

STEAM English: Innovations in Composition Pedagogy

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Three Year STEAM Implementation

	ENGL 1101 Sections	ENGL 1102 Sections
<i>AY 2014/15</i>	10	10
<i>AY 2015/16</i>	12	12
<i>AY 2016/17</i>	16	16

A Beginning Framework

- Center the sciences culturally and politically in a humanities framework.
 - Foster awareness of and build student investment in socioeconomic, cultural, and ethical issues in the sciences (relational perception).
 - Build recognition that complex global problems require work that is collaborative and community based, where goals often shift in process.
- Target the development of analytical skills necessary for burgeoning scientists while fostering interdisciplinary college writing practices.
- Make visible and problematize the rhetoric of science.

Goals:

- Bridge the perceived discipline gap.
- Increase student engagement.
- Reduce STEM student anxieties & barriers with English.
- Target rhetorical modes relevant to STEM fields broadly.
- Increase student performance and retention.
- Build a SoTL faculty community.

ENGL 1101: STEAM Guidelines

- 75% of readings are broadly science based (nonfiction) with at least one common text among sections.
- Two essays deal with STEAM issues.
- Each instructor follows the same writing trajectory:
 - Summary.
 - Response.
 - Critique (of an argument).
 - Argument (constructing their own).
 - Poster Presentation as a final assignment.
- Students complete a pre/post-test measuring same skill set.
- Students participate in a focus group evaluation performed by an outside evaluator.

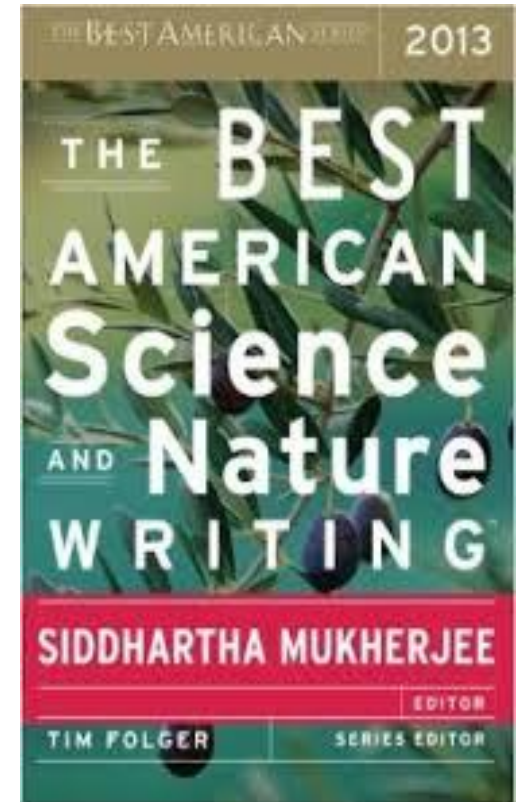
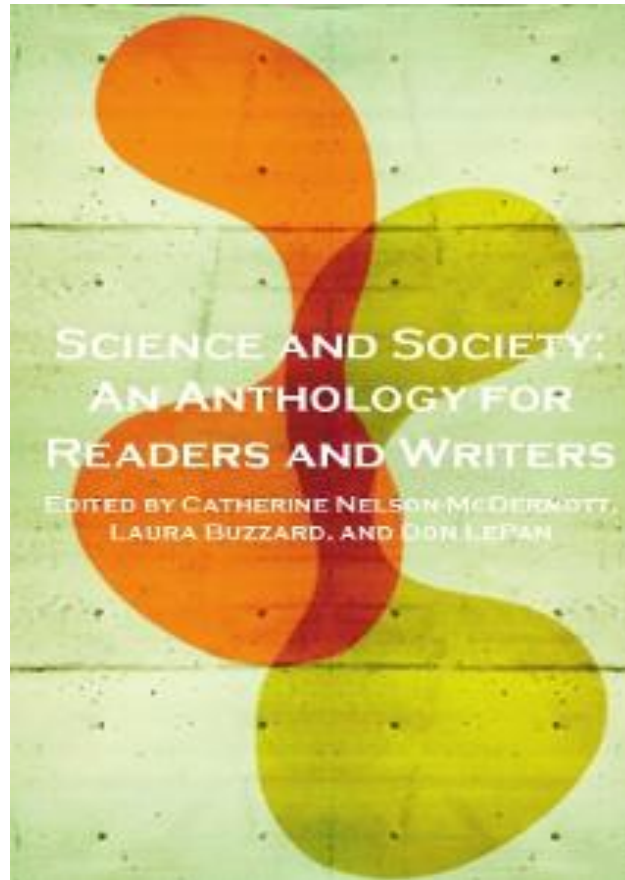
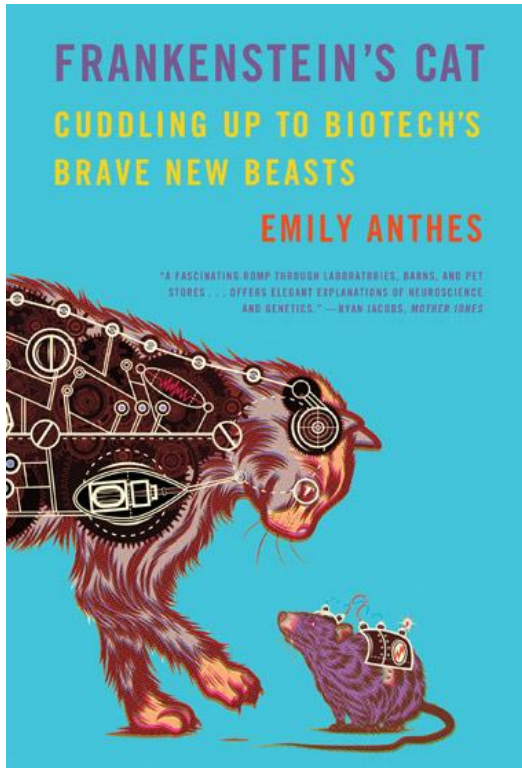
ENGL 1102: STEAM Guidelines

- 70-75% of readings are broadly science based (mix of fiction, poetry, & nonfiction) with
 - at least one common text among sections.
 - one student driven unit.
- Texts for two essays deal with STEAM issues (in a literary context).
- Each instructor repeats the writing trajectory from 1101 giving significant coverage to argumentation: claims, evidence, analysis.
- Sections deploy a multi-media presentation as a final assignment.
- Students participate in a focus group evaluation performed by an outside evaluator.

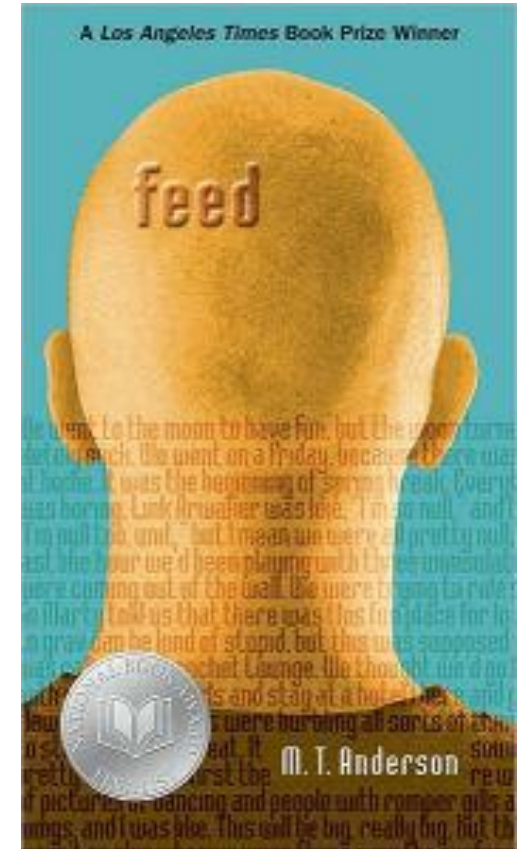
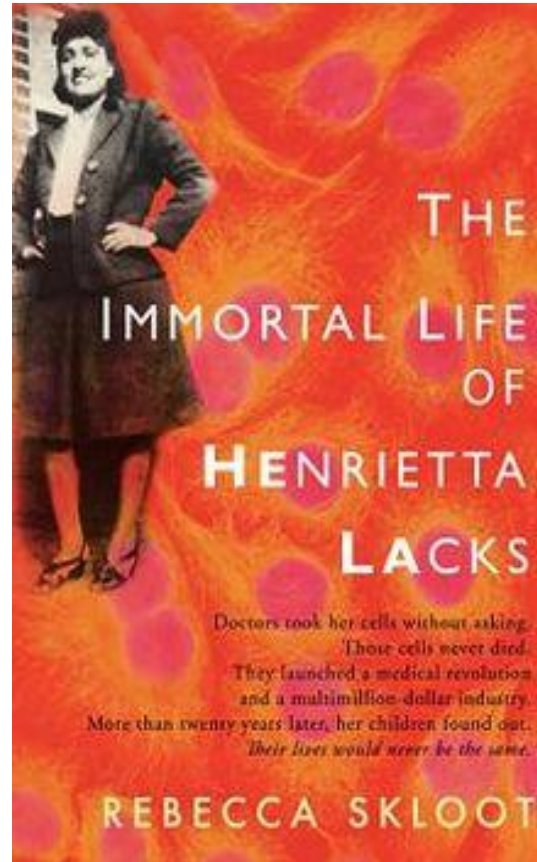
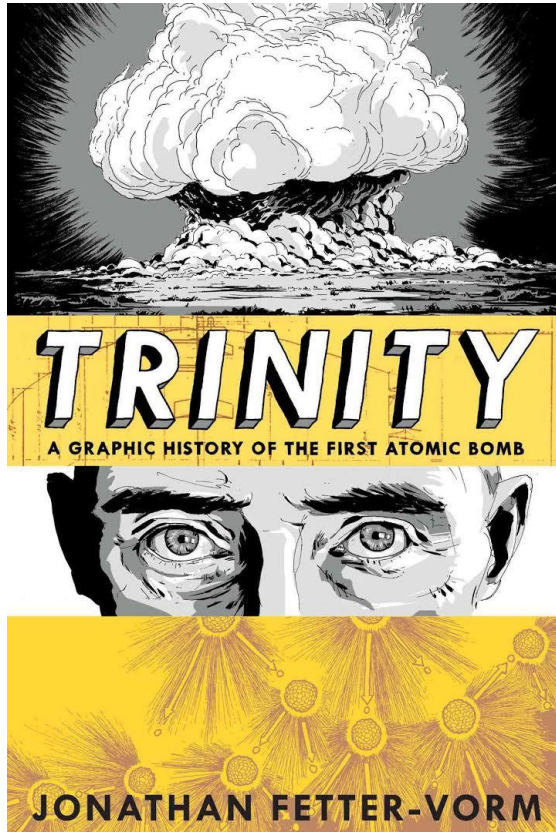
Moving to STEAM Based ENGL 1102s

- Students learn to see 1101 and 1102 as a coherent design and as a program that aids them in their respective discipline-specific fields.
 - Consistent themes.
 - Consistent, common vocabulary, and knowledge set.
 - Consistent instructor set.
- Students apply accumulated knowledge from our 1101 units (mostly nonfiction) to current literary debates and engagement with technology & science.
- Recursive pedagogical design that repeats and deepens the writing skill set to promote learning and retention of material while advancing their analytical skills.

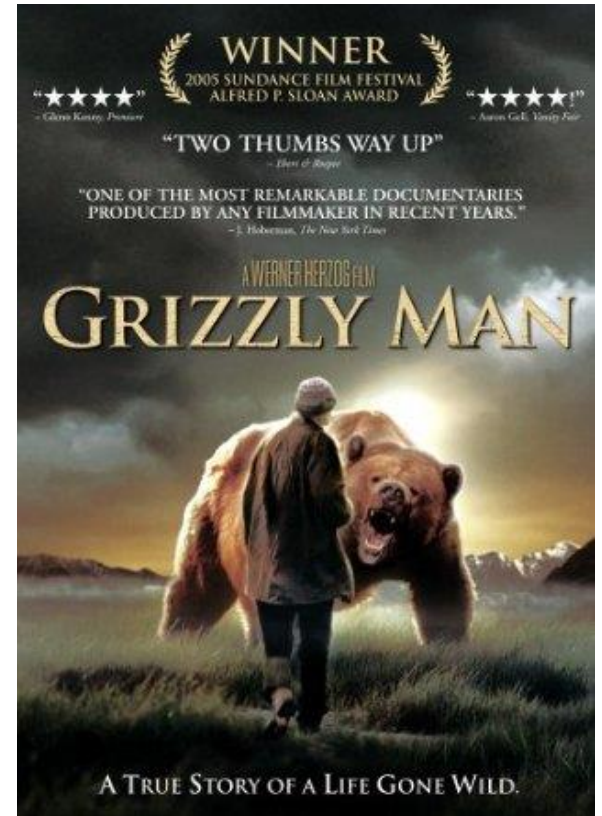
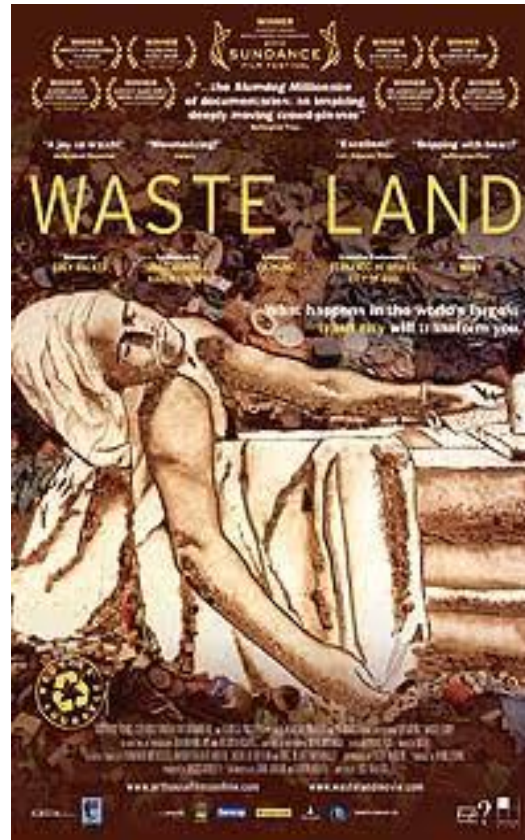
Sample Texts



Sample Texts



Shared texts/films





FutureCoast

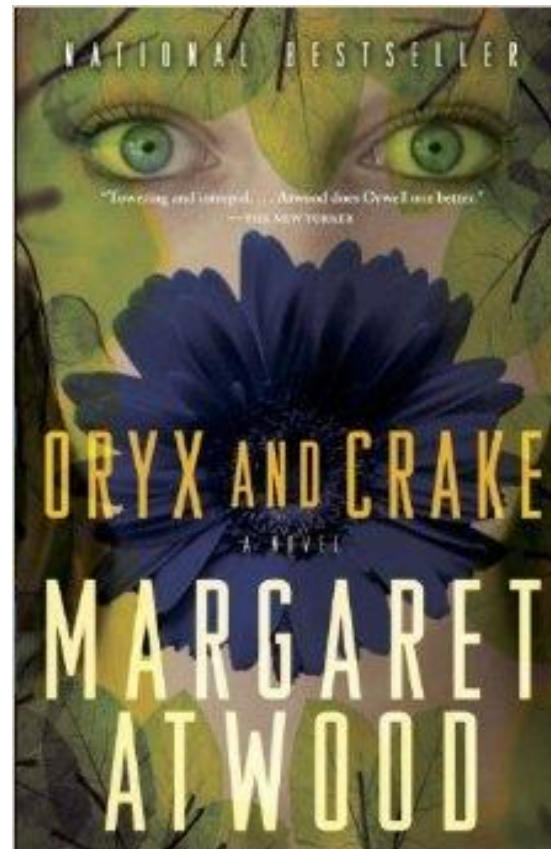
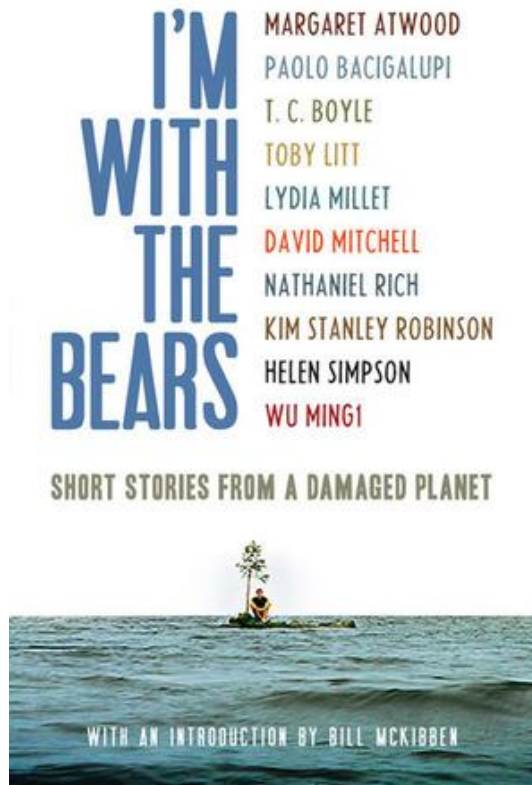
Transmedia Storytelling

- the act of telling one universal and continual story through various mediums
- voice messaging, immersive online presentation platform, alternate reality gaming
- Participants were given the chance to create their own voicemails, projecting their **individual** fears (and hopes) of the future of climate change into a single message.
- These voicemails were **collected**, dated, and posted on a website for the public to listen to and **combine** into their own narrative patterns (timestreams).

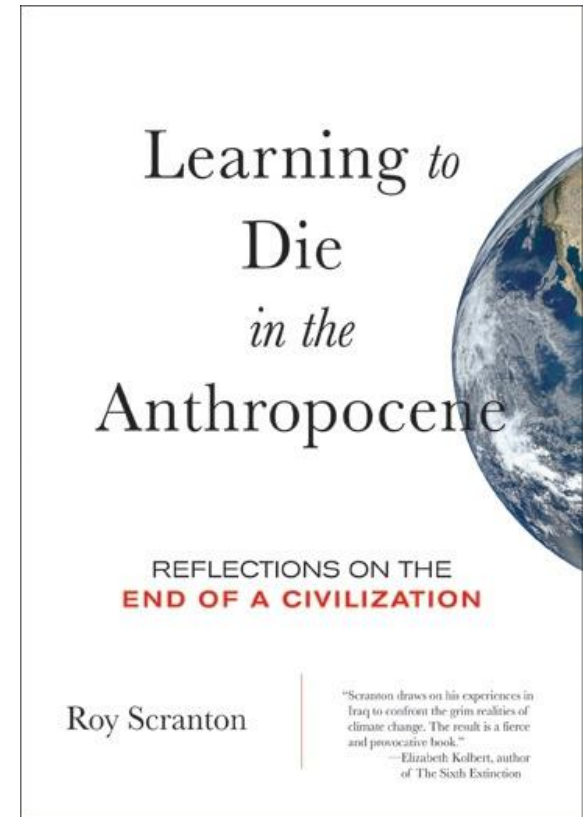
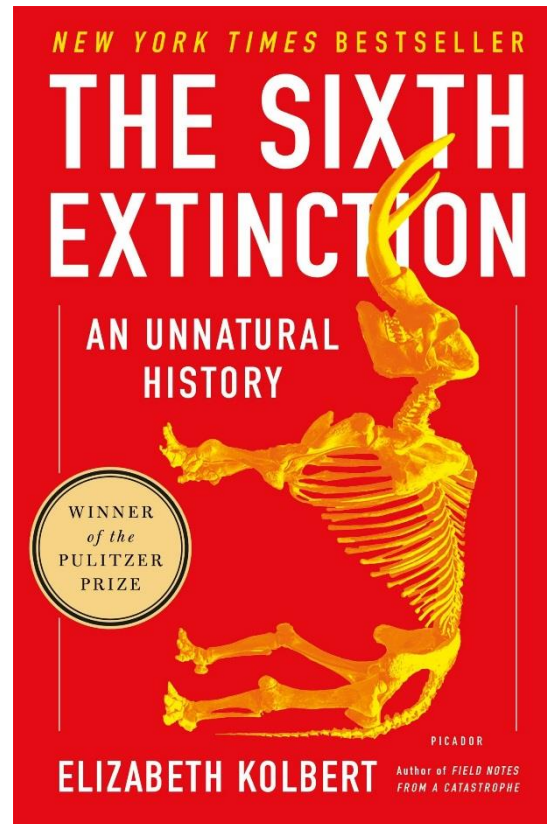
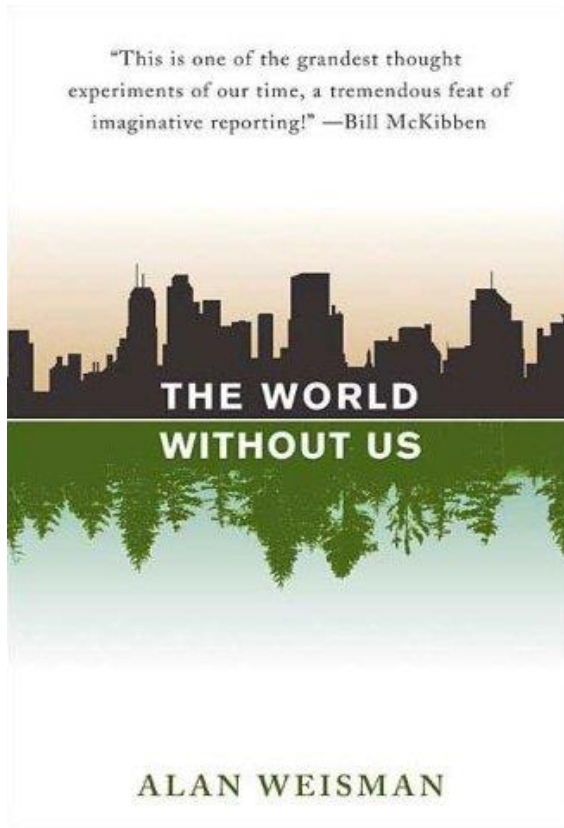
Intellectual Challenges, Creatively Approached

- “While the voice mails tackle climate change in different ways, few, if any, are politicized. ...Using a fictional narrative to tackle a difficult issue encourages people to suspend judgment.” – Julia Pyper, *Scientific American*
- “Stories help in making connections, breaking down disciplinary boundaries and linking larger scale events with personal consequences.” – Stephanie Pfirman, co-chair of the Environmental Science Department at Barnard University
- “In these voicemails, people express their views and share the elements that make the threat of climate change relevant to them. They mix in a collaborative space where different ideas about climate-changed futures exist together and learn from each other.” – Ken Eklund, Game Designer

Classroom Context: Fiction



Resources: Nonfiction



The Written Assignment

Assignment #2

Script Proposal and Annotated Bibliography for Voicemail Project

Required Length: 5-7 pages

Due Date: Friday, 3/11 by 5 PM

Format and Citations: MLA

Directions:

- Pre-production planning for multimedia project
- Synthesize scientific/sociological research on a focused topic of contemporary relevance with fictional representations of that topic
- Explain and reflect on methodologies, self-analyze process
- Learn to produce texts like the ones they study, empowering their participation in a conversation that extends beyond the classroom

1. Listen to several of the *Futurecoast* recordings (<http://futurecoast.org>), which take the form of fictional voicemails from various points in the future, in which climate change has rendered life on this planet a little or a lot different. Ultimately, you'll be recording your own voicemail from the imagined future, so consider making a "timestream" of your favorites to listen to again as you plan yours. While you're listening and collecting examples of voicemails you find interesting or useful, explore the website(s) to learn more about the project's aims, who its contributors are, and how a collaborative storytelling platform engages regular people, not scientists or authors, in a dialogue about climate change. Look at the Chronofall Diary to get a sense of how people are responding to particular voicemails.
2. Consider how the specific topics and anxieties represented in these voicemails align with any of the works we've been reading over the course of the semester. Be sure to be clear about the connections you're making by planning to identify and discuss one or two specific texts and by referring to the content in specific voicemails.
3. Write a script for a voicemail of similar length to the ones you've encountered on the *Futurecoast* website. You can be as creative as you want, but the content of your script must relate to the themes, images, and/or concerns from one or two course readings.
4. Following the script, you should compose a short essay explaining how your script relates specifically to course readings and generally to a global conversation about climate change. **Please note that though the script will ultimately be the most important feature of this assignment as a pre-production draft of your voicemail, your grade for *this* assignment will come primarily from your essay, so you should not treat it as an afterthought by writing it in haste, filling it with generalizations or trite conservationist claims, or by writing an excessively long voicemail script and then only a brief, unsupported passage explaining it. You should summarize and analyze your own composition with the same rigor by which you analyzed the article in Assignment #1.**
5. Lastly, you'll provide a bibliography of five sources that informed the composition of your script and supply a brief annotation summing up the relevance of each source to your project. Though this will appear last on the document you submit, you will do this research first. One of the sources will be *Futurecoast*, and your annotation will describe the individual voicemails that inspired your script. 1-2 of the other sources listed here will be the readings from class you're tying in. 2-3 other sources you list here must be scholarly sources on climate change or articles from reputable popular sources. I'm happy to help you evaluate your outside sources if you like!

Submission Guidelines: Upload your three part document (I. the finished script, II. the essay, and III. the annotated bibliography) to the appropriately labeled dropbox on Course Den. Your work should be in either .DOCX or .PDF format—the dropbox doesn't like Pages, etc. and I won't be able to read your essay if you submit in an uncommon format. Don't forget to cite everything you quote or paraphrase, even if it's audio! If you upload early enough, you can check the Originality Report in Turnitin to avoid plagiarism and resubmit if there's a problem, but be careful because Turnitin will mark properly formatted quotations as content from source material. It does not distinguish between proper documentation and improper documentation; it only searches for identical language.

The Multimedia Assignment

Multimedia Project
Futurecoast-inspired Voicemail

Required Length: up to 2 minutes of audio
Due Date: Monday 3/28 by the beginning of class
Format: Recording, any common format

Purpose of the Futurecoast log: “As an authentic fiction, *Futurecoast* aims to spark collaborative exploration of possible futures, including climate-changed ones, and create an open channel for sharing visions of how people and systems respond and adapt to change.”

Directions for Submissions from the Original Futurecoast CFP: “FUTURECOAST HOTLINE: During the Fourth Chronofall (Feb-Apr 2014), FutureCoast players created the voicemails from possible futures that you hear at FutureCoast.org. During our active period, anyone could express their ideas about possible futures simply by calling the Hotline and leaving a message. When you record a voicemail on the hotline, you add to the collection of voicemails from the cloud of possible futures on FutureCoast.org. You participated in a work of collaborative fiction – that means you're one of hundreds of storytellers giving voice to futures that we want to explore.”

Assignment: Though the official *Futurecoast* hotline is closed, we, as a class, are going to continue to participate in the spirit of that project by recording and collecting our own futuristic voicemails from this Chronofall, which is actually a “ChronoSpring.” I guess. You’ve already done all the preliminary work for this project in your second written assignment, so your task now is simple. You will record your own own “voicemail” and upload it to the dropbox in CourseDen, where I will then render it anonymous and add it to a folder in Google Drive. There, you will be able to listen to all of the voicemails from all four of my sections of 1102 this semester. Your production should be of similar length and auditory quality and express like aims to the material you find on the *Futurecoast* website, but beyond that, you have a lot of freedom to determine the content of your piece. I ask only that it relate to course material and the conversations that arise from that material in class.

Directions:

1. Using the script you wrote for the second assignment and my feedback on that assignment, record a voicemail. You should practice your voicemail so that you do not sound like you’re reading from a script. You should also consider using friends and family as voice actors if your own voice is inappropriate to the content you plan to record (i.e. it’s from a child’s perspective/it’s polyvocal). I don’t care how you record this thing—you can check out audio recording devices from the university, simply record it on your phone or just record it directly to the dropbox in Course Den (this is the easiest option). All that matters is that your recording is in a common format, like MP3, that I’ll be able to listen to and play in class.
2. Upload your recording or video to the appropriate dropbox in Course Den.

Submission/Presentation: We’re going to listen to all of the voicemails in class starting 3/28, so you’ll need to have yours uploaded and have verified that it is listenable/viewable by class time on that date, even though we might not get to yours until the 30th. Then, we’re going to talk about them just like we’ve been talking about other course texts.

Evaluation: There’s no rubric for this assignment, but your voicemail or chronofact will be graded, first and foremost, according to how well it seems to fit the goals of the *Futurecoast* project and how well it represents your own statement about the work from the second written assignment. Secondly, your efforts will be graded on creativity and depth of engagement with the project, so if you barely looked at the website or simply duplicated something you found there or in a course text or elsewhere on the internet, this part of your grade will suffer. In other words, this part of your grade comes from making a sincere effort, rather than “phoning it in.” See what I did there?

- Imagine the future as a writer of speculative fiction/cli-fi might, basing ideas on current scientific findings and projections
- Evaluate and respond to various possible futures encountered in assigned reading
- Communicate widely and accessibly through the platform modeled by the game
- Participate in the game itself by having their work published as part of *Futurecoast**

Other Transmedia Story Projects

- [World Without Oil](#)
- [Ingress](#)
- [The Hive](#)
- <http://beyondthebrightblackedgeofnowhere.com>

Quantitative Results

ENGL 1101 Fall 2015	Pre-Test	Post-Test
Average Score	75.3%	83.1%

AY 2015/2016	ENGL 1101	ENGL 1102
DFW Rates	12.67%	7.24%
A/B Range Final Grades	64.1%	73.9%

Independent Evaluations Report

- Significant reduction in fear of 1101 due to subject mastery.
- Genuine connection to and enjoyment of 1101.
- Motivated to engage the readings and class discussions at a higher level.
- Broader understanding of the human factor in science, learning to question science differently, and seeing science from different perspectives.
- Seeing connections to other classes and improved performance in lab reports.

On behalf of the full STEM-to-STEAM Team,
we sincerely thank

Complete College Georgia
and our colleagues in the
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