

## We, Frankenstein: How Culture and Technology Morph Mary Shelley's Frankenstein

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This curriculum unit is recommended for: AP English Literature and Composition or English IV

**Keywords:** Frankenstein, AP English, literature analysis, film analysis, science, technology, culture

**Teaching Standards:** See Appendix 1 for teaching standards addressed in this unit.

**Synopsis:** What comes to mind when you hear the name "Frankenstein?" For nearly 200 years, this literary icon has pervaded culture in uncountable ways, from written stories, to film adaptations to consumer products. In this unit, students will investigate the placement of the Frankenstein story from its 19<sup>th</sup> century inception to modern times and anticipate its treatment in the future. How and why has the narrative changed? What do people living in a certain time period and culture fear about and want from the idea of Frankenstein? They will deeply analyze the source text, view and research modern interpretations, and create a futuristic version of the story while continuously considering and questioning the impact of science and technology on society and culture. The assignments and activities blend a variety of learning modes, including informal and formal writing, peer collaboration, visual and aural text analyses, artistic endeavors, and reading with and without the use of technology. The skills practiced in this unit will not only prepare them for the college classroom; they will develop the critical and analytical skills needed to understand life, love and loss in an increasingly technological society.

I plan to teach this unit during the Spring 2014 semester to 23 students in AP English Literature and Composition.

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# We, Frankenstein: How Culture and Technology Morph Mary Shelley's Frankenstein

#### Michele Lemere

#### Introduction

Nearly everyone in Western society has a preconceived notion and assigned meaning to the idea of "Frankenstein." Breakfast cereals, iPhone apps, comic books and commercials are among the myriad modern-day references to the 19th century "monster" and its creator. However, the Frankenstein we experience today is, in many cases, far removed from Mary Shelley's original creation. To give a simple example, many people who are unfamiliar with the story do not realize that the name Frankenstein refers to the scientist and not to the monster. This kind of confusion begs these questions: How did we get here from there? What contributes to the lasting, yet changing, power of this creation?

This curriculum unit traces the Frankenstein story from its creation in the early 1800s to modern day interpretations while also anticipating its role and function in the future. First, students will conduct an evidence-based (scientific/forensic) reading of Shelley's original text. Next, they will analyze 20th and 21st century versions of and references to the story, including a consideration of the cultural and technological context in which they have occurred. Finally, they will predict how future cultural and technological advances will adapt and influence the story even further.

## Background

This curriculum unit is designed for an AP English Literature and Composition course but can be implemented easily into an English IV honors or standard level classroom focused on British literature. AP courses are typically scheduled on a yearlong, A day/B day timeframe in which students attend class every other day. For the AP timeframe, it is best to teach this unit in the spring semester immediately preceding the AP exam in May because it relies on the students' prior knowledge of literary devices and criticism. It is designed to encompass 4 weeks on the A/B Day schedule. The thematic complexity of the text makes itself a likely candidate for the open-ended essay question on the AP exam. Furthermore, the novel appears on the AP recommended reading list and has been referenced on at least five previous exams.

The school in which this unit will be first implemented is an urban high school in Charlotte, NC with an estimated enrollment of 1,400 students. It is a Title I school in which the demographics are 53% Black, 32.8% Hispanic, 8.7% Asian and 3.8% White. The high poverty rate means that many students, regardless of intellectual ability, need to work part-time jobs. Portions of the population are transient, and the school experiences a

high absence rate and below average achievement overall. For example, students enrolled in AP English Language (grade 11) and AP English Literature (grade 12) in 2013-14 earned either a 1 or 2 out of 5 on the AP Exam. The AP and honors level courses are open-enrolled, so there is no entrance test, screening or formal teacher recommendation process. This means students with decent grades are strongly encouraged, sometimes forced, into an Advanced Placement track. Some students have strong work ethics and critical thinking skills. Some have strong writing skills. Some have none of the above.

The effort to push students to reach beyond their academic potential is highly commendable; however, this policy creates classes containing students with college-level potential who deserve a high level of rigor with those who may (or may not) be ambitious but are lacking in skills. It is tempting to simplify the coursework to serve the lowest common denominator, but doing so would be a disservice to all students. Assigning a large load of different texts is not the answer either. Those who diligently read them will merely gain a surface interpretation, while those who cannot keep up will lose even more confidence. That is why an in-depth reading of this anchor text and comparisons to relevant, modern-day versions has the greatest ability to "stick" with all learning levels.

#### Rationale

My reason for creating this unit is to bridge the gap between "old-fashioned" close reading and literary analysis of canonical literature and the analysis of technology-based renditions of today and tomorrow. While I would love to believe that all students are eager to dig into a printed, black and white novel they may at first consider difficult and irrelevant, I know that realistically this is not the case.

The Common Core State Standards provide a three-part model for measuring text complexity: quantitative aspects, qualitative aspects and the reader/task relationship. Quantitative measures, such as Lexile levels that measure a reader's ability to comprehend vocabulary and sentence length, are no longer the primary consideration when matching texts to a student's needs and abilities. Qualitative considerations include levels of meaning and themes, author's purpose, structure (such as non-linear or stream of consciousness), the clarity/ambiguity of the language and the knowledge demands, or prior knowledge requirements, imposed on the student. Finally, and probably most importantly, teachers should consider a student's motivation in relation to the task the teacher is asking the student to perform with the text. I agree with teacher and CCSS consultant Dave Stuart when he points out that many students upon graduating from high school are not able to handle the reading requirements during college and in their careers:

Wise teachers, concerned about this problem in their students' futures, will think long and hard about how to not only use simple hooking strategies for motivating kids to dive into a text, but also how to teach kids the much greater, more mysterious skill of motivating themselves.<sup>2</sup>

The question is how? My solution is to provide students with multiple ways to approach the text as well as offer choices and allow their input into the ways they are assessed.

The teaching of specific literary criticism types typically is frowned upon in AP professional development sessions as something that is too complex and "not necessary for the test." I disagree. First, "acing the AP test" is not a motivator for a significant portion of my students because they know it will not be counted as part of the English IV grade and they do not appreciate the benefit of potentially earning a college credit. Second, my students become overwhelmed by many texts when they perceive that there is too much to consider in each one. When they attempt to write a critical analysis of a text, many fall back on plot summary or a generalized listing of literary devices because they lack a specific focus. They struggle with sorting out the various themes in a text and honing in on one extensively.

Offering them different lenses to approach the work may be a useful direction to take. How, for example, would a feminist, or a scientist, or a Marxist, or an African-American, or an environmentalist approach this text? This kind of framing helps the students tremendously. Therefore, I have integrated at least one beginning-level literary criticism type into each of my themed units. By the time this last unit is implemented in the spring, the students will have been exposed to archetypal, cultural, Marxist, feminist and biographical critical approaches to canonical and contemporary literature. While this unit features a scientific/forensic critical approach to the texts, students will not be limited to this lens for the formal paper assignment. Finally, I have noticed that my students struggle with determining the overall tone of a piece and the effect the text's narrative perspective has on its meaning throughout. Presenting related pieces – the source text and its variations – will help students differentiate tone and consider the effect of point of view on the overall meaning of the work.

#### Overview

Considering the CCSS text complexity model explained above, the source text Frankenstein can be considered highly complex to my students. The Lexile level is 1040 (some versions rate it as high as 1170 – the specific edition I am using is not listed in the lexile.com database). Students in grades 11-12 should be able to read texts in a 1070 to 1220 range. Meanwhile, the CCSS suggest students in 11-12 grades should be able to read texts ranging from 1185 to 1385. Considered alone, one could conclude high school seniors enrolled in AP English would easily be able to read *Frankenstein*, yet in reality, this is not the case. In order to get a general reading level for each of my students, I conducted a short reading screening suggested by a Title I Literacy Coach employed by my school district. In the process, the student reads aloud a random passage in a text believed to be close to his or her reading level for one minute. When the minute is up, the teacher counts the number of correct words read. A score of approximately 125 indicates

that the text is appropriate for that student. The majority of students could read texts in the 1150 range, such as *Great Expectations* by Charles Dickens, yet when given a passage from *Frankenstein* these students scored lower. This shows the unreliability of using only a Lexile level to assign texts. Considering this discrepancy as well as the qualitative aspects of the text – multiple themes, non-linear structure, changing point of views – and the Reader and Task implications, it is necessary to put in place strategies for approaching the text and motivating students to read it.

This unit is arranged in chronological order, simply stated as "past, present and future," in order to help students more easily trace the cultural and technological changes that have affected the original story. It forms the basis of an overall unit on the theme "The Creator and its Creation."

#### Past

The unit begins in the distant past with the novel's origin story. Frankenstein is not merely a novel about the scientific and moral implications of manufacturing life; it also serves as a commentary on parenting and caregiving reflected in Shelley's society and her own life. As Alan Rauch states, "The novel is replete with scenes which emphasize the value of compassionate and nurturing behavior... These small moments of care and attention serve as a direct contrast to Frankenstein's science, and thus offer a moderated version of how knowledge can and does work in social contexts." Students will research the historical context of early 19th century England, including the relationships and scandals occurring within the monarchy at the time. In addition, they will investigate the personal life of Mary Shelley – after all, she was roughly the students' age when she wrote the book – the story of how it became a story, her relationship with Percy Shelley and their collaboration on the original manuscript. A relatively new online archive, www.shelleygodwinarchive.org, includes digitized versions of Shelley's handwritten drafts of Frankenstein, including margin notes from Percy. 4 This unit explores the archive as part of the introduction to the text – the creation of the novel – but it would be useful to revisit it as students progress through the text.

Students also will discover what it was like to be a teenager, a female, and the offspring of famous parents during this period. What will follow is a close, evidence-based reading of the text. This will be tackled with a combination of in-class reading focused on specific scenes and quotes and reading assignments completed outside of class. Guiding questions will help struggling students hone in on meaning, while advanced students will feel free to explore a variety of approaches. Small group and whole class discussions, characterization activities and journal entries will round out this portion of the unit. The formal assessment is an AP-style, in-class writing assignment that addresses the ideas of nurturing and caregiving.

#### Present

The term "present" is used loosely; essentially, this portion of the unit examines adaptations and variations on the source text. It asks the questions of how and why interpretations of the story have developed over time. What is happening culturally and technologically to inspire these changes? Students will analyze film versions, including clips from the 1931 adaptation<sup>5</sup> and Abbott and Costello Meet Frankenstein<sup>6</sup>, and the full movie Young Frankenstein  $(1974)^7$ , not only to compare similarities and differences between the versions but also to place them in their cultural context. They will consider what "fear" represents in a specific time and how the retelling of the story assuages that "fear" and anxiety. They also will examine commercials/advertisements, art exhibits, comic books, and television and Internet series either in class or individually. It is during this portion of the unit in which students become proficient in describing the different tones and points of view of the texts and their impact on overall meaning. It is also where they begin to connect with text on a more personal level as they research Frankensteininspired media and texts that appeal to them directly. Because students have choices, they are more motivated to complete the assignments and activities. The major assessment includes a term paper in which students will analyze and criticize an adaptation of the source text.

#### **Future**

Can we imagine what the Frankenstein of 10, 50, or 100 years from now will look like? How will students' children and grandchildren experience the story? What kinds of advances in science and technology will potentially elicit retellings of *Frankenstein*? How, in effect, have we *become* the monster? In the final portion of the unit, students will research ideas about our cultural, scientific and technological future and predict their effects on the story. They will consider the effects that reading digitally (internet, phones, etc.) have on the brain and learning, and mind uploading technology that would allow a person to have conversations with his or her own brain. This portion includes an assessment that offers a high level of choice: students may create a short movie, story, graphic novel, performance, or student proposed project as long as it anticipates the story of the future.

## **Objectives**

The formative and summative assessments in this unit directly align with the curriculum requirements outlined in the AP English Literature Syllabus Development Guide and the Common Core State Standards for English III-IV. Because individual schools and systems may have different policies on whether AP teachers are to refer to Common Core standards or Advanced Placement curricular requirements, I have included and explanation of how this unit addresses both (see Appendix 1.) By the end of this unit, students will be able to fully analyze a difficult source text using text evidence and historical and biographical research. They also will be able to compare the source to other

versions while including more cultural research. Finally, they will be able to make predictions about future cultural and technological shifts and their impact on the *Frankenstein* story.

## **Teaching Strategies**

Differentiation is key in any classroom in order to reach students at different levels and with varied learning styles. This unit employs a variety of teaching and learning techniques in order to reach mastery.

## Journaling

A student's raw reaction to a text stimulates a personal connection and serves as an excellent first approach at meaning. It allows them to get their preliminary thoughts in writing before discussing them with their peers. The unit includes journal entries in which students respond to written and visual texts.

#### Class discussions

Small group and whole class discussions allow students to engage with different points of views and form arguments. They help students feel comfortable with speaking in public and prepare them for classroom discussions in the college environment. Small groups in particular help shy students contribute ideas in a more comfortable setting. They also ensure that students come prepared with questions and comments.

## Formal writing

As stated above, much of the AP standards revolve around the formal writing process of drafting and revising with teacher input; therefore, in-class writer's workshops are built in to the schedule. Workshops include peer editing sessions and teacher/student consultations.

#### Hands-on Activities

Creating a visual portrait of an idea or text or creating products that are not writing intensive are crucial activities for some learners. These techniques help readers to "see" texts in different ways. Activities such as the body biography exercise help students discuss character traits and motivations visually while gathering textual evidence. This becomes particularly important when one tries to set aside preconceived notions of Frankenstein's monster (green skin, black hair, etc.) and focus upon the source text version's physical and personality traits. I first encountered the body biography during a pedagogical course and have adapted it successfully for a variety of grade levels and texts. Cynthia Morawski, an associate professor of education at the University of Ottawa,

conducted extensive research into the benefits of incorporating art into novel study and reported her findings after implementing the body biography strategy in her class consisting of teacher candidates. Morawski states that her students responded enthusiastically, stating that it "...allows students a unique and engaging way to study a novel. Getting students out of their seats and actively participating is infinitely more valuable than seatwork or traditional essay or writing activity." Another stated that it "...can easily be adapted for gifted or LD students. It allows students to explore the beauty of a novel in a fun way. It also allows the students to be critical about it."

## **Independent Reading**

As stated earlier, in order to prepare for college and career, students need to be able to interpret difficult texts on their own. Struggling readers, however, may need strategies put in place to help them move forward. Vocabulary activities, passage analysis, and listening to audio versions while reading the texts are some methods used to support below-level readers.

#### **Lessons/Classroom Activities**

Part 1: Past (Weeks 1-2)

## *Introductory Activities*

What is Frankenstein?: As an anticipatory exercise, students will create a drawing/illustration of their notion of Frankenstein based on prior knowledge and write a journal entry explaining how they arrived at this notion. The prompt: What do you think of and picture in your mind when you hear the word "Frankenstein?" Create a sketch and write an explanation in your journal. One page minimum. Students will share responses with classmates one-on-one, then with the whole group. The teacher should take this opportunity to dispel the common assumption that Frankenstein is the name of the monster, not the creator. The discussion continues as the teacher shows images of a variety of "Frankensteins." (A simple Google image search will net a variety of images; for more variety, search similar terms such as "Frankenberry" and "Frankenweenie.")

## Group Research/Presentations

The class will be divided into four equal groups. Each group will be assigned one of the topics below to research and present to the class. Each presentation should include written, visual and oral information. Presentations may include PowerPoints, poems, skit performances or biographical information presented in a social media fashion, such as a Facebook profile. Struggling students/groups may benefit from a list of suggested online resources. Approximate time is one 90-minute class period.

Group 1: Who was Princess Charlotte? What happened to her? How did this incident devastate England? Include details about her parents and her notorious grandfather, King George III.

Group 2: What was it like to be a female teenager in early 1800s England? What were the trends of the day? Consider fashion, music, past times, school, forms of communication and courtship and marriage. How did one's situation differ based on economic and social background?

Group 3: Who were Mary Shelley's parents? For what were they famous in British society? Why were they considered unorthodox? What happened to Mary's mother? Group 4: Who was Mary Shelley? What was scandalous about her relationship with Percy Shelley? Describe the evolution of their relationship as well as the number and manner of deaths surrounding Mary Shelley.

Students will take notes as each group is presenting. For an exit assessment, students will individually respond in their journals to this prompt: How do you think Mary Shelley's family, culture and historical surroundings influenced her as a writer? If she were living under similar circumstances today, what would her life be like?

## Creation of the Novel

Students will read Mary Shelley's introduction to the novel independently, either as the previous night's homework or at the beginning of class, and respond in their journals to this prompt: In your own words, explain how and why Shelley created this story.

After sharing their responses, students will explore the handwritten drafts of the novel at <a href="www.shelleygodwinarchive.org">www.shelleygodwinarchive.org</a>, taking note of Mary Shelley's handwriting and Percy Shelley's handwritten edits at left as well as the typewritten version on the right. Students will skim at least two versions of the same chapter, and then contribute to a discussion about what they notice.

Next, the teacher will prepare students for independent reading by explaining the non-linear structure of the novel and its shifts in narration. It must be clear that Walton is retelling the story through a series of letters to his sister based on what was told to him by Dr. Frankenstein aboard the ship. The teacher will play a free audio reading of the story on archive.org and will model how to do the independent reading journal reflections. Students should be encouraged to play the audio version at home if it is helpful in comprehension.

Independent Reading and In-Class Analysis

As students read the novel over the course of the next 2-4 class periods, they will record at least five unfamiliar words per chapter (with page numbers) and a summary/reaction to each chapter in their journals. The entries will serve as a plot summary as well as a space for their initial reactions to the text, creating a launching point for class discussion. Students also should be made aware of the timed essay prompt (see below) to give them further direction in their reading. The novel may be assigned in two parts: Letters and Chapters 1-12 (up to page 81) and Chapters 13-24 (pages 81-166). Classes with struggling readers or those that meet on a daily basis may divide the reading into four or more parts. Class periods following each reading assignment will consist of a vocabulary focus, in which we define as a class the most commonly noted unfamiliar words and examine them in context, and a close reading of significant quotes from the text. It is best to allow discussion to occur organically, but the following textual references will serve as starting points. It also is useful for students to search keywords in an online version of the text, such as the free and unrestricted version compiled by Project Gutenberg.<sup>11</sup>

After so much time spent in painful labour, to arrive at once at the summit of my desires was the most gratifying consummation of my toils. But this discovery was so great and overwhelming that all the steps by which I had been progressively led to it were obliterated, and I beheld only the result. What had been the study and desire of the wisest men since the creation of the world was now within my grasp. 12

I doubted at first whether I should attempt the creation of a being like myself, or one of simpler organization; but my imagination was too much exalted by my first success to permit me to doubt of my ability to give life to an animal as complex and wonderful as man...A new species would bless me as its creator and source; many happy and excellent natures would owe their being to me. No father could claim the gratitude of his child so completely as I should deserve theirs.<sup>13</sup>

I beheld the wretch—the miserable monster whom I had created. He held up the curtain of the bed; and his eyes, if eyes they may be called, were fixed on me. His jaws opened, and he muttered some inarticulate sounds, while a grin wrinkled his cheeks...Oh! No mortal could support the horror of that countenance. A mummy again endued with animation could not be so hideous as that wretch. I had gazed on him while unfinished; he was ugly then, but when those muscles and joints were rendered capable of motion, it became a thing such as even Dante could not have conceived.<sup>14</sup>

"Abhorred monster! Fiend that thou art! The tortures of hell are too mild a vengeance for thy crimes. Wretched devil! You reproach me with your creation, come on, then, that I may extinguish the spark which I so negligently bestowed." My rage was without bounds; I sprang on him, impelled by all the feelings which can arm one being against the existence of another. 15

"But where were my friends and relations? No father had watched my infant days, no mother had blessed me with smiles and caresses; or if they had, all my past life was now a blot, a blind vacancy in which I distinguished nothing. From my earliest remembrance I had been as I then was in height and proportion. I had never yet seen a being resembling me or who claimed any intercourse with me. What was I? The question again recurred, to be answered only with groans. <sup>16</sup>

I sickened as I read. 'Hateful day when I received life!' I exclaimed in agony. 'Accursed creator! Why did you form a monster so hideous that even YOU turned from me in disgust? God, in pity, made man beautiful and alluring, after his own image; but my form is a filthy type of yours, more horrid even from the very resemblance. Satan had his companions, fellow devils, to admire and encourage him, but I am solitary and abhorred.' (93)

## Body Biography (one class period)

After two classes of intense reading, students will be ready for a change of pace. The class will be split into groups of three, with each group assigned a major character from the novel. Victor Frankenstein and the monster may be assigned more than once. Each group will receive a large sheet of chart paper. One student will lie on the paper while the others trace his or her body (a larger piece of paper and a tall student should be used for the monster.) Students will represent each body part with the corresponding idea.

Heart: the person who the character loves most

Spine: his or her motivation Arms: strengths and weaknesses Feet: moral foundation/values

Students also will draw a mirror and display how the character sees *himself* inside of it and how *society sees him* outside of it. Thought balloons will show how the character changes, at least two symbols that represent the character, at least three quotes that describe the character (with page numbers), and an acrostic poem using the letters in the character's name. The background should reflect the setting of the story.

There are multiple variations and images of the Body Biography posted online. It may be helpful to show students examples from other texts if they are unfamiliar with the process. Time permitting, each group will present its finished biography; otherwise, presentations may occur prior to the formal assessment to be completed next class. To review for the formal assessment, students will read and annotate the article "Was 'Frankenstein' Really About Childbirth?" for homework. Annotation strategies include highlighting unfamiliar words and main ideas, agreeing or disagreeing with statements

and writing comments and questions. Students will discuss the article before completing the formal assessment below.

#### Formal Assessment

This timed-writing (40 minutes) essay prompt mimics the type of essay students will be required to write on the AP exam: Mary Shelley's *Frankenstein* explores the ideas of creation and caregiving. How does Shelley address these themes in the novel? In a well-organized essay, explain how Shelley's story is a commentary on the roles of the creator and the caregiver. Avoid plot summary.

While an AP essay rubric is recommended to score the assessment, for the sake of consistency, the teacher should use one he or she typically uses for writing assignments.

## Part 2: Present (Weeks 2-3)

Once again, students should be made aware of the formal assessment argumentative research paper (see prompt below) at the beginning of this section of the unit so they may begin thinking about what version they would like to investigate.

## Film Clip Comparison

The class will begin with a journal entry: Think of a story that you have both read and viewed on TV or film. How were the versions different? Which did you prefer? Why?

After discussion, students will reread the animation scene in Chapter 5 of the novel. They will complete the top rectangle on the Film Comparison Graphic Organizer (see Appendix 2.) Next, the teacher will show two film versions of this scene: *Frankenstein* (1931)<sup>20</sup>, and the YouTube clip of *Abbott and Costello Meet Frankenstein*. (Different film versions may be substituted based on availability. Suggestions include *Frankenstein* (1994) and *I, Frankenstein* (2014). Students will complete the two lower rectangles on the graphic organizer and participate in a class discussion. Time permitting, the teacher will follow the same procedure with clips portraying the death of the monster in the 1931 film<sup>22</sup> and the Abbott and Costello "Death of the Monster" clip on YouTube.<sup>23</sup>

For the second half of the class period, students will conduct historical research in order to place these versions in context. One-third of the class will focus on the 1810s, one-third on the 1930s and the last third on the 1940s. Students will take turns discussing their findings with the class and making connections to the text or films. Guiding questions include: What were the popular technologies of the time? What advances in medicine were occurring? Describe the politics of the decade. What, if any, global conflicts or wars were underway? What did people fear?

## Young Frankenstein<sup>24</sup>

Students will respond to the film guide questions in Appendix 3 as they view the film. The teacher should pause occasionally to check for understanding and lead discussions, particularly after each quote from the film. The after-viewing questions may be completed for homework. Viewing should take no longer than two class periods.

#### Formal Assessment

This class period is devoted to starting the formal assessment. For the warm up, students will re-read and analyze the prompt:

Choose an adaptation of the Frankenstein story; you may use one of the selections studied in class or one you discover on your own. Virtually any medium/text is acceptable: film, television, advertisement, short story, graphic novel, etc. In a 4-page paper, analyze how this version of the story interprets and contorts the original novel. How do the author's choices in characterization, plot, setting and literary devices affect the meaning of the story? Be sure to consider the cultural, technological and historical context of the text you choose as well as the author's intentions. Also, address the effectiveness of the medium used. Include at least two sources in your evaluation.

The teacher will show students the introductory episode of the web series *Frankenstein MD* and lead a brief discussion about how it could qualify for the research paper<sup>25</sup>. Students will have the rest of the class period to begin researching possible topics with support from the teacher and peers. Students will deliver a one-minute oral presentation of their chosen topics during the following class and will have one week to prepare a draft outside of class. (Meanwhile, part 3 of the unit will be underway.) On the draft due date, students will work with a partner, using the rubric to complete a peer evaluation. Student 1 will read student 2's paper aloud. Then, student 2 will comment on what he or she likes and dislikes about the paper. Next, student 1 will comment on what he or she likes about the paper and what seems to be confusing or missing. The roles are then reversed. Finally, both students will use the rubric (see Appendix 5) to score each other's papers and make written comments. Students will make revisions for homework and turn in the new draft to the teacher. The teacher will return the drafts to the students and set a due date for the final draft.

## Part 3: Future (Weeks 3-4)

## Introductory Activities

The class will begin with a journal response: What effect does technology have on your life? What do you think are the positive and negative aspects of our high-tech society? After discussion, students will read and annotate a hard copy of the article "The Web Shatters Focus, Rewires Brains" by Nicholas Carr. 26 Students will discuss the article with

a partner, then in the full group. The teacher will announce that the class will attempt to re-create the experiments in the text. Half of the students will receive a print version of the article "The Singularity Is Near: Mind Uploading by 2045?" with all of the advertisements and sidebars removed.<sup>27</sup> The other half will read the article online, where hyperlinks, advertisements and links to celebrity videos bombard the text. After 10 minutes, every student will put away the article and will have another 10 minutes to take the quiz:

- \_\_\_\_\_1. What was the name of the conference?
  - a. Global Future 2045 International Congress
  - b. Global Future 2014 International Congress
  - c. Global Future 2054 International Congress
- \_\_\_\_\_2. True or False. The article reported that some scientists predict that robots will take over humans by 2100.
- \_\_\_\_\_3. Which topic is NOT covered in the article?
- a. singularity b. digital immortality c. the human genome d. mind uploading
- 4. Summarize the article to the best of your ability. Include everything that you can remember. Do not include your opinion of the topic; merely restate the information relayed in the text.

The teacher will score the quizzes and chart the results, dividing the data by online or print, and present the findings during the next class. Students will launch a discussion on whether Carr's theories about reading comprehension are correct. Questions should include *Did reading the article on paper and having the opportunity to annotate help you understand the article*? and *Were you distracted or assisted by the advertisements and links? How many did you click on?* 

#### Predicting the Future

For a warm up activity, students will think of and discuss one technology they wish was already invented, or one they would like to invent, and how it would affect society. One example is the ability to teleport, which would eliminate the need for current forms of travel (automobile, planes, trains, etc.) as well as highways, airports and car mechanics. The teacher will show the introductory clip of the TED Radio Hour on predicting the future. Titled "Which Predictions from 1984 Came True?," which notes Nicholas Negroponte's prediction that someday we would use our fingers to navigate touchscreen computers. Next, the class will split into five groups and spread out to the far corners of the room. Each group will listen to one of the five segments: "How Personalized Will Medicine Get?," "Will Sequencing Your Genes Change The Way You Live - and Die?,"

"What Does The Future of Crime Look Like?," "Will GPS Change Our Standards For Privacy?," and "When Will Driverless Cars Be a Part of Our Everyday Lives?." Each group will prepare a summary of the segment and each member will create one discussion question to pose to the class. After each group has presented, the teacher will close the activity with the final segment, "How Do You Predict the Future?," creating a segue into the formal assessment (see below.) Students will have the remainder of this class and subsequent classes to form groups and create their Frankenstein stories of the future. The teacher will assign checkpoints and deadlines as needed. As students are working, the teacher will have the opportunity to conference one-on-one with students about their research papers and give feedback to groups about their projects.

#### Formal Assessment

Small group project: Using a medium of your choice, preferably technology-based, tell the *Frankenstein* story as you predict it will be told in the future. Be sure to include an explanation of the context of the story. What year is it? What technology is available? What are the cultural attitudes and norms in this time and place? (See Appendix 5.)

## **Appendix 1: Implementing Teaching Standards**

Common Core State Standards Addressed

- **RL7.** Analyze multiple interpretations of a story, drama, or poem (e.g., recorded or live production of a play or recorded novel or poetry), evaluating how each version interprets the source text.
- **RL3.** Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).

The above two reading standards are the cornerstone for this unit. Students will examine several interpretations of Frankenstein as well as the authorial motives and cultural influences on these versions.

- **W1.** Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
- **W9.** Draw evidence from literary or informational texts to support analysis, reflection, and research.
- **W4.** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- **W7.** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

The above four writing standards align with the formal literary analysis essay assignments in which students will formulate a thesis and support it with evidence. W4 also applies to informal journal writing.

- **W3.** Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
- **SL5.** Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

The W3 and SL5 standards coincide with the final unit assessment in which students will use technology to create a futuristic version of the Frankenstein story.

## Advanced Placement Curricular Requirements Addressed

- 1. Students will study literature from both British and American writers, as well as works written in several genres from the sixteenth century to contemporary times. This unit includes the 18<sup>th</sup> century source text (Frankenstein) as well as films and visual texts from contemporary times.
- 2. The course teaches students to write an interpretation of a piece of literature that is based on a careful observation of textual details, considering the social, cultural and/or historical values the work embodies as well as structure, style, and themes, figurative language, imagery, symbolism and tone.

This requirement is satisfied through the forensic reading of Frankenstein, the literary analysis essay and the modern-version analysis research-based essay.

3. The course includes frequent opportunities for students to write and rewrite formal, extended analyses and timed, in-class responses. The course requires:

**Writing to explain:** Expository, analytical essays in which students draw upon textual details to develop an extended explanation/interpretation of the meanings of a literary text *This coincides with the literary analysis essay*.

**Writing to evaluate:** Analytical, argumentative essays in which students draw upon textual details to make and explain judgments about a work's artistry and quality, and its social and cultural values. *This coincides with the modern-version analysis research essay*.

**Writing to understand:** Informal, exploratory writing activities that enable students to discover what they think in the process of writing about their reading *This coincides with the journal entry and reflection assignments*.

4. The AP teacher provides instruction and feedback on students' writing assignments both before and after they revise their work that help the students establish an effective use of rhetoric including controlling tone and a voice appropriate to the writer's audience. This requirement is satisfied through the writing, editing and revision process.

## **Appendix 2: Film Comparison Graphic Organizer**

Frankenstein, Chapter 5 (pages 34-6)						
Summarize the action in the passage:						
What is the tone of this passage? Describe in one or two	o words.					
what is the tone of this passage. Describe in one of two words.						
How does the author achieve this tone? List diction, det	ians, etc.					
	1					
Film Version 1 TitleYear	Film Version 2 Title Year					
Summarize the action in the clip:	TitleYear Summarize the action in the clip:					
What is the tone of this clip? Describe in one or two words.	What is the tone of this clip? Describe in one or two words.					
words.						
	How does the filmmaker achieve this tone? List diction,					
How does the filmmaker achieve this tone? List diction, visual details, etc.	visual details, etc.					
diction, visual details, etc.						

## **Appendix 3: Young Frankenstein Film Discussion Questions**

- 1. Describe the cinematography. How is the film shot and edited? Make notes as you watch.
- 2. Frankenstein did not have assistants in the novel. Why does he share his workload with others?
- 3. What does the little girl's acceptance of the monster reveal about this society?
- 4. How does the monster's "abnormal" brain relate to today's birth defects?
- 5. Analyze Frankenstein as a mother figure. Cite examples from the film.
- 6. How does Frankenstein inadvertently supply the monster with a wife?
- 7. Why do you think the monster is sexually virile?
- 8. Why do you think the monster is wooed by music?
- 9. Considering the ending of the novel, how is the monster's fear of fire ironic?

#### Quotes for discussion. Record the speaker's name as you watch.

- "Destiny. Destiny. No escaping death for me."
- "He's beautiful, and he's mine."
- "Science teaches us to accept our failures with quiet dignity and grace."
- "Scientists really want to rule the world."
- "It's alive!"
- "This is the 20th century...monsters are passé, like ghosts and goblins."
- "Love is the only thing that can save this poor creature and I am going to convince him that he is loved, even at the cost of my own life."
- "Hello, handsome! You're a good looking fellow...Why do they hate you? Because they are jealous."
- "You are a god! You are not evil. You are good."
- "The gateway to immortality" "The creature." "I assure you there is nothing to fear."
- "If I couldn't inspire love, I would promote fear."

## After viewing discussion questions (homework)

- 1. The film was made in 1974, yet the cinematography resembles the 1930's. Why would the filmmaker use this style? What effect did it have on the overall story?
- 2. How does the comedy/satire genre effect the meaning of the story?
- 3. Research the stars and writers of this film. What was there place in society in the 1970s? For what were they known? Consider Mel Brooks, Gene Wilder, Teri Garr, Cloris Leachman and Madeline Kahn. For what other roles/genres were they famous?

**Appendix 4: Argumentative Research Paper** 

Name:\_\_\_\_\_

Category	A (93-100)	B (85-92)	C (78-84)	D (77-70)
THESIS	The opening paragraph	The opening paragraph	The opening paragraph	Weak or missing thesis statement.
	includes a	includes a thesis	attempts to guide	
	powerful thesis	statement that	the rest of the	
	statement that	overall guides the	paper.	
	guides the rest of	rest of the paper.		
CONTENT	the paper.	Paper focuses on	Paper minimally	Paper does not
CONTENT	Paper expertly focuses on how	how the author's	focuses on how	focus on how the
	the author's	choices in	the author's	author's choices
	choices in	characterization,	choices in	in
	characterization,	plot, setting and	characterization,	characterization,
	plot, setting and	literary devices	plot, setting and	plot, setting and
	literary devices	affects meaning.	literary devices	literary devices
	affects meaning. It	It considers the	affects meaning.	affects meaning.
	considers the	context of the text and effectiveness	It barely considers the	It does not consider the
	and effectiveness	of the medium.	context of the text	context of the
	of the medium.	of the medium.	and effectiveness	text and
			of the medium.	effectiveness of
				the medium.
ORGANIZATION	Exceptional,	Logical flow of	Ideas appear out	Organization
	logical flow of	ideas.	of place on	flawed or
	ideas.		occasion.	lacking.
COMPLETENESS	Paper is four	Paper is three	Paper is two	Paper is under
SOURCES	pages Flawless internal	pages Satisfactory	pages Internal citations	two pages. Internal citations
SOURCES	citations (2) and	internal citations	OR works cited	AND work cited
	works cited page	and work cited	page missing.	page missing.
	included	page included	1 8	1
FORMAT	☐ 12pt Times	One element at	2-3 elements at	4-5 elements at
	New Roman	left is missing	left are missing	left are missing.
	□ Double			
	spaced			
	□ Name, class			
	name and			
	date in left corner			
	☐ Title centered			
CONVENTIONS	Formal diction is	Formal diction is	Informal writing.	Informal writing
551,121,1201,10	expertly used.	used.	More than 5	More than 10
	No spelling,	Minimal spelling,	spelling,	spelling,
	grammar or	grammar or	grammar or	grammar or
	punctuation	punctuation	punctuation	punctuation
	errors.	errors.	errors.	errors.

Overall score: Comments:

## **Appendix 5: Group Project Rubric**

Category	A (93-100)	B (85-92)	C (78-84)	D (77-70)
CONTENT	The project expertly captures the essence of the Frankenstein story, yet diverges from the story based on context.	The project captures the essence of the Frankenstein story, yet diverges from the story based on context.	The project attempts to capture the essence of the Frankenstein story.	The project minimally captures the essence of the story.
CONTEXT	The project includes superior explanation of context, including timeframe, available technology and cultural attitudes and norms.	The project includes adequate explanation of context, including timeframe, available technology and cultural attitudes and norms.	The project includes some explanation of context, but key points may be missing.	The project includes minimal explanation of context.
ORGANIZATION	Exceptional, logical flow of ideas.	Logical flow of ideas.	Ideas appear out of place on occasion.	Organization flawed or lacking.
GROUP DYNAMIC	It is clearly evident that all group members contributed equally to the project.	It seems evident that all group members contributed equally to the project.	Some group members contributed more than others to the project.	The project was completed by only one or two group members.
CONVENTIONS	Diction is highly appropriate for the project. No spelling, grammar or punctuation errors.	Diction is appropriate for the project Minimal spelling, grammar or punctuation errors.	Diction is may not be appropriate for the project. More than 5 spelling, grammar or punctuation errors.	Diction distracts from project. More than 10 spelling, grammar or punctuation errors.

Overall score: \_\_\_\_\_ Comments:

## **Materials for Student and Classroom Use**

Bud Abbott and Lou Costello Meet Frankenstein. Directed by Charles Barton. Performed by Bud Abbott and Lou Costello. Universal International Pictures, 1948. Accessed November 22, 2014.

https://www.youtube.com/watch?v=C3W5kkZLN50&index=6&list=PLD5EA35B38AFDC0EA and

https://www.youtube.com/watch?v=kZQwVWTB2hI&list=PLD5EA35B38AFD C0EA&index=12 Abbott and Costello are freight handlers who unwittingly "unpack" Dracula and Frankenstein (the monster) for a horror exhibit in the United States in this comedic monster film. Rated PG.

- Carr, Nicholas. "Author Nicholas Carr: The Web Shatters Focus, Rewires Brains." *Wired*, May 24, 2010. Accessed November 23, 2014.

  <a href="http://www.wired.com/2010/05/ff">http://www.wired.com/2010/05/ff</a> nicholas carr/all/. Carr summarizes the chapter "The Juggler's Brain" from his book *The Shallows* in this accessible Wired magazine article. He briefly describes several print and online reading experiments that he claims show that electronically-based reading is not as effective as print reading.
- *Frankenstein*. Directed by James Whale. Performed by Boris Karloff and Colin Clive. Universal Studios, 1931. DVD. Probably the first motion picture based on the novel, it omits and changes several elements of the story. Walton is gone and the scientist, named Henry, animates the monster surrounded by witnesses. Not rated.
- "Frankenstein: Mary W. Shelley: Free Download & Streaming: Internet Archive." Internet Archive. The LibriVox Free Audiobook Collection. October 20, 2005. https://archive.org/details/frankenstein\_shelley. This website offers a free reading of the novel by a male narrator, broken down by chapter. Run time is 8:14:41.
- Frankenstein MD. Developed by Lon Harris, Brett Register, and Bernie Su. Performed by Anna Lore and Steve Zaragoza. Pemberley Digital. Accessed October 20, 2014. <a href="http://www.pemberleydigital.com/frankenstein-md/">http://www.pemberleydigital.com/frankenstein-md/</a>. The main character of this web series is Victoria Frankenstein, an ambitious medical student who stars in a YouTube show where she explains science topics to the general public.
- Franklin, Ruth. "Was 'Frankenstein' Really About Childbirth?" *New Republic*, March 7, 2012. Accessed November 22, 2014. <a href="http://www.newrepublic.com/article/books-and-arts/101435/mary-shelley-frankenstein-godwin-bodleian-oxford">http://www.newrepublic.com/article/books-and-arts/101435/mary-shelley-frankenstein-godwin-bodleian-oxford</a>. Franklin's article relates Shelley's struggles with child rearing with themes in the novel. It is a solid overview and easily accessible for high school students.

- Lewis, Tanya. "The Singularity Is Near: Mind Uploading by 2045?" LiveScience. TechMedia Network, 17 June 2013. 3 Oct. 2014.

  <a href="http://www.livescience.com/37499-immortality-by-2045-conference.html">http://www.livescience.com/37499-immortality-by-2045-conference.html</a>. This article is a summary of the Global Future 2045 International Congress held in 2013. The highlight is participants' belief that in the near future we will be able to upload our minds to computers, thus creating an eternal version of the self.
- Negroponte, Nicholas, Nina Tandon, and Richard Resnick. "TED Radio Hour: Predicting the Future." NPR. October 10, 2014. Accessed October 30, 2014. http://www.npr.org/2013/08/26/215826949/predicting-the-future?showDate=2014-10-10. A fascinating look into the future, the program notes Negroponte's 1984 prediction that we would use our fingers on touchscreens, Tandon describes how we will use our cells to grow "spare parts" for our bodies and personalize drugs, and Resnick explains how we will cure cancer and design babies through genomes. Negroponte's epilogue is a nice commentary on predicting the future. Each segment includes a link to a full story.
- Shelley, Mary Wollstonecraft. *Frankenstein*. New York: Dover Publications, 1994. This reprint of the 1831 edition is Shelley's story of a scientist who assembles and animates a monster from cadavers, then immediately rejects his creation. It includes an introduction from the author.
- Shelley, Mary Wollstonecraft (Godwin.) Frankenstein or The Modern Prometheus.

  Project Gutenberg, 2008. <a href="http://www.gutenberg.org/files/84/84-h/84-h.htm">http://www.gutenberg.org/files/84/84-h/84-h.htm</a> An online, searchable version of the complete text. "This eBook is for the use of anyone anywhere at no cost and with almost no restrictions whatsoever. You may copy it, give it away or re-use it under the terms of the Project Gutenberg License included with this eBook or online at www.gutenberg.net."
- "The Shelley-Godwin Archive." The Shelley-Godwin Archive. Accessed November 23, 2014. http://dev.shelleygodwinarchive.org/. This site features scanned copies of all of the surviving drafts of *Frankenstein*, including Mary Shelley's notebooks and three draft volumes. Visitors may view Shelley's handwritten work with annotations from her husband, Percy, alongside typed versions.
- Young Frankenstein. Directed by Mel Brooks. Performed by Gene Wilder, Peter Boyle, Marty Feldman, Cloris Leachman, Teri Garr, et al. 20th Century Fox, 1974. DVD. In this parody of the 1931 film, Dr. Frankenstein's grandson, Frederick, inherits his grandfather's castle and recreates his experiment with much different results. It is rated PG but contains sexual innuendo.

## **Bibliography for Teachers**

- Carr, Nicholas G. *The Shallows: What the Internet Is Doing to Our Brains*. New York: W.W. Norton, 2010. Carr, citing numerous studies, argues that today's digital technology has a profound effect on both our culture and the way we think. He aptly explains the science behind reading and learning to a general audience.
- Morawski, Cynthia. "Transacting in the Arts of Adolescent Novel Study: Teacher Candidates Embody Charlotte Doyle." *International Journal of Education & the Arts* 11, no. 3 (February 6, 2010): 1-25. Accessed November 23, 2014. <a href="http://www.ijea.org/v11n3/v11n3.pdf">http://www.ijea.org/v11n3/v11n3.pdf</a>. This is an interesting perspective on incorporating the arts into novel analysis.
- Rauch, Alan. "The Monstrous Body of Knowledge in Mary Shelley's *Frankenstein*." *Studies in Romanticism* 34, no. 2 (1995): 227-53. Accessed October 25, 2014. http://www.jstor.org/stable/25601114. Rauch makes interesting comparisons between Dr. Frankenstein's relationship and use of knowledge in creating the monster with Shelley's experience in creating the novel as a woman concerned with death through childbirth. The article steers the reader away from trite interpretations and towards cultural and moral uses of science and knowledge.

#### **Notes**

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<sup>&</sup>lt;sup>1</sup> "Charlotte-Mecklenburg School Demographics." *Charlotteobserver.com.* June 6, 2014. Accessed September 24, 2014.

<sup>&</sup>lt;sup>2</sup> Stuart, Dave. "On Common Core Text Complexity, the Triangle of Life, and the Freakout." *Teaching the Core*. June 24, 2014. Accessed September 24, 2014. http://www.teachingthecore.com/common-core-text-complexity-triangle/.

<sup>&</sup>lt;sup>3</sup> Rauch, Alan. "The Monstrous Body of Knowledge in Mary Shelley's *Frankenstein*." *Studies in Romanticism* 34, no. 2 (1995): 245.

<sup>&</sup>lt;sup>4</sup> "The Shelley-Godwin Archive." The Shelley-Godwin Archive. Accessed November 23, 2014. http://dev.shelleygodwinarchive.org/.

<sup>&</sup>lt;sup>5</sup> *Frankenstein*. Directed by James Whale. Performed by Boris Karloff and Colin Clive. Universal Studios, 1931. DVD.

<sup>&</sup>lt;sup>6</sup> Bud Abbott and Lou Costello Meet Frankenstein. Directed by Charles Barton. Performed by Bud Abbott and Lou Costello. Universal International Pictures, 1948. Accessed November 22, 2014. https://www.youtube.com/watch?v=C3W5kkZLN50&index=6&list=PLD5EA35B38AFDC0EA and

https://www.youtube.com/watch?v=kZQwVWTB2hI&list=PLD5EA35B38AFDC0EA&index=12 

<sup>7</sup> *Young Frankenstein.* Directed by Mel Brooks. Performed by Gene Wilder, Peter Boyle, Marty Feldman, Cloris Leachman, Teri Garr, et al. 20th Century Fox, 1974. DVD.

<sup>&</sup>lt;sup>8</sup> Morawski, Cynthia. "Transacting in the Arts of Adolescent Novel Study: Teacher Candidates Embody Charlotte Doyle." *International Journal of Education & the Arts* 11, no. 3 (February 6, 2010): 15. Accessed November 23, 2014. http://www.ijea.org/v11n3/v11n3.pdf.

<sup>&</sup>lt;sup>9</sup> "The Shelley-Godwin Archive." The Shelley-Godwin Archive. Accessed November 23, 2014. http://dev.shelleygodwinarchive.org/.

10 "Frankenstein: Mary W. Shelley: Free Download & Streaming: Internet Archive." Internet Archive. The LibriVox Free Audiobook Collection. October 20, 2005. https://archive.org/details/frankenstein shelley.

- <sup>11</sup> Shelley, Mary Wollstonecraft (Godwin.) *Frankenstein or The Modern Prometheus*. Project Gutenberg, 2008. http://www.gutenberg.org/files/84/84-h/84-h.htm
- <sup>12</sup> Shelley, Mary Wollstonecraft. Frankenstein. New York: Dover Publications, 1994, 31.
- <sup>13</sup> Ibid., 32.
- <sup>14</sup> Ibid., 35.
- <sup>15</sup> Ibid., 68.
- <sup>16</sup> Ibid., 86.
- <sup>17</sup> Ibid., 93.
- <sup>18</sup> Franklin, Ruth. "Was 'Frankenstein' Really About Childbirth?" New Republic, March 7, 2012. Accessed November 22, 2014. http://www.newrepublic.com/article/books-and-arts/101435/mary-shelley-frankenstein-godwin-bodleian-oxford
- <sup>19</sup> Shelley, Mary Wollstonecraft. Frankenstein. New York: Dover Publications, 1994, 34-6.
- <sup>20</sup> Frankenstein. Directed by James Whale. Performed by Boris Karloff and Colin Clive. Universal Studios, 1931. DVD. Minute 15:00-25:00.
- <sup>21</sup> Bud Abbott and Lou Costello Meet Frankenstein. Directed by Charles Barton. Performed by Bud Abbott and Lou Costello. Universal International Pictures, 1948. Accessed November 22, 2014. https://www.youtube.com/watch?v=C3W5kkZLN50&index=6&list=PLD5EA35B38AFDC0EA
- <sup>22</sup> Frankenstein. Directed by James Whale. Performed by Boris Karloff and Colin Clive. Universal Studios, 1931. DVD. Minute 1:05-end.
- <sup>23</sup> Bud Abbott and Lou Costello Meet Frankenstein. Directed by Charles Barton. Performed by Bud Abbott and Lou Costello. Universal International Pictures, 1948. Accessed November 22, 2014. https://www.youtube.com/watch?v=kZQwVWTB2hI&list=PLD5EA35B38AFDC0EA&index=12
- <sup>24</sup> Young Frankenstein. Directed by Mel Brooks. Performed by Gene Wilder, Peter Boyle, Marty Feldman, Cloris Leachman, Teri Garr, et al. 20th Century Fox, 1974. DVD.
- <sup>25</sup> Frankenstein MD. Developed by Lon Harris, Brett Register, and Bernie Su. Performed by Anna Lore and Steve Zaragoza. Pemberley Digital. Accessed October 20, 2014. http://www.pemberleydigital.com/frankenstein-md/.
- <sup>26</sup> Carr, Nicholas. "Author Nicholas Carr: The Web Shatters Focus, Rewires Brains." *Wired*, May 24, 2010. Accessed November 23, 2014. http://www.wired.com/2010/05/ff\_nicholas\_carr/all/.
- <sup>27</sup> Lewis, Tanya. "The Singularity Is Near: Mind Uploading by 2045?" LiveScience. TechMedia Network, 17 June 2013. 3 Oct. 2014. <a href="http://www.livescience.com/37499-immortality-by-2045-conference.html">http://www.livescience.com/37499-immortality-by-2045-conference.html</a>.
- Negroponte, Nicholas, Nina Tandon, and Richard Resnick. "TED Radio Hour: Predicting the Future." NPR. October 10, 2014. Accessed October 30, 2014. http://www.npr.org/2013/08/26/215826949/predicting-the-future?showDate=2014-10-10.