

## Utopia on Trial: The Science of Society

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### Introduction

“You seek for knowledge and wisdom, as I once did; and I ardently hope that the gratification of your wishes may not be a serpent to sting you, as mine has been.”  
Mary Shelley, *Frankenstein*

The challenge of society inevitably involves the challenge of science and the impact of scientific discovery and application on man’s seemingly endless quest towards progress and “perfection.” This historically insatiable drive to apply newly-acquired scientific knowledge to the age-old pursuit of societal betterment manifests as a dominant theme in numerous literary volumes, two of which are examined extensively in the eighth grade curriculum. Eighth grade language arts students grapple with a unit based around “the Challenge of Society” dealing with utopian dreams, often driven by scientific discovery or enforced by scientific manipulation, which ultimately dissolve into dystopian worlds, wreaking subsequent havoc on citizens while simultaneously raising serious questions about science as the “savior” of humanity.

In the selections studied, science often becomes an embodiment of the transgressor archetype, creating characters trapped in a paradox of Promethean proportion. On the one hand, these individuals “transgress” their cultural and societal hegemony, driven by the seemingly noble desire to attain a utopia for themselves and their peers. However, this literal “nowhere” they seek demands the displacement of systems and thoughts (gods of a fashion) whose assault angers not only their worshipers, but the “gods,” or ideas, themselves, concomitantly producing a moral and ethical crisis; is the transgressor in pursuit of utopia, in these texts science in a variety of forms, greater than the god, or former system? Within the context of this unit, students will engage this archetypal dilemma and its subsequent impact on society by examining transgressors and the “gods” who oppose them in two primary texts, *The Giver* by Lois Lowry, an excerpt from *Frankenstein* by Mary Shelley, and a variety of non fiction scientific articles. At the same time, students will analyze the major scientific themes of each selection and their impact on mankind’s contravening drive to achieve societal utopias.

### Background

This lesson centers on strategies and curriculum designed for eighth grade language arts students in a high performing middle school in Charlotte, NC. The school is an honors

school of excellence, meeting both high growth and 27 out of 27 AYP standards. The school population consists of 1,054 students in sixth through eighth grade with a racial and socioeconomic diversification resulting in 72.2 percent Caucasian, 13.8 percent African-American, 7.6 percent Asian, 4.1 percent Hispanic, 2.1 percent multiracial, .3 percent Native American and 12.6 percent of students participating in the free and reduced lunch program. 7.3 percent of students have disabilities and 5.4 percent have limited English proficiency (LEP). The majority of the school population enjoys wealth, involved and well educated parents, and average to high intellectual abilities.

Driven by “rigor and relevance,” the goal of the administration and teachers remains to create an academic environment designed to challenge the most gifted students while simultaneously stretching and growing all students to reach new academic heights. A strategy employed to accomplish this goal is the heterogeneous grouping of all Language Arts classes. This grouping creates a classroom of multiple ability levels and challenges the instructor to differentiate education in order to facilitate the needs of lower-level students without introducing frustration, while simultaneously driving high level students to greater academic and intellectual engagement. The instruction exists within the premise of teaching all whole group lessons to the highest level of student and then addressing the needs of lower level students through small groups and on an individual basis as need arises. Intellectually stimulating, challenging, and rigorous instruction aligned to the NC standard course of study, and designed to teach students curriculum as well as application, guides the instructional focus of this school. This curriculum unit’s design applies these principles to create a unit of study both challenging and accessible as students engage with an interdisciplinary exploration of “the science of society” as revealed through literary analysis.

## Overview

This unit occurs within the context of a larger thematic unit entitled “The Challenge of Society” and incorporates two texts, *The Giver* and *Frankenstein*, that are a part of the 8th-grade standard course of study. Modern science unfolds during the study of *The Giver*, a novel in which society maintains “utopia” through the euthanasia of the old and weak, emotional suppression of its citizens with drugs inoculating individuals against their copulative desires, and procreation only through the controlled fertilization of specially selected birth mothers. Amidst this scientifically sterilized community, an unlikely transgressor in the form of a twelve-year-old “Receiver of Memory” named Jonas, challenges the scientific suppression of pain at the expense of emotion or joy. This ethical dilemma presents a dramatic crisis of epic proportion as Jonas decides to defy science in favor of feeling and flee his community. Jonas’ internal crisis parallels a number of modern scientific questions with which students themselves will grapple. Expanding upon the questions asked by Jonas, students will study nonfiction articles on cloning, euthanasia, and genetic alteration of food. They will also watch a clip from the

movie *Gattaca* as they compare and contrast another transgressor suffering in the midst of a scientifically controlled community.

While reading *Frankenstein*, students study the science of industrialization that produced man-made monsters of mechanized industry, forever altering the function of the individual worker and leaving nations of scientific transgressors like Dr. Frankenstein pushing the limits of the gods, resulting in unheard of creations symbolized so profoundly by Dr. Frankenstein's monster. In this section of the unit, students will examine the consequences of scientific discovery unleashed on a society unprepared to accept the subsequent alterations to accepted cultural norms. Students will revisit transgression by viewing a video clip of the monster's creation from the movie version of this novel and comparing and contrasting that clip to a video of the Miller-Urey experiment. Students will then analyze the impact of these "creations" on their respective societies and again examine the question of "transgression" versus discovery while applying analysis to modern scientific endeavors. These endeavors will be symbolized and analyzed as students view a modern adaptation of this story in the form of a clip from *The X-Files: Post Modern Prometheus* and continue to compare and contrast the various manifestations of the transgressor.

At this point, the drama of science emerges as students explore the scientific ideas and crises within these texts in more specific detail as the ultimate demonstration of this unit reveals that as pervasive and transcendent as literary themes and archetypes in literature are the ethical and societal ramifications of the conflict of scientific discovery. This realization manifests as students form "expert groups" and select a text and its scientific themes to research. Research driven by pro/con analysis and arguments from the perspectives of two or more characters with opposing viewpoints directs the learning process. Presentation of this research, and a review of the unit as a whole, occurs as student groups write a one act play about the characters studied and the scientific dilemma that has a role in the plot of their story. The "science" of each text stands trial as student audiences question "...how dangerous is the acquirement of [scientific] knowledge and how much happier [is] that man who believes his native town to be the world than he who aspires to become greater than his nature will allow?" (Mary Shelley, *Frankenstein*)

## Objectives

Today's society inundates students with scientific products, theories, and applications intended for the "betterment" of humanity. However, inherent within every discovery a moral and ethical dilemma waits paradoxically, begging the question "what is the price for the progress on a platter that is being served on this century?" This, ironically, is not a dilemma exclusive to modern society. Literature chronicles a history of similar struggles dating back as far as Greek mythology and the rise of the transgressor archetype in the

form of Prometheus, an ancient symbol of today's scientist, introducing his discovery, fire, in the form of an experiment, man's manipulation of fire. The catastrophic results chained Prometheus to his infamous rock and angered the gods, leaving man to stumble over the implications of this new found power. This same story, transgressor versus "gods" versus society, appears again and again in culture after culture in form after form. While the character, the discoveries and the "gods" change, the underlying conflict remains constant: what are the moral and ethical repercussions of scientific discovery on society; what is the responsibility of mankind to protect its citizens from scientific transgressors; can science create a better society; is science the key to utopia?

These fundamental questions direct students through an exploration of ancient archetypes, as literature provides a lens by which students examine the challenge of society to balance scientific discovery and morality, grapple with the price of "utopia" and achieve the curricular goal of recognizing the transcendence archetypes lead to literature and the ways in which they continually reappear in texts. As students recognize literary archetypes, particularly that of the transgressor, as recurrent and transcendent symbols, literature becomes a vehicle for interdisciplinary study by which the impact of science on society can be examined. The goal driving this analysis is student understanding of literary characters, conflict, and themes in two dimensions. First, students master characterization and plot within the context of an individual text, then, students apply this analysis outside an isolated environment to make connections to their own life and experiences by comparing and contrasting the literary characters and situations to real life scenarios and making predictions and connections between modern science and its implications in contemporary society.

## Strategies

Students will study fiction and non-fiction texts exploring moral and ethical questions raised by science's effects on society. Students will learn and apply strategies for analyzing fiction with careful focus on characterization, conflict, and theme. Students will discover methods of characterization used directly and indirectly by authors to create believable characters and how and why effective characterization is essential to utilizing characters as symbols. Students will learn and analyze the forms of conflict, both internal and external, manipulated by authors to produce effective literary plots. Students will learn text features and organizational strategies used by non-fiction writers and analyze the key features of informational text. Students will examine the idea of bias and its effect on the dissemination of information. Students will recognize thematic similarities between fiction and non-fiction text and compare and contrast the effectiveness of each form of writing and the impact of genre on an audience. Students will apply research skills to expand their study of science and literature and will learn and apply debate and drama skills to complete their student by writing a play in the form of a mock trial.

## Classroom Activities

This unit and the following activities take place during a nine week thematic based curriculum unit. Throughout the nine week unit students engage with texts of different genres all related to the theme of societal challenges. The following activities demonstrate the introduction of the unit and how teachers can extrapolate scientific themes from fiction texts and use these themes as a means to connect fiction and non-fiction articles and study. The section on controversial science illustrates this idea. In this section I have stopped my students during key points in their reading and taken one to two class periods to examine the scientific and moral dilemmas the text of *The Giver* or *Frankenstein* has raised. It is at this point that students break into groups and read a variety of non-fiction articles based on these ideas and complete the reading analysis activities designed to facilitate making connections between the novels and modern scientific issues.

### Defining the Challenges of Society (Day One)

Students begin their studies with the introduction of the thematic unit, “The Challenge of Society”. This introduction begins by defining the idea of challenge and society. A teacher led discussion of the questions: “what is a challenge,” and “what is society” culminates in the definition of both terms. When the terms are defined and understood by students, the teacher then guides students in generating a list of all the challenges students believe modern society faces. The teacher lists these challenges on chart paper as students brainstorm and discuss issues in a whole class environment. Once students finish compiling a list of societal challenges, the teacher presents them with a challenge. Students are instructed to pretend that they have been given complete control over the entire world (a privilege they all too eagerly accept) and have the ability to legislate any actions they deem appropriate to solve the problems before them. Students are encouraged to be creative and implement strategies to rectify the plight of the world.

Following their brainstorming, students share their ideas with a group of two to three other students. These students symbolize society as a whole. The students presenting their solution are required to obtain the approval of all group members before a solution is considered viable. What follows is a series of very heated debates between the leader and their society with few to no ideas gaining approval. What begins with enthusiasm ends in frustration as students realize that solving one problem often creates a series of others and satisfying all members of a society is a very difficult task, sometimes even raising their hands and deeming the assignment impossible.

In order for student to process what they learned in this activity, it is helpful to follow it with a short writing assignment or journal entry where they answer the following

questions: what did I learn about my society's challenges; what did I learn and discover when I, or my group members, tried to solve these challenges; is it possible to overcome all of society's challenges? A whole class discussion of these journal entries then follows.

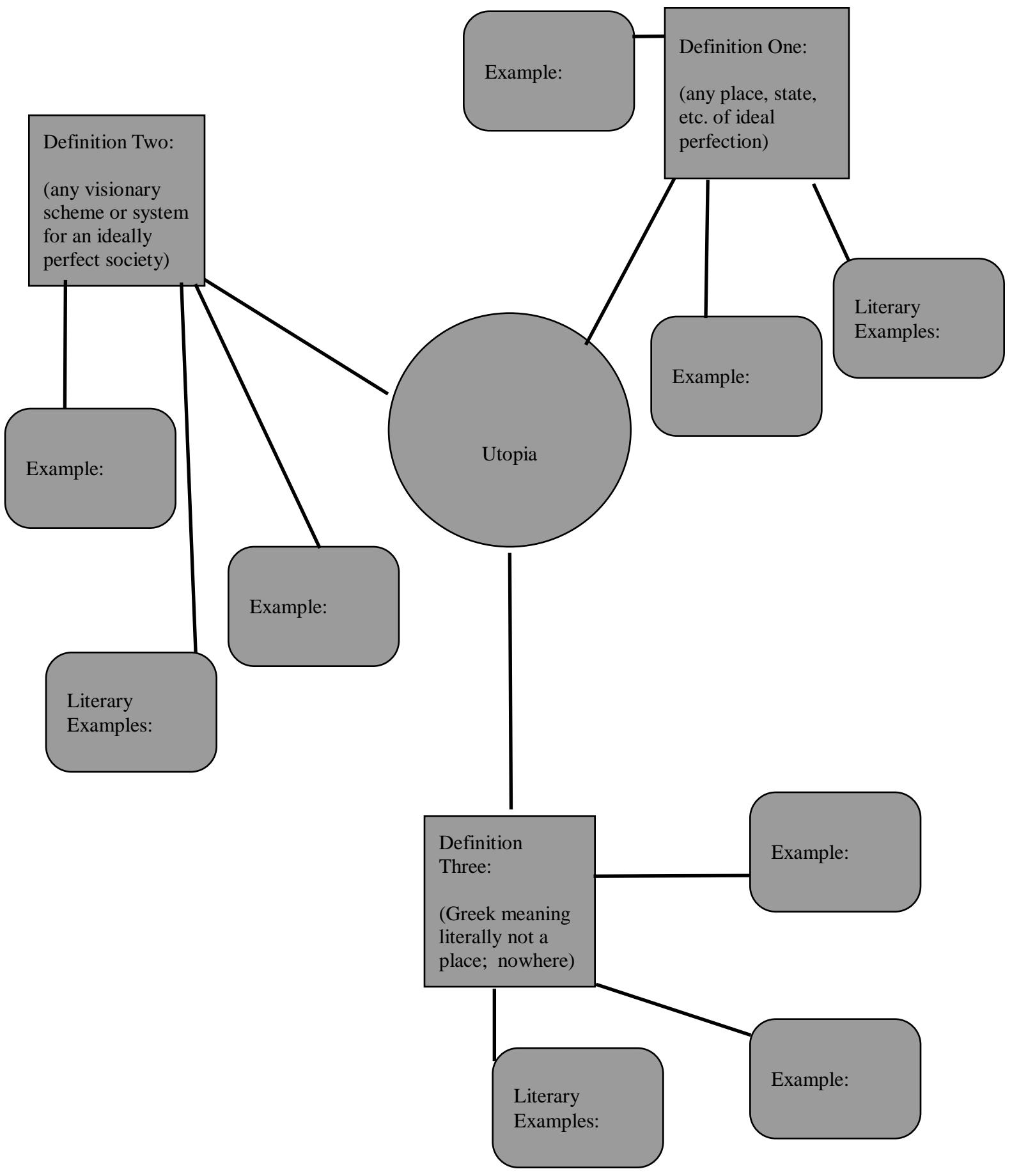
### Utopia (Day Two)

In the midst of the frustration of yesterday's assignment, a true understanding of the challenges humanity faces in maintaining a functional and effective society develops. Students realize the difficulties leaders face in their efforts to be good stewards of mankind and the earth. It is with this insight that students begin the next activity, a study of utopia. This introduction to utopia is important as most transgressors are driven by a desire to improve their lives or the lives of those around them. Students are introduced to "utopia" through the creation of a graphic organizer definition map (see sample map below). They place the word "utopia" within a circle at the center of their page and are given only one of three of its definitions, any place, state, etc. of ideal perfection; any visionary scheme or system for an ideally perfect society; Greek meaning literally not a place- nowhere, at a time. They must then try to generate examples that fit each of the three definitions to fill in on their maps. (Students keep examples from literature blank as they are informed these will be filled in over the course of the unit.)

Students are given only one definition at a time after which they fill in their chart and discuss answers with a partner or group. The discussion piece helps students realize an important point about "utopia;" it is relative to the individual. This helps establish the conflict inherent within the attempted creation of these societies and provides a foundation upon which to begin an informed reading of *The Giver*, a novel illustrating the difficulty in creating and maintaining a society everyone views as perfect. Definition one and two should easily generate a variety of student answers, however, definition three, the etymological meaning of the word, should cause confusion. It is the generation of this confusion that should lead students to a true understanding of the concept of utopia and its meaning in literature.

### Utopia Definition Map

The chart (Figure 1) on the next page is the definition map used with this activity. Teachers may delete the definitions inserted here and use this to teach the Utopia activity described above.



### Sir Thomas More's Utopia (Day Three)

After analyzing a very different literal interpretation of “utopia’s” definition from the Greek and its modern meanings, the teacher introduces students to Sir Thomas More and his Utopia. Students will use an excerpt from this text to accomplish several objectives. First of all, students will read an excerpt and identify the challenges of society being addressed by More. They will compare and contrast these challenges to the challenges being faced in their society (generated and placed on chart paper on day one of the unit). Any section of More’s work can be used for this activity; it just needs to be a section of the text that clearly addresses societal challenges faced then and now. I try to use sections that address challenges that will also be discussed in *The Giver* and have a scientific connection. The way students engage this text is through a text marking process. I copy the selection from Utopia and while reading, students are required to highlight the societal challenges More is discussing in the text and then list them and their modern counterpart in chart form beneath the excerpt. (Figure 2)

<b>Challenge in “Utopia”</b>	<b>Modern Challenge</b>

After reading and discussing the excerpt from Utopia, students are reminded that the word means “nowhere” in Greek. Analyzing More’s historical background and political opinions, students identify author’s purpose and see that the title of this book is meant as a form of irony. They are then able to recognize the satirical impact of the literary text they just engaged and identify that More wanted to criticize ineffectual attempts to perfect society. Students will return to More’s purpose in writing and the effects of this piece following their reading of *The Giver*. At that point they will identify the ways in which More criticized challenges in his society and compare and contrast them to the ways in which Lowry commented on more modern, and specifically scientifically controversial, issues in her novel.



## The Giver (two to three week study)

After this introduction to key thematic concepts, students begin to study a primary text for this unit, *The Giver*, by Lois Lowry. Background on this novel allows students to realize that the basis of the plot is a society that wanted to eliminate all problems and create a utopian world. Much in the same fashion as their attempt at solving the world's problems, a group of elders met and devised a plan to create a "perfect world." Unlike the classroom experiment, these elders implemented their plan and created the world in which *The Giver* is set. As students read, they are asked to determine what sacrifices the society made in order to achieve perfection. Students are also asked to identify how and why science is used to maintain "utopia." They will also be asked to determine whether or not the protagonist, Jonas, is a transgressor or a hero, or both, in his attempt to undermine the elders' utopian vision and betray his world as a dystopia dictated by transgressors in the form of the elders.

## Controversial Science

At several different points during the reading of this novel the teacher takes one to two class periods and creates expert groups of students who will read non-fiction articles about modern science that directly relate to themes in their reading of *The Giver*. When students are almost halfway through the novel they begin to discover that science has been manipulated in some very controversial ways and the utopia might, in fact, be a dystopia. When the protagonist, Jonas, discovers euthanasia is being employed to eliminate sick and aged members of society, and pills are being taken by the entire population to prevent sexual impulses and activity, the first of a key strategy for this unit is employed, the extrapolation of a scientific theory from its fictional setting, and the analysis of this concept by small groups and non-fiction study.

When this section of the book is reached, students will take a break from their study of fiction and examine the science being used by Jonas' society. They will examine this science in connection not only to the novel they are studying, but, also in conjunction with the moral and ethical questions it raises in today's world. The students in each group engage with informational text and non-fiction articles about each relevant scientific topic. As students rotate from station to station, they are exposed to the pros and cons of each issue and analyze the science of Jonas' society by answering questions based on the informational text they read or viewed, debating with group members, participating in small group and class discussion, and completing a larger activity (expert group presentations) designed to connect the scientific and informational text to their novel

study. There will be connection questions at each station linking these texts to the books as well as questions challenging students to decide their personal opinion on this issue.

Every child will engage with at least three of these texts as the groups rotate, however, they will become an “expert group” on one text. Each expert group will answer questions and present their information to the class as a whole. Following the presentation of each “expert group” the class will discuss the science behind Lois Lowry’s text, making connections between the use of science as a means to create and facilitate a utopian society, and the role of certain characters as transgressors as they manipulate this science.

Different follow up activities can be applied after each group study. Students might select a point of view on one of the topics and write an essay defending or challenging the use of this science within the novel to create a “utopia,” write an editorial defending or opposing government legislation on scientific application, write a letter to the chief elders in Jonas’ society about the implications of the utopia they have created, pretend they are a chief elder and write a defense of the scientific methods used to govern and control society. The goal behind any and all of the assignments following the rotation is to encourage students to think critically about the moral and ethical dilemmas scientific discovery and manipulation can create and to make connections between the conflicts faced by the characters within *The Giver* and the conflicts faced by key “characters” in modern society.

#### Sterilization: Group Activity One (two class periods)

In chapter 16 of *The Giver* Jonas challenges another method his community has employed to maintain utopia; he stops taking the daily pill all citizens take for their “stirrings,” or sexual desires. The first of the controversial group studies will occur after students read these chapters. Expert groups will be formed and each expert group will read one of the following articles. These groups can be differentiated by ability levels based on the difficulty level of the nonfiction texts. The first three groups will study articles and images from the Image Archive on the American Eugenics website. This website offers a vast array of images as well as primary and secondary source documents about the history of eugenics and forced sterilization in the United States. The first expert group will examine two sections, “Social Origins” and “Scientific Origins” of American eugenics. The next group will examine the sections “Research Methods” and “Traits Studied” as the third group studies “Marriage Laws” and “Eugenics Popularization.” In order to fully appreciate all of the resources this website offers, it is best to set these research groups up around lab top computers in the classroom or spend the class period in a computer lab or library where student groups can access the computers and interact with the format of this website. The other two groups will be engaging with print articles. The first studying the specifics of the Buck Versus Bell Supreme Court case upholding mandatory sterilization of the mentally retarded, the second examining an article entitled

“Forced Sterilization in America and Canada” by Lilith Mill. (To access these articles please reference the teacher bibliography page.)

While each expert group is engaging with their texts they will also be filling out the chart below (Figure 3) comparing and contrasting the article they are reading with *The Giver*. Following each group’s analysis, group members prepare presentations of their article and its connection to the novel. They will also make a visual on chart paper summarizing the key points of the article and including a type of Venn diagram connecting the two texts. The final activity students complete in this lesson is a homework assignment during which they select a real life character from the nonfiction articles they studied and write a letter to Jonas in the voice and from the perspective of that character advising Jonas about the consequences of forced sterilization on an individual and a society.

	<b>Nonfiction Article (Student Inserts Title)</b>	<b>The Giver chapter 16</b>
Occasion for Writing:		
Author’s Purpose:		
Tone:		
Characters involved:		
Attitude of speaker/protagonist		
Subject and Main Ideas		
Theme		

**Euthanasia: Group Activity Two (two class periods)**

In chapters 19 and 20 of *The Giver*, Jonas learns the truth about “release,” the community’s euphemism for euthanasia. This fictional discovery sets the stage for student groups to analyze the modern controversy over euthanasia. Groups will be designed to show both perspectives on this practice and to challenge students to critically analyze and examine this issue in the same way Jonas was forced to in *The Giver*. Students will engage with pro and con articles on euthanasia practices. (To access these articles please reference the teacher bibliography page.) At station one students will select and read an article from ProCon.org about the arguments used by citizens in favor

of euthanasia; at station two select and read an article from the same website on the cons of this practice; station three will provide students with the transcript of Dr. Kevorkian’s speech at Kutztown University during which he avers that “assisted suicide was my duty,” station four students will read a New York Times editorial titled “Dr. Kevorkian’s Wrong Way,” and station five will read “Euthanasia: Death with Dignity or License to Kill?” Accompanying each article will be a set of questions to be answered and discussed by group members and the same brief analysis worksheet used in the “Sterilization” activity by which students create a kind of double entry journal (Figure 4) designed to make them connect the nonfiction articles to their novel studies.

	<b>Nonfiction Article (student inserts title)</b>	<b>The Giver Chapters 19-20</b>
Occasion for Writing:		
Author’s Purpose:		
Tone:		
Characters involved:		
Attitude of speaker/protagonist		
Subject and Main Ideas		
Theme		

As a follow up activity to these expert groups students participate in a classroom debate. Students, depending on the article studied in their expert group, are assigned as homework the task of preparing a defense for or against euthanasia. This is a double debate as students spend the first half of class debating this issue within the context of modern society (30 minutes) and the second half of class debating its use within the novel (30 minutes). Whatever side of the debate a student was assigned must be argued for both scenarios. Following the debate, the use of this practice in a fictional setting versus real life is analyzed and discussed in a whole class “debriefing” (30 minutes).

#### Genetic Engineering (two to three class periods)

In Jonas’ society, procreation occurs through the controlled fertilization of birth mothers. This ensures population control and helps the elders produce productive and viable citizens. These practices are similar to the controversy of genetic engineering and

“designer babies” becoming more and more prevalent in today’s society. Students will again compare and contrast this practice in the novel with modern society. The study will begin as students view a clip from *Gattaca*, comparing Vincent Freeman, a natural born or “In-Valid” citizen of the future, and his views on genetic engineering and its effects on society, with Jonas and his new found understanding of natural birth and families. Following a class discussion on how and why Vincent becomes an ironic transgressor, pushing the limits of human knowledge through regression away from science instead of towards it (a direct foreshadowing of the decision Jonas will make at the end of the novel), they will again do group based non-fiction and fiction readings on this controversial scientific topic, however, during this rotation there will only be three nonfiction articles and instead of having expert groups present the information to the whole class, small groups will rotate through every station and read and analyze every article.

Station one will have a non-fiction scientific article on human genetic engineering entitled “Designer Genes: Will DNA Technology Let Parents Design their Kids?” Station two will engage with the article “High Hopes” about a government approved growth medicine for healthy kids who are short and hope to grow taller to fit into society. The third station will explore the ramifications cracking the human genome code would have on genetic engineering and child birth by reading “Cracking the Code.” (To access these articles please reference the teacher bibliography page.) While rotating from station to station students will answer questions about each article or selection, complete the analysis chart explained in the “Sterilization” and “Euthanasia” sections, and discuss the pros and cons of genetic engineering with group members.

The summation of this mini science study will be to return to a fictional text, *Shadow Puppets* by Orson Scott Card, and assign as homework the reading of chapter 7, “The Human Race” where the protagonist, Bean, discusses the price of his genetically enhanced intelligence- a premature death- with the scientist responsible for his genetic alterations. This text not only applies to *The Giver* as a means for students to identify possible dangers of genetic engineering, but will be revisited during the study of *Frankenstein* when Anton, the scientist who “created” Bean is compared with Dr. Frankenstein and the creation of his monster. Students will make a list of the pros and cons of Bean’s genetic alterations and then make a list of the pros and cons of Jonas’ utopian society and then respond to the following prompt: Bean is supposed to be a “perfect human being” in the same way Jonas’ community is supposed to be a “perfect world,” however, neither Bean nor Jonas’ community reached this state of “perfection” without sacrifices. What sacrifices did Bean and the citizens of Jonas’ society have to make in order to experience “perfection”? Are these sacrifices worth what was gained? What, exactly, has been gained? If you had to live Bean or Jonas’ life which would you live? Explain why. Do you think either of these individuals has truly experienced any type of utopia? Do you think the “designer babies” of today will be perfect? Address these questions in essay format and be sure to include a thesis statement and examples

from *The Giver*, *Shadow Puppets*, and one of the non-fiction articles you read during class.

Frankenstein (two to three week study)

Transgression: (*one to two class periods*)

Following the completion of *The Giver* students will engage with excerpts of text from the novel *Frankenstein* by Mary Shelley, focusing specifically on the role of the transgressor in literature and the influence of science on archetypal transgressors. To begin this study, students will engage with a review and mini-lesson on the transgressor archetype. Students will be shown a brief video clip from the 1931 film *Frankenstein*. Students will watch as Dr. Frankenstein brings his monster to life for the first time. Students will then be shown a video of the Miller and Urey experiment, showing that under conditions that simulated the early earth, amino acids and other biologically relevant molecules could be synthesized from inorganic starting materials in the laboratory. Students will generate Venn diagrams comparing and contrasting these two scenes and the roles of the “transgressors” in each scene.

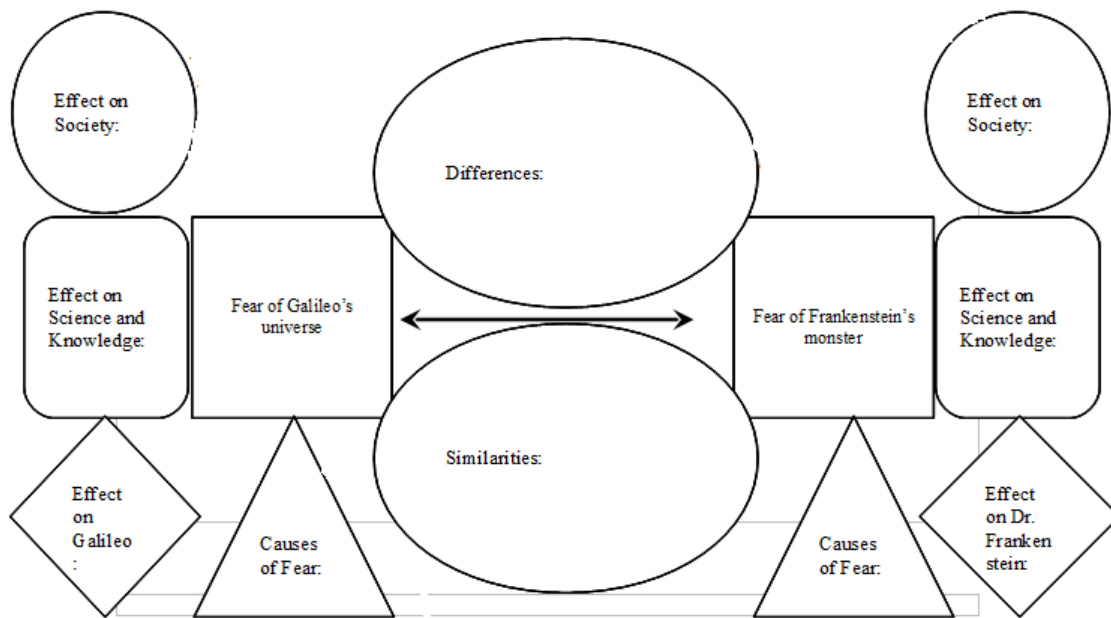
Following a discussion of these clips and diagrams, students will read the story of Prometheus, often described as the original transgressor, and identify how and why Frankenstein’s monster and the amino acids in the video experiment are both types of “fire stolen from the gods.” They will also discuss the ramifications of transgression as they identify what “rocks” Dr. Frankenstein and Miller and Urey found themselves chained to as a result of their defiance. In order to complete this analysis, a mini lesson on symbolism will be taught following which students will be given the chart below (Figure 5) to complete based on the three texts studied in this lesson. The teacher will lead a whole class discussion of these three texts based around students’ completed charts, focusing on the role of the transgressor in each text, paying particular attention to the impact of “transgression” on both the transgressor and the society of which they are a part.

Origin of Life Debate (one to two class periods)

These clips and the assigned readings in *Frankenstein* set the stage for another series of discussions on controversial scientific topics, the first being the origins of life. In these activities, students will examine the moral and ethical dilemmas that abound when science challenges societal norms. Students will first read and examine an excerpt from *Inherit the Wind* (Act II, scene II) and analyze the effects Darwin’s theories had on individuals within this community while comparing those effects to the havoc reeked by

the monster in Frankenstein. They will then read scene five and scene seven of Galileo by Bertolt Brecht and compare and contrast the fear the monks and cardinals had over a “Godless” sun-centered universe and the fear citizens in Frankenstein experienced when they encountered a “Godlessly” created monster using the cause and effect chart below (Figure 6).

Cause and Effect Chart:  
Frankenstein and Galileo



### Cloning (one to two class periods)

Students will also participate in another series of group activities based around the pros and cons of cloning. They will read a series of articles about cloning and ultimately compare it to the action of Dr. Frankenstein and his creation. They will explore the question of whether the greater transgression is to “steal” the ability to create life, or fail to facilitate and sustain life properly once it is created. Group one will read the magazine article “Repeat After Me” about the race to make the world’s first human clone; group two will explore “The Clash Over Cloning” and examine the current pro and con views on this science; group three studies two sides of the issue as well by reading an article from the Springboard textbook titled “President Bush Leads Push to Outlaw Clone Research”; the final group looks not at the issue of cloning, but the perspective of the

cloned by watching a clip from an X-Files episode about a cloned human and his suffering titled "The Post-Modern Prometheus." (To access these articles please reference the teacher bibliography page.)

### **Unit Summary and Final Project**

After students have read both *The Giver* and *Frankenstein* and completed the classroom activities, they will finish their unit study on the challenges of society by completing a final project focusing on one of the scientific issues studied during the course of the unit. In groups, students will select a controversial scientific issue studied during the course of the unit. As a group, students will research the topic and write and prepare a short play during which science is put on trial. The students will have a defense and prosecuting attorneys "trying" the case of science as it has been manipulated within the primary texts studied. Students may focus on either the text of *The Giver* or *Frankenstein*. Students will personify science and accuse him or her of a "crime" within the context of the novel they are focusing on. In order to "try" science, the play they write and perform must show both sides of the controversial scientific issue through the arguments of the two attorneys. Characters from the novel from both sides of the argument must appear as witnesses and the group must share their final opinion as they end their play with the judgment and sentencing of science.

### Resources

#### Bibliography for Teachers

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## Appendix

This unit addresses the following North Carolina eighth grade language arts standards:

1.02 Analyze expressive materials that are read, heard, and/or viewed by:

monitoring comprehension for understanding of what is read, heard and/or viewed.

reviewing the characteristics of expressive works.

determining the importance of literary effects on the reader/viewer/listener.

making connections between works, self and related topics

drawing inferences.

taking an active role in and/or leading formal/informal book/media talks.

1.03 Interact in group activities and/or seminars in which the student:

shares personal reactions to questions raised.

gives reasons and cites examples from text in support of expressed opinions.

clarifies, illustrates, or expands on a response when asked to do so, and asks classmates for similar expansion.

2.01 Analyze and evaluate informational materials that are read, heard, and/or viewed by:

monitoring comprehension for understanding of what is read, heard and/or viewed.

recognizing the characteristics of informational materials.

summarizing information.

determining the importance and accuracy of information.

making connections to related topics/information.

drawing inferences and/or conclusions.

generating questions.

extending ideas.

3.01 Explore and evaluate argumentative works that are read, heard and/or viewed by:

monitoring comprehension for understanding of what is read, heard and/or viewed.

analyzing the work by identifying the arguments and positions stated or implied and the evidence used to support them.

identifying the social context of the argument.

recognizing the effects of bias, emotional factors, and/or semantic slanting.

comparing the argument and counter-argument presented.

identifying/evaluating the effectiveness of tone, style, and use of language.

evaluating the author's purpose and stance.

making connections between works, self and related topics.

responding to public documents.

4.01 Analyze the purpose of the author or creator and the impact of that purpose by:

monitoring comprehension for understanding of what is read, heard, and/or viewed.

evaluating any bias, apparent or hidden messages, emotional factors, and/or propaganda.  
evaluating the underlying assumptions of the author/creator.

evaluating the effects of author's craft on the reader/viewer/listener.

4.03 Use the stance of a critic to:

consider alternative points of view or reasons.

remain fair-minded and open to other interpretations.

constructing a critical response/review of a work/topic.

5.01 Increase fluency, comprehension, and insight through a meaningful and comprehensive literacy program by:

using effective reading strategies to match type of text.

reading literature and other materials selected by the teacher.

leading small group discussions.

taking an active role in whole class seminars.

analyzing the effects of elements such as plot, theme, characterization, style, mood, and tone.

discussing the effects of such literary devices as figurative language, dialogue, flashback, allusion, irony, and symbolism.

analyzing and evaluating themes and central ideas in literature and other texts in relation to personal and societal issues.

extending understanding by creating products for different purposes, different audiences, and within various contexts.

analyzing and evaluating the relationships between and among characters, ideas, concepts, and/or experiences.

5.02 Study the characteristics of literary genres (fiction, nonfiction, drama, and poetry through:

reading a variety of literature and other text (e.g., young adult novels, short stories, biographies, plays, free verse, narrative poems).

evaluating what impact genre-specific characteristics have on the meaning of the text.

evaluating how the author's choice and use of a genre shapes the meaning of the literary work.

evaluating what impact literary elements have on the meaning of the text.

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