characters’ that face the tension.

• Determining a greater message:
  Although the greater messages and our incentives for communicating them were the driving forces behind this project, this step also led us to one of the largest obstacles. Annie and I had different incentives for teaching geology; she wanted to teach geology for the pure joy of learning about the earth underneath, while I wanted to help people understand their greater context and influence them to live in a safer way with our planet. This difference boiled down to Annie wanting to spend more time teaching the geologic details because geology is awesome, while I wanted to explain to the viewers why geology is awesome. This conflict required us both to compromise and together explicitly state our greater message, and why it is important. Both of these were used in creation of the story.
  **Greater Message:** The earth [and it’s geologic processes] is large and powerful.
  **Why it is important:** Realization of this fact humbles us, so that we may recognize dangers and limitations, and react to dangerous geologic situations realistically.

• Establishing a source of tension:
  As Squamish has an incredibly dynamic range of geological features, it was not difficult to find a landmark that poses threat to the Squamish community. The Barrier, a rock wall that acts as a natural dam for Lake Garibaldi, is crumbling away. Its collapse would lead to the lake flooding Squamish valley. However, it would take significant tectonic activity or lots of time for this to happen. In order to be truthful we tried to avoid making this look like it was likely to collapse at any moment soon.

• Developing a tone:
  In developing our tone, we were unsure what would be most effective for presenting the subject matter. To solve this, we wrote three different documents outlining what type of storyline, theme, and shots would be included in each tone. We then selected one of these tones and wrote a five-page document further and more specifically exploring these aspects.

• Multiple story lines:
  We wanted smooth transitions between the stories, but them to have enough contrast that they added dynamics to the film (and to do their purpose (educate vs. entertain and engage)).

• Make the story relatable:
  In order to make it relatable we decided to add a ‘character’ that the audience could identify with enough to become invested in.
Goal two: to learn film techniques in storyboarding, shooting, and post editing.

Storyboarding: Aside from the overarching story that ties together all of the story elements, there are smaller stories that exist as individual scenes. For the purpose of creating these scenes, there are specific types of shots used to propel the scene’s plot forward.

- Wide/Establisher:
  This shot (or short series of shots) is crucial for establishing a scene’s exposition. It is generally very zoomed out and shows the setting of the scene.

- Medium Shot:
  This shot is used to frame the majority of the action in the scene. It is large enough to show what is happening, but small enough to keep other distractions out of the shot.

- Close up/Cutaway:
  This shot highlights important nuances of a scene. It is useful in a situation where a wider shot may have too many distractions. For example, a close up shot of a hand holding an ipod might be shown to let the audience know a character is changing the song on his ipod.

- Ender:
  This shot gives closure to the viewers at the end of the scene. Similar to the establisher shot, it indicates information about how the scene ends transitions to the next scene. This could be as simple as the character walking out of the frame, or a pan from the objects in the current scene to the objects of the next scene.

Shooting: For the actual filming of the documentary, there were several major aspects that were key to successful shots:

- Steady shots:
  We always aimed to use a tripod or steadycam (a handheld camera steadier device) to keep our shot stable. It can be disorienting to the viewer to have shaky shots.

- Light:
  We had to make sure that our subjects had enough light on them. This required us to be extra aware of the time of day we chose to film. If we wanted to use the orange evening light to heighten the beauty of the geological features, this required extra time coordination, as we often had to hike up mountains to do so.

- Preparedness:
  Several of the shots we retrieved were not in the storyboard, but were filmed spontaneously. We aimed to be spontaneous with some of our filming by bringing the camera with us everywhere. We also brought an extra battery and SD card after an experience where we needed more shots but did not have an extra card.
**Post Editing:** The majority of work occurs during post editing. In pre-production we fantasized about what we wanted our project to look like. During the filming we acquired hours of shots with unlimited potential. Once in post editing, we married the our vision and the shots together to create our film. These are some of the lessons we learned during the process.

- **Give yourself more time than you think you need:**
  Even though we allotted a significant amount of time to for editing, we were still rushing at the end of the project. We also ran into several unanticipated technological obstacles such as slow software and creative limitations to imovie. These obstacles would have been less of a problem if we had given ourselves more time for the editing process.

- **Do not use music or sound as an editing crutch:**
  When editing a video that has background music, it can be tempting to sync every cut with a beat in the music. However, the visuals should flow nicely on their own, as well. If the visuals are cut according to the beat in a song, they may not have the same visual appeal as if they were carefully edited independently, with the audio added in afterwards.

- **Always back up footage:**
  This is simple; If the computer crashes, or footage gets deleted, the project is gone. Although hopefully unnecessary, backing up footage and projects in process is a necessary insurance for those sorts of situations.

- **Use visual evidence where possible:**
  This means use shots as visual evidence to support what is being explained. Especially in interviews, show footage that illustrates what the interviewee says. For example, if an interviewer is talking about the ‘U’ shaped valleys that are formed by glaciers, cut to a shot of a ‘U’ shaped valley to illustrate the point.

**Personal Lessons:**

One of the most important lessons I learned during this project is the value in time management. I am used to the pressure of the block system (and learning in 3 week increments), so with twelve weeks to accomplish the project, it felt like I had all the time in the world. This resulted in us falling behind in our work, because we spent too much time trying to perfect the storyline. What we really needed to do was choose an idea and commit to it - which we eventually did. After this confusion at the beginning of the project, we created a detailed, day-by-day outline. This helped us manage our time throughout the rest of the summer.

I learned a lesson in time management, but perhaps we could have been more efficient at the beginning of the project if we had been more willing to ask for help. Our host faculty members (Colin and Steve) could have helped us generate a storyline and commit to it quicker if we had communicated how difficult it was for us. I didn’t realize until after the fact that it is absolutely acceptable to have difficulties with a project. I know now that there will always be limitations to my knowledge/abilities and I should ask for help when I need it.
Communication could have been increased with my project partner, Annie, as well as with the host faculty members. There was an instance during the summer where I was waiting for Annie to finish the script so I could put the finishing edits in a scene. However, unbeknownst to me she was waiting for me to finish editing the scene so she could perfect the script. This problem was not addressed until we encountered it, probably because it was such an obvious obstacle that we overlooked it. Once we realized what was happening, we quickly made lists of everything that we were expecting from one another. This allowed us to sort out an order that our tasks needed to be accomplished in.

**Conclusion:**

The Summer Fellows Program provided me with a unique opportunity to explore filming techniques through the creation of a film. I was also exposed to the basics of geology, and saw how fascinating rocks can be through the eyes of my project partner, Annie. I communicated this appreciation through story and film techniques. My hope is that our viewers reflect on the power of nature, and use the knowledge of this power to understand their greater context.

Our film, entitled “Beyond the Barrier: The Geologic Story of the Sea to Sky Corridor” can be viewed on youtube using this URL: http://www.youtube.com/watch?v=IHcfTwc2j7I

Check out Annie Borch’s Summer Fellows Final Report to get her perspective on the collaborative project!

If you have any further questions about our documentary or about this project, feel free to email me at sommer.harris@questu.ca.

**Thank you (in alphabetical order):**

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