



Examining the Effects of Social Technology Through Analysis of Fiction and Non-Fiction Writing

Curriculum Unit 19.01.06

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A curriculum unit designed to help students find a healthy relationship with modern social media technology by becoming more fully aware of how it is designed, how it is influencing us, and where it can ultimately take us if we are conscientious . . . or how it may destroy us if we are not.

Introduction

The newest generation has more immediate access to a larger body of knowledge than any generation before it, all in the palms of their hands, and yet, if you ask any honest adult tasked with educating these kids, they are quite possibly the most easily distracted, the most illiterate, and the most ignorant generation in the history of the world. Of course, a similar sentiment has been felt (if not always openly expressed) by almost every aging generation (i.e. “cranky old fogies”) about the youthful population (i.e. “kids these days”) that was rapidly displacing it. Somewhere in France, waiting to be discovered, is a cave painting clearly depicting a tribal elder’s absolute exasperation with the kids of that day and their incorrigibly unhealthy obsession with fire. And, of course, none of those older generations has ever been proven wrong by time (as far as I can remember); which is why I am perfectly justified in lamenting that modern technology, and especially cell phones and social media, is an unmitigated disaster that has destroyed whatever little progress humans have made with regard to our social and cultural evolution in the last few centuries.

Anecdotally, over my twenty-three year teaching career, I have observed diminished attention spans and declining social skills. I don’t know that students ever did all of the assigned reading – Cliff’s Notes were a big part of the success enjoyed by many of my contemporaries in high school – but my students now read even less of what is assigned, and with less understanding, than the students I had when I began teaching. Getting and maintaining their attention is also a far more laborious struggle than it was in the past – to say nothing of how poorly they comprehend what is being said to them when (and if) I do have their attention. Over the course of my career, I have taught in four different school systems, and the pattern can be observed regardless of socio-economic or cultural factors – in every case, my students seem to have grown (though “grow” may not be an appropriate term) more emotionally volatile, more self-absorbed and incurious, more

distracted, less self-reliant, and less creative. Perhaps I have unwittingly succumbed to the age old and old age tendency of waxing nostalgic while disparaging the socio-cultural evolution of younger generations . . . or perhaps, this time, things really are getting worse. *The Invisible Gorilla*, a fascinating book about our perceptions and misperceptions by Christopher Chabris and Daniel Simons, does an excellent job of showing us why we maybe should mistrust our recollections of certain events;¹ on the other hand, there are also plenty of research articles listed in the bibliography below suggesting the anecdotal memories of old teachers bemoaning the loss of attentive and aware students are not entirely inaccurate; of course, on the third hand (and if you are a successful veteran teacher, then you have certainly developed one of those to help you juggle your myriad responsibilities), a very readable article by Rachel Becker argues that much of the data on the effects of technology comes from self-reporting by users who, going back to the premise of *The Invisible Gorilla*, are not the most reliable sources of unbiased information.² Given all this foggy uncertainty, you (as well as your students) must become adept at navigating the myriad articles and the data they provide before it is too late and our worst fears are realized and we become digital zombies.

To help your students practice and improve their understanding of the complex relationships we have with social technology, this unit consists of four parts. In the first part, students read (and perhaps watch) and work on rhetorical analysis of various texts that explore the effects of cell phones and social media technology. Having completed this reading and discussed their findings with the class, your students will (if possible) begin writing letters to middle school students, offering them sound advice on how to develop their own relationships with their cell phones and social media. Ideally, the initial letters may spark a pen pal relationship or mentorship between your students and their younger peers, all of whom may benefit from such connections. Next, your students will be reading and analyzing the predictions of Ray Bradbury in *Fahrenheit 451* (or a similar work of dystopian fiction) regarding how technology affects our lives, relationships, and communities. The goal is to determine how closely his vision matches our reality and to explain why. Finally, using all that they have learned in this unit, your students will make predictions of their own about the future. This can take the form of a poem, short story, video, editorial, or some other expression of their ideas about where we are headed.

Background

I teach in a Title I school in New Haven, Connecticut, where many of my own students begin with every disadvantage one could imagine in a first world country; some even suffer from a few disadvantages that most Americans can't (or don't want to) imagine at all. These kids are frighteningly familiar with deprivation and abuse in all its various forms. And while they may not have easy access to healthy foods, the best schools, safe and stable home environments, or an abundance of positive role models, they do all have cell phones and a web of social networks that could provide a ready escape from their difficult lives . . . if only those virtual societies did not so often so closely resemble the omnipresent dysfunction of the real worlds they inhabit.

Almost none of them have been promised much more than a hard life of unmitigated mediocrity . . . and many have been almost guaranteed even less than that. These are not the suburban scions who simply have to jump through the hoops of education and social networking to be promised a future of comfort and relative certainty. A diploma doesn't mean much from a school that graduates 96.2% of its students when only about

23.5% of them can meet benchmark on any standardized test of college and career readiness. Nor does post-secondary acceptance offer any radical opportunities for a brighter future when about 50% of any senior class will fail to make it to their sophomore year in college.³ College admission that is granted by virtue of historical injustices, modern quotas, and the triumph of capitalist greed over academic excellence at many colleges and universities does little more for most of our graduates than drain them of the slender economic gifts they were given, deepen their debts, and briefly delay their entry into the cycles of poverty and self-destruction so few of them can escape.

Many modern pundits, most technology corporations, and even a few scientists have suggested that science and emerging technologies will save us. In a recent New York Times article, David Brooks waxes optimistic about the ways in which Artificial Intelligence can help us more accurately identify people at risk for serious depression.⁴ This is great news, but I don't need AI to point out my students with mental health issues (they are the norm, not the exception where I teach); I need better ways to treat them – one of which, I am almost sure, must be removing them from the toxic environments in which these mental health problems emerge and propagate. This already difficult task becomes much more daunting when you realize that they pay more (and closer attention) to their phones than they do to me or any of their other teachers (the people who are, ideally, offering them the skills and knowledge they will need to ultimately improve their prospects for the future). When you realize that their on-line interactions only serve to mirror and magnify their real world problems, helping them seems almost impossible.

Having grown up in poverty, I can empathize with much of what these kids experience, but when I was a child, school – however unbearable an education may have seemed in the moment – was a seven-hour respite from whatever troubles were overwhelming me at home. We got free food, sympathy and support from our teachers, and easy friendship with other kids from similar circumstances. That I was smart also helped – perhaps some of my struggling peers found school to be another reminder of the difficulties life offered, but for me it was an opportunity to excel and exert some control over my life. It wasn't until junior high when we moved to Connecticut (and in with an uncle) that I attended a more affluent school and began hating it because I was teased about my hand-me-down clothes.

Thanks to the advent of cell phones and social media, school is no longer an escape from a student's life outside it. My students regularly receive text messages from parents, family, and friends while they are in class. Some are even so brazen as to take calls or attempt to Facetime during instruction. This has resulted in behavior I almost never witnessed when I was growing up – students who burst into tears or who are suddenly overcome with rage at ostensibly nothing. The “nothing” is some bit of information they received on their phones that has now made it impossible for them to be anything but a disruption to the class. This can be the continuation of an argument they were having with family and friends or some new offense to their person in the form of a social media post. The result is, at best, that they will walk out of class (sometimes they will pause for a pass to guidance or the nurse, but often their emotions do not allow for even a conversation with someone who may deny them what they want); at worst, they will engage other students in their emotional overload and bring to a halt any possibility of work being done. In my youth, such news would not have reached us until after school and therefore would have disturbed no one's education.

Another problem is the heightened level of insecurity arising from the ubiquity of phones and social media. No longer can students only be teased at the bus stop or during lunch; now the harassment can be non-stop. Even if they aren't immediately aware of any assaults to their appearance, dignity, or reputation, the possibility is always looming in their pocket (or even on the desk next to them as many of my students need incessant reminders to put their phones away). There is no break from judgment and possibly persecution.

There is also no break from the constant need to present yourself positively on social media. In my day, girls would never want their picture taken; now they come late to class because they spent twenty minutes in the bathroom trying to take the perfect selfie. I would estimate that far more time and effort is put into creating their social media personas than is put into their academic résumés; that far more time is spent reading and thinking about text messages and posts than is spent reading and interpreting literary texts; that far more time is spent in surreptitious communion with their phones than is spent in active collaboration with the class. Certainly, they grow immediately annoyed (even angry and aggressive) when you require them to put away their phones (many simply refuse to do so as there are no real consequences for insubordination at our school – another thing that has changed since I was a child), and very few express any contrition when the impact of their behavior on their grades becomes apparent (and then only in the hopes they will be favored with extra credit or, even better, forgiveness for missing work).

It is for the above reasons I wanted to create a curriculum unit that has my students examine closely the effects cell phones and social media are having on their lives and their already slim chances for success. If some of them do not soon recognize the role their phones are playing in their downfall, I fear it will be too late . . . perhaps for a few it already is. But in those same potentially poisonous devices there may exist a salve for or salvation from some of what ails them, and I believe with knowledge comes hope and opportunity. Their lives have already taken away too much of that; my sincerest wish is that the work they do for this unit will give some of it back.

Objectives and Rationales

Is there a bit of hyperbole and bias involved in my assessment of the current situation? Perhaps, but that is the thing about biases – we are rarely aware of our own and they often color our view of reality. So even if I am biased, I may not be able to see it and probably wouldn't willingly admit it when I am trying to prove a point. Likewise, my students are certainly biased in their defense of cell phones and social media as not being a problem in their lives. So that becomes one goal of this unit: to determine if the soft and subjective perceptions of teachers and students match the undeniable data and irrefutable evidence of academic research regarding the impact of modern technology.

I can, if I am looking for an excuse, take some small comfort in the fact that I am not alone; historically, almost every assessment of new ideas, new playthings, new tools, new practices and policies, and new people (whether just born or just arriving) has been fraught with prejudice and personal agendas. This is why it is important for the newest generation and every generation arriving after it to acquire the skills necessary to discern between objective information and bias-driven propaganda. This includes an understanding of our own cognitive biases, an ability to identify the logical fallacies used purposefully or inadvertently to sway audiences, and a familiarity with the rhetorical elements of ethos, pathos, and logos necessary to evaluate the merits of the arguments being made to us. So that set of knowledge and skills becomes a subordinate necessity to the first aim of this curriculum unit.

It is imperative to have my students develop a more clear and carefully supported understanding of the impacts modern technology is having on their lives, with specific attention paid to cell phones and social media (for the purposes of this unit, future references to tech can be considered shorthand for these two elements of modern technology) because these are kids who are in desperate need of any advantage that will

help them survive and succeed in this world. Modern technology could provide that advantage for some of them. Many of these kids are also precariously close to falling into patterns of poverty, dysfunction, degradation, and despair. Cell phones, and social media could spur and speed their descent. What may really matter to their success is their ability to tell the difference between good and bad actors through the critical consideration of offers tendered and promises made. What may really matter to their social serenity and economic comfort is their ability to create and maintain healthy and potentially advantageous relationships with technology, particularly through their cell phones and social media. What may really matter to their socio-economic evolution in this society is their development of four simple skills.

To that end, in my classes, all assignments fall into at least one of four categories: curiosity, creativity, persistence, and self-regulation. These are four of the many “soft skills” that are commonly known to improve one’s likelihood of success in any situation or under any circumstances for which success is possible. Much has been written about these skills and they have often been promoted as highly important to the modern classroom. A recent academic publication entitled *Non-cognitive Skills and Factors in Educational Attainment* encapsulates much of the research on their value to academic, career, and personal success,⁵ but there are many articles and resources on their value as well as how to implement them in the classroom that can be easily found on-line. The logic supporting their worth is simple: if you are truly curious you will always seek out answers to the questions you have and doors to new opportunities you might enjoy or need. When a student does not read the required assignment, it often is not because he can’t – it is because he is incurious about what the teacher is offering him (or more curious about alternative options available to him).

Similarly, if you are truly creative, you can always come up with a solution to ameliorate or eliminate a problem that vexes you. When a student wallows in the wake of a problem rather than working through it, it often isn’t because the problem is unsolvable – it is because she lacks the imagination to approach it from another direction or use the assets available to her in new and creative ways. If you are persistent, you will always allow time for your curiosity and creativity to do its magic and you will not give up until you have arrived at a satisfying conclusion. When student work is sloppy or half-finished, it is not because the student couldn’t do better – it is because the student isn’t willing to keep working toward a grander goal. If you are self-regulated, you will not become so easily distracted from the important tasks at hand, nor will you sacrifice larger long-term gains for immediate superficial and short-lived pleasures. When the student stops working out of boredom or frustration, these are not signs that the work is boring or too difficult – this is evidence that he lacks the willpower to avoid activities that are more immediately gratifying. I would argue that grades have always been determined by the student’s mastery of these “soft skills,” but this system makes that relationship more explicit. Reinforcing these skills will be a subsidiary aim of this unit for my classes, and I recommend it highly to anyone who teaches struggling students, but depending on your familiarity and comfort with these ideas (as well as the expectations for grading your school imposes), you may not want to include them as a core undertaking during your study of cell phones and social media.

The subject of this unit logically requires that students will read a variety of articles and essays on the effects of cell phones and social media on people in general, and adolescents in particular. Some of these texts will be provided in the bibliography below, some you or they will need to seek out according to interests and issues of timeliness. Through rhetorical analysis of these texts, students will determine how skeptical they should be of this information and how much they should probably take to heart. Ideally, they will begin to differentiate between reliable sources of information and those with an agenda that may not be in line with the health and happiness of the reader, or society as a whole. More to the main objective of this unit, they will recognize more completely what they are sacrificing through obsessive use of their cell phones and social media.

To make matters worse kids are living in an age when their tech addictions are not only supported by many of their parents and friends, but are seemingly given a wink and a nod (if not overt encouragement) by teachers and administrators at many of their schools. Aside from the lax regulation of cell phones in many schools due to inadequate understanding of their deleterious effects and a faculty exhausted by even the thought of engaging in the emotionally taxing and tremendously time-consuming fight to break students of their well-formed habits regarding surreptitious (or occasionally blatant) use of these devices, there comes from many corners of education the echo that the use of technology is a 21st century skill and therefore must be encouraged. With little research-based support for this (without explicit rules regarding this use and in-depth training for teachers), especially when it comes to cell phones, administrators are hired explicitly for their willingness to promote technology in the classroom and teachers are asked (or coerced) to incorporate it into any lesson they possibly can. This is all done under the auspices of making education appear more relevant in the modern era. This cultish ideology ignores the research suggesting that technology may not improve learning outcomes and may, in fact, be detrimental to them. It ignores that only some technology in some forms has proven beneficial, but only in circumstances when teachers have been properly trained and students have the appropriate framework of basic skills. More often, it seems, the distractions caused by cell phones and other forms of technology “harm not only the user, but classmates as well” in spite of student reports that their technology does not impact their learning.⁶ Especially with regard to student attempts at multitasking (surreptitious or otherwise), the research suggests that attempting it produces negative outcomes on almost every standard measure of learning skills and achievement.⁷ So my students (and ideally their teachers and parents) not only need an awareness of how their personal devices affect their growth and learning, but also how the modern pedagogy of technology may also may be hindering or robbing them of their success in academics.

Having this awareness, it will then be incumbent on my students to “pay it forward” and offer what advice they can to children younger than themselves who might be straying (or hurling themselves headlong) into an unhealthy relationship with social technology. The vehicle for this could be letters they write to middle school students offering warnings and advice based on their research. By having the class discuss the most important findings of their research and agree upon the most essential elements of the messages they hope to deliver to their pen pals, teachers can be relatively assured that the information being passed along is accurate and helpful to the younger students receiving these letters. An additional layer of supervision over these interactions can also be implemented during the editing process, with no letters being delivered that have not been reviewed by the teacher. Hopefully these letters will spark some longer (and perhaps in-person) conversations about the topics they address, as a sense of belonging to a real community based on in-person interactions is helpful in preventing or overcoming an obsession with digital interactions. Alternatively, they could create a website or a video that provides helpful information and tips for teens and younger students. They may even come up with better ways to communicate their learning to others and help us achieve the second major aim of this unit: to share our acquired wisdom in a way that benefits (and perhaps creates) a larger community of people.

While they are working on their letters we will be reading *Fahrenheit 451* by Ray Bradbury (with perhaps an alternative for the sake of differentiation, serving individual tastes, or pushing more adept readers – maybe *1984* by George Orwell or *2001: A Space Odyssey* by Arthur C. Clarke . . . or something else with numbers in the title so they know it’s scientific) and discussing what predictions for the future (relative to the author) he got right (either literally or in spirit) and where he might have erred. Depending on time, interest, and the need for models, they may also supplement their reading with a second novel or variety of short stories, poems, and essays that make predictions about the future, analyzing the prescience of these authors as well.

Once they have completed this work, they will have the option of writing a poem, short story, or essay that offers their own predictions for the future of technology, particularly in the realms of video games, cell phones, and social media. This written piece will give them an opportunity to hone their creative writing skills and also satisfy the 3rd (or sixth, depending on how you count – someone should be keeping track) aim of this unit: taking what we know about the past and what we have learned about the present to make logical inferences and evidence-based predictions about the future of our relationships with technology and each other.

Teaching Strategies and Classroom Activities

Depending on your classroom, your students, your school's curricular requirements, and your whims (if such things are allowed by your administration), there are a variety of ways you can approach this subject.

The first element of this unit you must decide to incorporate or discard is the focus on describing the work and its outcomes in terms of soft skills. If you do not already do this in your class, then bringing it up here may be time-consuming and confusing to your students (and their parents). First, there is the question of which ones you may want to include (because there are many more than the four I describe above and a great deal of overlap between them), and then there is the problem of figuring out how to include them. So let's begin our dissection of the teaching strategies portion of this unit with the suggestion that if you have not already have been incorporating them into your curricula, just ignore soft skills as a component of this lesson . . . for now. (Eventually, I believe, you will want to develop a soft skills curriculum because it may be the only thing that can bring your students back from the brink of digital zombie-ism . . . no, probably nothing will do that, but having kids understand the connections between what you are asking them to do and how this will develop the skills they need to succeed in the future will undoubtedly increase their intrinsic motivation.)

I like to begin each class with a journal entry, a writing activity that either gets the kids thinking about what we will be studying that day or transitions us from the material we covered last class to the work we will be doing next. With this particular topic, it can be a good way to identify what the students already know (or what they believe) and how they feel about the subject before introducing anything that might disturb their comfortable ignorance. It also helps to get them thinking a little more deeply before they engage in a conversation. To get them going, I usually write an open-ended question (or command) or two on the board and have them respond without prior discussion. They can focus on anecdotal experiences (e.g. "Describe a time when technology saved you; describe a time when it got you in trouble."), ethics (e.g. "If you were a politician or a parent, under what circumstances might it be okay to lie? When would it be unacceptable to lie?"), imagination (e.g. "Describe how social media will evolve in the next twenty years."). Then we discuss what we've written (if classroom management permits, I will also write on the topic) before exploring a text on the subject (poetry, fiction, or non-fiction). At the end of class, I will often have my students add to their original entries with any new ideas or perspectives they have gained on the issue at hand. These entries can later become valuable resources for larger/longer writing projects at the end of the unit (e.g. their letters to middle school students). If you prefer, or if you have more specific goals for any particular reading/writing assignment, that end-of-class writing can occur as an exit slip.

Before you begin your study of what might prove to be a topic that makes your students more defensive and depressed than delighted, you will want to introduce some basic cognitive biases and logical fallacies. This will

allow them to examine this very personal topic with a bit more objectivity than they might otherwise possess. The two cognitive biases I would most recommend are confirmation bias (only looking for, finding, and/or accepting information that supports what we already believe) and the fundamental attribution error (believing our unhealthy behavior has perfectly understandable environmental causes – and may, in fact, not be unhealthy at all – while assuming that the same behavior in others represents some defect in character and a serious problem). You may know these biases by other names, but both could present significant impediments to your students understanding the nature of their own problems with technology. If you can construct a journal entry and subsequent discussion to help your students examine how they and the people around them occasionally succumb to these biases, that may help them better recognize their blind spots when it comes to modern technology.

The logical fallacies you choose to introduce could depend on your curriculum as well as which sources you intend to have your students read, but if you want your students to develop the critical reading skills necessary to discern valid claims from spurious propaganda, then you will want them to be able to identify some of the more common fallacies employed by pundits today (e.g. straw man, slippery slope, false dilemma, circular argument, appeal to ignorance, hasty generalization, etc.). Again, you may know these by other names, but after a bit of research (a quick Google search should provide you with plentiful articles, videos, and even cartoons explaining most fallacies) it should be obvious which ones are most commonly used in debates about the impacts of modern technology. It may be fun to have students not only identify these fallacies in passages from various texts and advertisements, but also create their own to sell an imaginary product or support a hypothetical position. Introducing these fallacies along with the basic elements of rhetoric (ethos, pathos, logos) should prepare your students to more carefully dissect what they are reading to determine if the source, and the information it contains, is one they can trust.

For my own class, I like to provide a reading list of articles (I have used many of those listed in the bibliography below) from which they can initially choose sources to examine. Depending on the level of your students, you may wish to design templates for taking notes and analyzing the articles they are reading. For this unit, I use a graphic organizer that highlights the rhetorical strategies employed by the author. This not only allows them to better identify the strength evidence used in the piece, but also prepares my students for greater success should they choose to take AP Language and Composition in the coming years. Other elements of the graphic organizer you create should reflect the specific goals you have for this unit (e.g. identifying logical fallacies or determining the best advice to offer middle schoolers).

We read and analyze several texts as a class, working together to complete the analysis sheets and making sure everyone understands (if not always agrees on) why an article is valid or questionable. I then have them read and analyze a few more articles in pairs or small groups – depending on the needs of individual students I will either select the pairings or let them choose their own groups. Once each pair or group has produced accurate analyses of two or three articles, I have each student pick one or two more from the list to read and analyze – this time their efforts are graded more strictly as they will be demonstrating what they have learned in the large and small groups. Finally, each student selects a specific subtopic in relation to cell phones and social media and finds two of their own articles to analyze – one that is credible and one that is of dubious quality. They must also offer evidence supporting their credibility assessments of each. The list I provide includes sources that are both pro and con on various issues related to cell phones and social media, and it also includes some sources that are highly questionable (and that make use of logical fallacies) so my students can develop their reading acumen. By the time we have gone through each of these stages, my students have (if they have done the work) read at least a dozen documents – this also helps make the point that no single source is sufficient for a thorough understanding of any topic.

The ultimate goal of all this research is twofold: developing healthier relationships with tech and giving good advice to middle school students to help them do the same. While still remaining in the larger domain of cell phones and social media, there are plenty of interesting subtopics to explore. Students can look at specific outcomes of overuse, specific social media sites, the role of parents or schools in creating and/or solving the problem, cognitive and biological effects versus social effects versus environmental effects – the opportunities for differentiation according to student interest or need are plentiful.

Having acquired a more detailed (and hopefully nuanced) understanding of their subject, the students can then decide how best to share this understanding with others. The idea I use is to have them write letters to middle school students in a kind of pen pal program that allows them to bond with somebody younger and share their sage advice on the subject of cell phones and social media. At the very least, these middle school kids will get some of the benefits of the research your students have done and be warned of the danger posed by digital devices without having to listen to another adult prattle on about how scary the world is and how unprepared they are to face it. At best, the middle school students might find a mentor who continues to be a source of support and sound feedback even after the project is over, and your students might develop a stronger grasp of the dangers as well as greater motivation to change their own behaviors as a result of their efforts. Of course, you and your students may come up with other culminating projects that would be even more exciting and worthwhile, so perhaps you will want to allow for more latitude when it comes time to create a summative assessment for this portion of the unit. There are many options for differentiation and catering to creative impulses as well as individual interests – perhaps they will want to create an app or social media site to warn others . . . and then you can teach them about irony.

The next section of this unit can be seen as a continuation of the first segment, or it can be used as a separate unit requiring perhaps only some supplemental non-fiction texts from the first part. If your class is more traditionally focused on literature and the techniques writers use to create a sustained narrative, then these activities will be better aligned with your curricular focus. In this part of the unit, you will have your students read a longer work of science fiction. I would use either *Fahrenheit 451* by Ray Bradbury or *1984* by George Orwell, but there are plenty of other options you could choose, including collections of certain short stories and poems if that is more in line with your students, goals, or interests. The goal here is to examine an author's predictions about the direction of our socio-cultural evolution with regard to technology and determine what he got right (literally or simply in the spirit of his prose) and what it looks like he may eventually get right. You can also examine what he got wrong and why he may have expected something other than the current conditions. By comparing and contrasting the descriptions in the book to the society in which they live, I find my students more invested and more capable of spotting important elements of the text. I have my students keep a reading log as we explore the book so they can keep track of the author's predictions and have an easy reference for class discussions or later writing assignments. Some of the research students have done should be useful in their support of arguments about what elements of the novel have come to fruition and which ones may still be pending.

Finally, after a thorough reading and many discussions of the novel, as well as some complementary readings and perhaps a written assessment of the author's efficacy in predicting technology's influence on our modern society (depending on time as well as student needs and inclination), it will be the student's turn to anticipate how technology will influence us in the future. To allow for differentiation, you can consider several forms or mediums for the production of this product – a short story, a poem, an essay, a video, an advertisement from the future, etc. The New York Times is currently running a series of "Editorials from the Future" in which they ask scientists and science fiction writers to contribute fictitious opinion pieces about life in 10, 20 or even 100 years from now⁸ – so perhaps you could select some of those as models for your students and have them

create a similar project for the school newspaper. The ultimate goal being that they synthesize what they have learned into a culminating product that demonstrates their ability to take an understanding of the past and the present and turn that into a lens that allows them a view of the future, one that they can eloquently and effectively argue without falling prey to cognitive biases or relying on logical fallacies.

Teacher Resources/Annotated Bibliography

This is a starting point . . . of course, by the time you are reading this, many of the texts may be out of date and more accurate research may be readily available.

Bila, Jebediah. *#DoNotDisturb: How I Ghosted My Cell Phone to Take Back My Life*. New York: Harper, 2018. Probably a book better suited for a young teacher who understands the difficulties of her students having grown up in the cell phone era as well. She might then borrow bits of this book to share with her students, but it probably isn't a text that is relevant or entirely appropriate for the classroom.

Broekhuizen, Ludwig van. "The Paradox of Classroom Technology: Despite Proliferation and Access, Students Not Using Technology for Learning." *AdvancEd.org*, accessed May 15, 2019.

https://www.advanc-ed.org/sites/default/files/AdvancED_eleot_Classroom_Tech_Report.pdf (accessed May 24, 2019).

A report on the use of technology in classrooms for educational purposes that paints a dim view of the efficacy of technology in the classroom setting without explicating exactly why this is so.

Brooks, David. "How Artificial Intelligence Can Save Your Life." *The New York Times*, June 24, 2019.

https://www.nytimes.com/2019/06/24/opinion/artificial-intelligence-depression.html?em_pos=large&ref=headline&te=1&nl=sunday-

[best&emc=edit_owr_20190630?campaign_id=94&instance_id=10588&segment_id=14800&user_id=15abe43389d3c27b16ea586e3491fc67®i_id=88881976dit_owr_20190630](https://www.nytimes.com/2019/06/24/opinion/artificial-intelligence-depression.html?em_pos=large&ref=headline&te=1&nl=sunday-best&emc=edit_owr_20190630?campaign_id=94&instance_id=10588&segment_id=14800&user_id=15abe43389d3c27b16ea586e3491fc67®i_id=88881976dit_owr_20190630).

Brooks' columns are usually interesting to read, but the comments section following them is often even more entertaining as he tends to spark lively debate with his comments (and with what he leaves out). This article is no exception and is tangentially related to the subject of social media as it deals with how AI might better enable us to identify mental health concerns and maladaptive behaviors.

Brooks, Mike, and Jon Lasser. *Tech Generation: Raising Balanced Kids in a Hyper-Connected World*. New York: Oxford University Press, 2018.

Really a handbook for parents on how to raise tech-healthy kids or how to intervene if your children are already showing signs of tech addiction. Combines much of the research found in other books and articles on this subject with the psychology of good parenting. Offers some assessments to determine tech risk and answers to popular questions parents might have. Much of the content could be adapted for use in the classroom since the responsibilities of being in *loco parentis* have become much greater for teachers of late.

Christensen, Arnfinn. "Paper beats computer screens." *ScienceNordic*, March 13, 2013.

<http://sciencenordic.com/paper-beats-computer-screens> (accessed May 24, 2019).

Research from a European study that suggests technology in the classroom may not help improve student learning and achievement.

Clement, Joe. *Screen Schooled: Two Veteran Teachers Expose How Technology Overuse Is Making Our Kids Dumber*. Chicago: Chicago Review Press, 2018.

Two veteran teachers offer their perspectives on the detrimental effects of technology on learning in and out of the classroom. Because they are fond of and very familiar with technology, they also explore how to limit and/focus its use to maximize the educational benefits. Written in a very readable style and supported by a good deal of fairly recent research, this book would be a good primer for beginning teachers and any administrator who is a little unreasonably insistent that technology be used frequently in the classroom.

Denoël, Etienne, and Emma Dorn, Andrew Goodman, Jussi Hiltunen, Marc Krawitz, and Mona Mourshed.

"Drivers of Student Performance: Insights from Europe." McKinsey & Company, November, 2017.

<https://www.mckinsey.com/industries/social-sector/our-insights/drivers-of-student-performance-insights-from-europe> (accessed May 24, 2019).

Interesting research around PISA results comparing European and non-European results. It compares factors influencing student success with some insight into the importance of motivation and types of instruction as well as the negative impacts of technology in the classroom. Importantly, it raises questions about how cell phones and social media might influence motivation.

Dodgen-Magee, Doreen. *Deviced!: Balancing Life and Technology in a Digital World*. Lanham, MD: Rowman & Littlefield, 2018.

Like a few other books in this genre (and lots more to be available soon, I am sure) this is a readable book that combines research, plentiful anecdotes from a variety of people, and some sound advice on how to have a healthier relationship with all facets of modern social technology (without being didactic or unrealistic).

Espejo, Roman, ed. *Cell Phones in Schools*. Farmington Hills, MI: Greenhaven Press, 2014.

As odd as it seems, this educational volume of essays on issues surrounding cell phones and education may already be a little dated (not to mention that these "made for schools" collections often read a bit cheesy and bland), but it still might prove a valuable resource for teachers seeking accessible and balanced writing for kids to explore.

Eyal, Nir. *Hooked: How to Build Habit-Forming Products*. New York: Portfolio/Penguin, 2014.

This very readable book uses the research, examples from modern tech, and the author's personal experiences to describe how you can design products through the four stages that "hook" your customers - you can think of it as the Devil's distraction handbook or the iGen Bible depending on your view of modern technology. The author assures us there need be no serious ethical concerns as your goals are noble - you wish to help people - and most people can self-regulate, so they aren't really susceptible to addiction.

Felisoni, Daniel Draghan, and Alexandra Strommer Godoi. "Cell phone usage and academic performance: An experiment." *Computers & Education*, Vol. 117, February 2018.

<https://www.sciencedirect.com/science/article/pii/S0360131517302324>

A study of 43 students in Brazil that controlled for academic ability and demonstrated a strong (deleterious) correlation between cell phone use and academic performance, especially if that cell phone use occurred during class.

Horn, Michael. "New Research Answers Whether Technology Is Good Or Bad For Learning." *Forbes*, November 14, 2017.

<https://www.forbes.com/sites/michaelhorn/2017/11/14/new-research-answers-whether-technology-is-good-or-bad-for-learning/#1f1a9cca19d7> (accessed May 24, 2019).

Argues that the pros of technology use in the classroom depend on the learning model, not the technology. If teachers have not been properly trained and the learning model is inappropriate, then technology worsens educational outcomes.

Khine, Myint Swe, and Shaljan Areepattamannil, eds. *Non-cognitive Skills and Factors in Educational Attainment*. Boston, MA: Sense Publishers, February 18, 2019.

A very recent publication that synthesizes much of the current research on the importance of soft skills in education (and success beyond) in academic essays by various authors.

Lukianoff, Greg, and Jonathan Haidt. *The Coddling of the American Mind: How Good Intentions and Bad Ideas Are Setting Up a Generation for Failure*. New York: Penguin Press, 2018.

An interesting read that might disappoint or offend anyone on either extreme of the liberal-conservative spectrum, but it does offer some stunning examples of how far some institutions (people) will go to appease special interest groups at the expense of truth, justice, honest debate, and slightly thicker skins. Much of this book does not pertain specifically to cell phones, social media, or video games, but sections of it do elucidate the role these elements of modern technology contribute to its thesis.

May, Kaitlyn, and Anastasia D. Elder. "Efficient, helpful, or distracting? A literature review of media multitasking in relation to academic performance." *International Journal of Educational Technology in Higher Education*, February 27, 2018.

<https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-018-0096-z>.

Describes how the research details the detrimental impacts of media multitasking on all measures of learning during educational activities both in and out of the classroom and suggests some promise for the future in enhancing student self-regulation.

McNamee, Roger. *Zucked: Waking Up to the Facebook Catastrophe*. New York: Penguin Press, 2019.

In this act of contrition, McNamee offers an insider's look at the history of Facebook and how its unhealthy-verging-on-insidious relationship to the average consumer developed. Probably not necessary to read the whole book unless you were doing a unit or project specifically on Facebook and whether or not the people behind it were fully aware of the breadth and depth of its impact.

Newport, Cal. *Digital Minimalism: Choosing a Focused Life in a Noisy World*. New York: Portfolio/Penguin, 2019. The case for limited technological dependence/use from someone who has never displayed any of the signs of cell phone or social media addiction. The insights and suggestions are valuable and the anecdotes effective,

but as with so much practical advice for bettering our lives – easy to offer, hard to follow . . . especially if, unlike the author, you are fully immersed in modern social media culture.

O'Brien, Carl. "Technology can hurt students' learning research shows." *The Irish Times*, February 9, 2018. <https://www.irishtimes.com/news/education/technology-can-hurt-students-learning-research-shows-1.3385864> (accessed May 24, 2019).

Short article summarizing some findings of an international study on technology use – mostly of value for what it says at the end about student mindsets being a more important focus than just their use of technology.

Pedro, Luis Francisco Mendes Gabriel, Claudia Marina Monica de Oliveira Barbosa, and Carlos Manuel das Neves Santos. "A critical review of mobile learning integration in formal educational contexts." *International Journal of Educational Technology in Higher Education*, March 15, 2018.

<https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-018-0091-4>

A survey of the research into how cell phones impact learning at the university level that stresses the inconclusiveness of the findings thus far; though it does suggest that there are some serious obstacles to effective implementation that must be addressed. The two most problematic are student engagement/distraction and the lack of teacher training in effective methods of incorporating such technology into content delivery.

Price, Catherine. *How to Break Up with Your Phone*. New York: Ten Speed Press, 2018.

Like a few other books and articles, this self-help book summarizes the research on the problems with an overdependence on our cell phones and social media. It then provides a 30-day plan to "break up" with your phone (though in the end it seems like the author is really just recommending a "friends with benefits" relationship.) It's a quick, easy read with some sound advice that could have been offered in fewer pages.

Richmond, Aaron S., and Jordan D. Troisi. "Technology in the Classroom: What the Research Tells Us." *Inside Higher Ed*, December 12, 2018.

<https://www.insidehighered.com/digital-learning/views/2018/12/12/what-research-tells-us-about-using-technology-classroom-opinion> (accessed May 24, 2019).

A brief but balanced view of the value of technology in the classroom that also gives some suggestions for improving its efficacy. The benefits seem mostly for students with special needs.

Turkle, Sherry. *Reclaiming Conversation: The Power of Talk in a Digital Age*. New York: Penguin Press, 2015.

A manifesto for a return to conversation as a cure for our intellectually and socially crippling addiction to technology (especially social media) – without really establishing that most of us had great conversations before our cell phones interrupted. Like her previous work, much more dependent on anecdotal evidence and conjecture than clear data that illustrates cause and effect – however, I found the examples and writing much more engaging in this book than in her book *Alone Together*. For the kids, it might be better to rely on her articles and Ted Talks which give you more bang for the buck.

Twenge, Jean M. *iGen: Why Today's Super-Connected Kids Are Growing Up Less Rebellious, More Tolerant, Less Happy – and Completely Unprepared for Adulthood – and What That Means for the Rest of Us*. New York: Simon & Schuster, 2019.

An interesting book with lots of fodder for discussion that occasionally seems to mistake correlation for causation and self-reported opinions (to somewhat vague or leading questions) for observable fact. Still, an easy-to-read compendium of anecdotes and research regarding how the latest generation has been affected by modern technology that serves as a strong voice in a very crowded conversation.

Wadhwa, Vivek, and Alex Salkever. *Your Happiness Was Hacked: Why Tech Is Winning the Battle to Control Your Brain, and How to Fight Back*. Oakland: Berrett-Koehler Publishers, 2018.

An easy-to-read-book that breaks down some of the research on the negative effects of technology on various parts of our lives. As it is accessible to both students and teachers, one might use specific chapters as resources to focus on specific areas of technology usage.

Zomorodi, Manoush. *Bored and Brilliant: How Spacing Out Can Unlock Your Most Productive and Creative Self*. New York: St. Martin's Press, 2017.

Examines the problems of tech absorption and addiction from the perspective of the benefits of boredom. Uses anecdotes and research to illustrate the dangers of our tech obsession (specifically phones) and then offers exercises to help us break our co-dependency.

Student (and teacher) Resources/Annotated Bibliography

Atchley, Paul. "You Can't Multitask, So Stop Trying." *Harvard Business Review*, December 21, 2010. <https://hbr.org/2010/12/you-cant-multi-task-so-stop-tr> (accessed May 24, 2019).

Another article that explains why we can't multitask, the dangers of attempting to do so, and how we might better focus ourselves.

Becker, Rachel. "The Problem with Studies Saying Phones Are Bad for You." *The Verge*, December 5, 2018. <https://www.theverge.com/2018/12/5/18126154/screen-time-smartphones-bad-health-risk-science-study-wrong-depression-anxiety>.

An interesting article that questions the efficacy of studies using self-reporting, and even certain apps, to track phone use and then drawing conclusions about its impacts on our well-being from that potentially inaccurate data.

Bowles, Nellie. "Human Contact Is Now a Luxury Good." *New York Times*, March 23, 2019. <https://www.nytimes.com/2019/03/23/sunday-review/human-contact-luxury-screens.html> (accessed May 24, 2019).

This article has a dual focus on the disparities in consumption of tech between wealthy and poorer people and on what tech consumption may be doing to the quality of our social interactions. It uses a combination of research and strong anecdotal material to raise some interesting discussion questions about our needs regarding human interaction.

Bradbury, Ray. *Fahrenheit 451*. New York, NY: Ballantine Books, October 19, 1953.

A classic work of dystopian science fiction that makes some damning predictions about the evolution of human society and raises plenty of interesting questions about what has already come true and what may be coming still. It also provides an opportunity for students of various reading abilities to enjoy the same book as the Lexile level makes it available to almost any high school student while its symbolism and social commentary makes it a challenge for even your better readers.

Carr, Nicholas. "Is Google Making Us Stupid?" *The Atlantic*, July/August 2008.

<https://www.theatlantic.com/magazine/archive/2008/07/is-google-making-us-stupid/306868/> (accessed May 24, 2019).

Yes and no. Depends on how you use it. This article discusses how we are using the internet and what effects it might be having on our brains, our social interactions, and our societies. Much of what it offers has been covered more thoroughly since this article's publication, but it is still a piece worth reading and discussing. Though perhaps it is now a bit dated, Carr's book *The Shallows* offers a more extensive look into the history of this topic.

Goldfarb, Anna. "Stop Letting Modern Distractions Steal Your Attention." *The New York Times*, March 26, 2019. <https://www.nytimes.com/2019/03/26/smarter-living/stop-letting-modern-distractions-steal-your-attention.html> (accessed May 24, 2019).

An article that describes the ill-effects on your brain of being constantly available through your tech devices. Makes an especially important point about how creativity and long-term memories require down time for your brain.

Heid, Markham. "We Need to Talk About Kids and Smartphones." *Time*, October 10, 2017.

<http://time.com/4974863/kids-smartphones-depression/> (accessed May 24, 2019).

A somewhat balanced perspective on the social use of cell phones among teens not being the only cause of their unhealthiness and unhappiness, but a key ingredient and one that needs investigation as well as discussion.

Herold, Benjamin. "Teens' Rising Social Media Use Is Not All Bad News." *Education Week*, September 19, 2018. <https://www.edweek.org/ew/articles/2018/09/19/teens-rising-social-media-use-is-not.html> (accessed May 24, 2019).

Even though it is one of the representative journals of our profession, I often find the reporting in *Education Week* to be superficial, slightly biased, and poorly written. This is no exception, but it makes for a quick read for your students and could spur some debate when paired with an article offering an opposing point of view.

Jones, Feminista. *Reclaiming Our Space: How Black Feminists Are Changing the World from the Tweets to the Streets*. Boston: Beacon Press, 2019.

A collection of essays that could make for interesting reading if you have a diverse group of students or just students who are interested in diversity and social activism – especially if they are heavily involved in social media culture.

Kara, Siddarth. "Is your phone tainted by the misery of the 35,000 children in Congo's mines?" *The Guardian*, October 12, 2018.

<https://www.theguardian.com/global-development/2018/oct/12/phone-misery-children-congo-cobalt-mines-drc> (accessed May 24, 2019).

A short, but well-written article describing where some components of our cell phones come from and who pays the price for their extraction. A good beginning to any measure of guilt you would like your students to feel about the suffering our excess consumption causes.

Knorr, Caroline. "New report: Most teens say social media makes them feel better, not worse, about themselves." *The Washington Post*, September 13, 2018.

https://www.washingtonpost.com/news/parenting/wp/2018/09/13/new-report-most-teens-say-social-media-makes-them-feel-better-not-worse-about-themselves/?noredirect=on&utm_term=.286199cc5088 (accessed May 24, 2019).

A good article to use if you want to spur a discussion about the ephemeral nature of feelings and the value of self-reporting when attempting to discern between truth and opinion.

Lenhart, Amanda. "Teens, Technology, and Friendship." *Pew Research Center*, August 6, 2015.

<https://www.pewinternet.org/2015/08/06/teens-technology-and-friendships/> (accessed May 24, 2019).

Simply sums up some of the findings from a Pew research poll with limited insight into what these results might really tell us about teens and technology or the value of information gained from self-reported opinions. Still, easy to read and worth a discussion.

Maleckar, Dave. "Prophet Motive." 100 Word Rant, December 31, 2018.

<http://100wordrant.blogspot.com/2018/12/prophet-motive.html> (accessed May 24, 2019).

A short, humorous piece that offers a historical perspective on the value of the cell phone.

Mina, An Xiao. *Memes to Movements: How the World's Most Viral Media is Changing Social Protest and Power*. Boston: Beacon Press, 2019.

An interesting exploration of how social media memes impact social consciousness and action. Great for students with this specific interest or who simply want to do some additional reading.

Orwell, George. *Nineteen Eighty-Four*. London: Secker & Warburg, June 8, 1949.

Another classic dystopian science fiction text that explores questions about where we are, where we may be going, and why. A slightly more difficult read than *Fahrenheit 451*, but every bit as provocative for class discussions.

Price, Catherine. "Putting Down Your Phone May Help You Live Longer." *The New York Times*, April 24, 2019.

<https://www.nytimes.com/2019/04/24/well/mind/putting-down-your-phone-may-help-you-live-longer.html> (accessed May 24, 2019).

Article by a popular author of texts about the effects of social media and cell phone technology on all aspects of our lives. This mostly deals with the potential health consequences related to the stress our phones cause.

Rajaniemi, Hannu. "Keep Your Augmented Reality. Give Me a Secret Garden." *The New York Times*, June 3, 2019. <https://www.nytimes.com/2019/06/03/opinion/future-secret-gardens.html>.

Part of a series by *The New York Times* called “Op-Eds from the Future” that offers speculative fiction from scientists, philosophers, futurists, and science fiction writers. This one is tangentially related to the topic of this unit in that it poses questions about the value of reality versus virtual reality. It also speaks to issues of privacy

Richtel, Matt. “Are Teenagers Replacing Drugs With Smartphones?” *The New York Times*, March 13, 2017. <https://www.nytimes.com/2017/03/13/health/teenagers-drugs-smartphones.html> (accessed May 24, 2019). A mixed message article proclaiming that drug and alcohol use among teens has declined (the positive) as the ubiquity and use of smartphones had increased (the worrisome). It suggests that cell phones and social media may induce the neurochemical responses as drugs and alcohol – for good and ill.

Richtel, Matt. “A Silicon Valley School That Doesn’t Compute.” *The New York Times*, October 22, 2011. <https://www.nytimes.com/2011/10/23/technology/at-waldorf-school-in-silicon-valley-technology-can-wait.html>. An interesting article that explores opposing ideas about tech in schools and informs us that many tech executives send their children to schools where tech is either limited or absent.

Roose, Kevin. “Do Not Disturb: How I Ditched My Phone and Unbroke My Brain.” *The New York Times*, February 23, 2019. <https://www.nytimes.com/2019/02/23/business/cell-phone-addiction.html> (accessed May 24, 2019).

A very readable account of the stages of rehab for overcoming cell phone addiction. The author enlists the aid of Catherine Price as his guide through this process.

Shakya, Holly B., and Nicholas Christakis. “A New, More Rigorous Study Confirms: The More You Use Facebook, the Worse You Feel.” *Harvard Business Review*, April 10, 2017.

<https://hbr.org/2017/04/a-new-more-rigorous-study-confirms-the-more-you-use-facebook-the-worse-you-feel> (accessed May 24, 2019).

Essentially explains the study mentioned in the title. But are the findings examples of correlation or causation . . . and in which direction does it run?

Swisher, Kara. “I’m a Tech Addict and I’m Not Ashamed.” *The New York Times*, April 5, 2019.

<https://www.nytimes.com/2019/04/05/opinion/tech-addiction-phone-screens.html> (accessed May 24, 2019).

An article that suggests some of the upsides to a balanced “addiction” to tech, even as it downplays or ignores the evidence of problems stemming from real tech addiction.

Thompson, Stuart A. “Where Would You Draw the Line?” *The New York Times*, April 2019.

https://www.nytimes.com/interactive/2019/04/10/opinion/privacy-survey.html?emc=edit_th_190414&nl=today%20headlines&lid=328771730414 (accessed May 24, 2019).

An interesting interactive survey that identifies how various media/technology platforms gather and use information about people – and how tolerant people are of these practices.

Twenge, Jean M. “Have Smartphones Destroyed a Generation?” *The Atlantic*, September 2017.

<https://www.theatlantic.com/magazine/archive/2017/09/has-the-smartphone-destroyed-a-generation/534198/> (accessed May 24, 2019).

No, but they have made that generation less tolerable to us old geezers. This article briefly covers some of the research findings that are expanded upon in her book *iGen*. It suffers from the same criticisms as that book, but is still worth reading and discussing – and much more palatable to your students as it is about 300 pages shorter than the book.

And because many of my students love TED Talks . . .

Milk, Chris. "How virtual reality can create the ultimate empathy machine." TED.com.

https://www.ted.com/talks/chris_milk_how_virtual_reality_can_create_the_ultimate_empathy_machine?language=en (accessed May 24, 2019).

An argument for how modern VR technology will help solve global problems by enabling people who would otherwise feel disconnected from the suffering of others to “virtually” engage with these people and thereby care more about what happens to them . . . unless the viewers think it is a new video game and simply try to shoot them.

“*The Pros and Cons of Digital Life*” (a TED Talk playlist). TED. Accessed March 15, 2019.

https://www.ted.com/playlists/26/our_digital_lives (accessed May 24, 2019).

Appendix on Implementing Common Core State Standards

Below is a list of objectives that are relevant to this unit, all culled directly from the Common Core. Write one of these on the board at the beginning of every class, and then, even if the class has gone off on a tangent wildly unrelated to the actual lesson (but ultimately more important to the lives of your students), any passing administrator will know that your sense of duty is in the right place even if your class is not.

Reading: Informational Texts – these standards correspond with the initial research students do into the costs and benefits of our relationships with technology.

CCSS.ELA-Literacy.RI.9-10.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

CCSS.ELA-Literacy.RI.9-10.2 Determine a central idea of a text and analyze its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

CCSS.ELA-Literacy.RI.9-10.6 Determine an author's point of view or purpose in a text and analyze how an author uses rhetoric to advance that point of view or purpose.

CCSS.ELA-Literacy.RI.9-10.8 Delineate and evaluate the argument and specific claims in a text, assessing whether the reasoning is valid and the evidence is relevant and sufficient; identify false statements and fallacious reasoning.

Reading: Literature – these standards correspond to the reading of *Fahrenheit 451* (or similar dystopian fiction) and analyzing what the author was suggesting about the future of mankind.

CCSS.ELA-Literacy.RL.9-10.1 Cite strong and thorough textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

CCSS.ELA-Literacy.RL.9-10.2 Determine a theme or central idea of a text and analyze in detail its development over the course of the text, including how it emerges and is shaped and refined by specific details; provide an objective summary of the text.

CCSS.ELA-Literacy.RL.9-10.3 Analyze how complex characters develop over the course of a text, interact with other characters, and advance the plot or develop the theme.

Writing – these standards correspond with the effort to inform middle school students about the benefits and dangers of social technology as well as the creative pieces the students will be writing about their predictions for the future.

CCSS.ELA-Literacy.W.9-10.1 Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.

CCSS.ELA-Literacy.W.9-10.2 Write informative/explanatory texts to examine and convey complex ideas, concepts, and information clearly and accurately.

CCSS.ELA-Literacy.W.9-10.3 Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.

CCSS.ELA-Literacy.W.9-10.8 Gather relevant information from multiple authoritative print and digital sources; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

Speaking & Listening – these standards will be addressed whenever we have class discussions about what we are learning.

CCSS.ELA-Literacy.SL.9-10.1 Initiate and participate effectively in a range of collaborative discussions, building on others' ideas and expressing their own clearly and persuasively.

CCSS.ELA-Literacy.SL.9-10.4 Present information, findings, and supporting evidence clearly, concisely, and logically.

Notes

- (1) Chabris, Christopher, and Daniel Simons. *The Invisible Gorilla*. New York, NY: Crown Publishers, May 18, 2010.
- (2) Becker, Rachel. "The Problem with Studies Saying Phones Are Bad for You." *The Verge*, December 5, 2018. <https://www.theverge.com/2018/12/5/18126154/screen-time-smartphones-bad-health-risk-science-study-wrong-depression-anxiety>.
- (3) Connecticut State Department of Education. "School Profile and Performance Report for School Year 2017-18: Cooperative High School - Inter-district Magnet, New Haven School District." EdSight. (accessed June 27, 2019) http://edsight.ct.gov/Output/School/HighSchool/0936411_201718.pdf.
- (4) Brooks, David. "How Artificial Intelligence Can Save Your Life." *The New York Times*, June 24, 2019. https://www.nytimes.com/2019/06/24/opinion/artificial-intelligence-depression.html?em_pos=large&ref=headline&te=1&nl=sunday-best&emc=edit_owr_20190630?campaign_id=94&instance_id=10588&segment_id=14800&user_id=15abe43389d3c27b16ea586e3491fc67®i_id=88881976dit_owr_20190630.
- (5) Khine, Myint Swe, and Shaljan Areepattamannil, eds. *Non-cognitive Skills and Factors in Educational Attainment*. Boston, MA: Sense Publishers, February 18, 2019.
- (6) Richmond, Aaron S., and Jordan D. Troisi. "Technology in the Classroom: What the Research Tells Us." *Inside Higher Ed*, December 12, 2018.
- (7) May, Kaitlyn, and Anastasia D. Elder. "Efficient, helpful, or distracting? A literature review of media multitasking in relation to academic performance." *International Journal of Educational Technology in Higher Education*, February 27, 2018. <https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-018-0096-z>.
- (8) Cassel, David. "The New York Times' Op-Eds from the Future." *The New Stack*, June 9, 2019. <https://thenewstack.io/the-new-york-times-op-eds-from-the-future/>.

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