

Technology and You: Science Fiction and the Culmination of Technology

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Objectives:

- (1) To introduce students to the Genre of Science Fiction in literature and film
- (2) To encourage students to be reflective about their dependence on technology.
- (3) To become familiar with sub-genres within the Science Fiction genre.
- (4) To appreciate film as a legitimate fiction experience.

Purpose:

Technology has become an increasingly important influence in the lives of our students. As computers speed up and slim down they become more financially accessible, more versatile, more often encountered in everyday life. As technology plays a more important role in the lives of every individual we should continue to look at it with a critical eye. Our students need to learn to ask why and question the existence of this technology.

On a very basic level, I want my students to ask the question “How does Technology serve me?” It is very easy to take the current state of affairs for granted. It is simple to look at the things a person does everyday and imagine that they have always been done that way and that there is no compelling reason to change. This is simply not the case with technological advances. Over the past 20 years technology has become so integrated into our society that it is difficult to imagine life before its presence. On a very basic level the presence of the computer in the classroom has gone from a distraction to an absolute necessity. A student taking my 8th grade English class in 2002 might wonder how an 8th grader ever made it through English in 1982 without the use of a computer— but it happened.

In every aspect of their lives, students of today will encounter some sort of technologically assisted work. There are very few parts of society that have remained isolated from this progress. All this technology was created to make our lives simpler when in actuality it seems to have become more complicated. Rather than slowing down the workweek is increasing, the workload is increasing, and it is questionable whether the average worker has more manageable day.

All technology comes with a cost. — That is what I would like my students to see: Technology created to make our lives easier has simplified some tasks while creating other problems of its own.

I. Pre-unit warm-up activities.

A. Small group discussion #1 “Technology every day” [30 minutes total class time]

1. Students will individually create a list of all the technology in their life they see as necessary. In 2 minutes, each student will pair up with another student and compare lists to compare similarities and differences. After 3 minutes as a pair, each pair will find another pair and create one list of technological innovations that the students share.
2. Each group will read their list of necessities to the class and we will create a list on the board that represents the class. Once we have identified the technological advances, they will have 2

minutes in their groups to come up with the device or method that the recent technology has replaced. For example, email, which is now commonplace, has largely replaced the practice of letter writing. Groups will share their answers and ideas with the class.

3. Each group will choose what they consider to be the five most important technological advances that are listed on the board and then imagine what will replace them. After 5 minutes groups will again share their ideas with the class.
4. Drawing from the class experience in a whole class discussion, the objective will be to show that progress is not something that has happened but something that 'is' happening and will continue.

B. Whole class discussion #2 "Next step in Transportation" [10-20 minutes total class time]

1. This dilemma will be presented to the students at the beginning of class: "In my pocket are the blueprints for a transportation device that will revolutionize the way we think about travel. It will cut travel times by over 90%. A journey that used to take 10 hours will now take 1 hour. I can get to the other side of the country in one day when it used to take over a week. There is a draw back, however... This system is not entirely safe. There will be a .1% fatality rate as it is used." In your journals, respond to the following questions:

** Do you want this device to be used by humanity? Why or Why not? ** Is the fatality rate acceptable? ** Would you and your family use it?

2. After asking a few students to share their responses and then moderating a brief discussion, reveal that the invention is in fact the automobile. Discuss the number of accidents per day, per week per year and then ask students to continue their entry by responding to this question: ** What will the next big technological advance be in transportation?

C. Individual brainstorm: "2102 predictions" [10-20 minutes total class time]

1. Students will have 10 minutes to brainstorm and create a list of as many predictions as they can think of for the year 2102 (or any year in the distant future.)
2. Students will gather in groups of 3-4 and will share these lists with their small groups.
3. In a large group setting, we will discuss and share any interesting prediction.

D. Group creative thinking assignment: "Intergalactic object identification" [40-50 minutes total class time] ** Prior to the instructions, the teacher will gather groups of unusual objects on eight different tables.

1. The instructor will explain to the class that they are a crack team of 'Celestial Archaeologists' who have been brought in to help identify some examples of technology from distant planets. Students should gather into 8 groups of 3 to 4 students each depending on numbers in the class. They will appoint a recorder and a timer to help keep the group focused and on task.

2. Each group will pick a table and answer a few questions about the objects on that table:
 - A. What is the name of this object?
 - B. What is the purpose of this object in a futuristic/technological perspective?
 - C. What are the potential benefits and draw backs of this object?

The groups will record all their answers in complete sentences on a provided sheet of paper. After 4-5 minutes, the teacher will announce that it is time to rotate and all groups will rotate clockwise to a different table and repeat the process.

3. After each group has visited 3 tables we will stop and share a few examples with the class.

II. Primer

[2-3 class periods (80-120 minutes)]

Short Story assignment: “The Veldt”

Purpose: Ray Bradbury’s short story “The Veldt” tackles the problem of too much technology in a family and its effect on the social structure of a family. The Hadley’s have a state of the art house, which provides for every physical need and even all their creature comforts. One component of this technology is the nursery- a room which provides a multi-sensory experience of any story or image that the children wish. Eventually, the parents realize that this house has taken over all the aspects of parenting leaving them as spectators within a technological parenting system. By the end, the children decide to take more drastic measures to insure that they won’t be deprived of their technological toys.

1. Pre-discussion: “Do parents matter?” By posing this question at the beginning of class, we can have a short conversation about what it means to be a parent. Can all the aspects of a parent be replaced by technology? Which jobs that a parent does must be done by a human being?
2. Read the story aloud. It’s short and reads well. The students really enjoy hearing it unfold.
3. Post-reading: The instructor will show students an example of a “Story sheet.” This is a piece of paper with boxes on either side that prompt students to complete questions about the characters, conflict, plot, setting, theme and a section to comment on the benefits and drawbacks of technology as presented within the story.

III. Films:

[With a flexible schedule, these films could be watched in 2 days each.]

Purpose: Film is a legitimate fiction experience. It hasn’t always been accepted as so, but I believe it to be true. Attitudes like this are a more recent development in the classroom and something that has taken a bit of work for me personally to get over. With the reasonable cost and availability of films currently they have become another option for the classroom never before available.

Film incorporates many of the same literary devices that accompany novels and short stories. Character examination, plot and climax work, theme, foreshadowing, and imagery are some of the elements that can be used within a film. In fact, reluctant students who might otherwise balk at the thought of a novel can step more easily into the comfortable medium of a film to help them understand these very basic elements that are so important to an author’s ability to tell their story.

I have chosen four films for the unit: *Star Wars*, *Contact*, *Sphere*, and *Gattaca*.

- They are all rated PG or PG-13 to accommodate any high school curriculum and fit well into most middle school curriculums. There are many 'R' rated science fiction films which are perhaps even better representatives of the genre but are inappropriate for the school setting.
- These four films represent different sub-genres under the science fiction umbrella:

Star Wars is an Action Adventure/Western. *Contact* represents a 'first contact'/exploration theme. *Sphere* represents the more mysterious, suspense-thriller aspect of the genre. *Gattaca* shows a Utopia/Dystopia where human technology reaches troubling proportions.

- They are all relatively contemporary with the exception of *Star Wars*. My idea behind this was to generate a bit of extra interest in the unit if the students recognized the titles, they would be more open to working with them as we can still accomplish the same academic work with newer titles.

A. *Star Wars*, 1977, 20th Century Fox, Rated PG

This film is an absolutely essential component of any Science Fiction curriculum. George Lucas ushered in the modern era of science fiction films with his groundbreaking, 1977 film. It sparked a resurgence in popularity for the science fiction genre in general and introduced new arenas of special effects to filmmakers.

With Lucas' close ties to Campbell's *The Hero with a Thousand Faces*, the story grew out of something we can all relate to. This film was able to speak to us on a very basic level. Growing up with *Star Wars* as an icon honestly made other things in life fall into place. It provided the mythology for a generation who would navigate this technology boom we are still experiencing.

There are so many examples of technological devices within this film that we are left to look at the characters who use fewer devices to accentuate their own humanity. This is a theme we can bring out in discussions, that those characters who use less technology, or turn away from technology tend to be the heroes within the story.

B. *Contact*, 1997, Warner Brothers, 153 minutes, rated PG

The film *Contact* shows a contemporary society that has contact with some form of extra terrestrial life. They discover the plans for some device. This revelation starts a controversial inquiry as to whether they should actually build what the blueprint describes. This film starts where the student's experience is currently and moves from there into the next stage of exploration that we are likely to experience. First contact science fiction films show present day society and imagine the effects that extra-terrestrial contact might have on our existence. This is a great subgroup of the Science Fiction genre and there are many films that would fall into this category.

Technological devices within this film include the device that allows the main character to travel across the dimensions of space to an alien world where she interacts with the extra terrestrials she meets there.

C. *Sphere*, 1998, Warner Brothers, 134 minutes, rated PG-13

Sphere is the story of a group of scientists who discover alien technology at the bottom of the ocean floor. The ship or device that they encounter has strange effects on the crew. They soon realize that they are struggling for their very lives as the device spreads its influence across everybody on the ship and people react in their own ways to its power.

This film represents more of the “Thriller/Suspense” subgroup of Science Fiction films. A film like this might keep students more engaged and interested in the story. This subgroup also lends itself to some interesting discussions on camera/sound/editing techniques that work to enhance the suspenseful nature of the story.

Technological devices within this film include the alien technology. This is an option for students to use their creative side to imagine its capabilities and how they might interact with it.

D. *Gattaca*, 1997, Columbia TriStar pictures, 101 minutes, rated PG-13

Utopia is something that all societies strive for. The path into the perfect existence is certainly not clear or planned out. In *Gattaca* we see the future of genetic manipulation might pan out. As we become more adept at modulating genes, a moral and ethical debate comes to the forefront as to whether this technology should be directed at humans. The story within *Gattaca* revolves around a family’s decision to not genetically modify one of their sons and we follow his quest for a successful, rewarding career within this futuristic society.

This film represents the “Utopia/Dystopia” subgroup of the Science Fiction genre. This film is an excellent choice for bridging material with the Science classes within your school if you are able to work on team teaching. The science teacher on my team will teach a unit on genetics concurrently and we can share the viewing and processing of this film.

Technological examples within this film include the ability to effectively modify the human gene structure. Also, we are shown a society that can quickly do identification procedures based on DNA sequencing.

****Device Journal:** Students will keep a film journal while viewing these four movies. For each movie they will respond to the following questions:

1. Keep a list of the items which are technological advances. These would include any item which demonstrates an advance over our current capabilities. It could be an ‘enhanced’ item such as a car which runs quieter or more efficiently or a new development overall.
2. Beside each item, make a short description of its capabilities and who uses it.
3. Choose 2 items from each film that seem to be the most important and answer the following questions:

Do these items enhance any character’s ability to solve problems? Is this item a weapon, a tool, or other kind of device? Does it make life easier for society in general in the film? What are the potential drawbacks or side-effects of the technology? Did this item play a major role in the conflict of the film? Draw a sketch of the item. Would you like to own this item if it was possible? What special effects did the film’s producers use to make this device come alive?

**** Story Sheets:** Students will complete a story sheet for each film. This is a piece of paper with boxes on either side that prompt students to complete questions about the characters, conflict, plot, setting, theme and a section to comment on the benefits and drawbacks of technology as presented within the story.

**** Presentation/Poster:** At the end of the unit, each student will create either a 2 minute presentation or a poster to demonstrate their mastery of the concepts of technology and its place within film.

[Worksheet A: Side project dealing with cinematic elements]

STAR WARS The 1977 Science Fiction film phenomenon...

Film is a very complex art form. It is much more than just sounds and images projected onto a screen. A film takes years of planning, months of shooting and editing before it becomes the masterpiece you see at the theater. Filmmakers will use a multitude of effects to help tell the story. Every camera angle, every sound, every choice of lighting, color and illumination is done to enhance the story.

As you watch this movie, you will pay particular attention to the main characters. Each character represents some aspect of humanity that George Lucas wanted to talk about. Carefully watch the colors that seem to accompany these characters as well as the sound, lighting, and costuming choices he chose. Each of these elements was chosen to help the viewer understand who these characters are and what they represent in the story.

This is officially episode IV in a much larger story and it might be helpful to have a few definitions in order to better understand the story.

The Empire

This is the governing entity in the galaxy. They wish to rule the known galaxy by force and fear.

The Rebellion

This is a collection of creatures who have chosen to resist the empire and create a more democratic society based on freedom and respect.

The Force

This is an invisible thread of life that connects everything together. There is a dark side and light side of the force. Pay attention!

Jedi Knights

These were people who had mastered the use of the force. They are simple and good people.

Jawas

These little creatures with brown cloaks are traders who deal with androids "androids" and other forms of technology.

Droids

These are robots who serve a variety of functions. They are all endowed with artificial intelligence and act as characters in some respect.

Colors

Different colors mean different things. Sometimes purple means royalty, blue means purity... Watch for their clothes, the color of their houses, their space ships, their weapons, the colors that appear around them on the screen. (Remember the colors used in the old westerns: Good guy wears a white hat, bad guy wears a black hat....)

Sound

Producers will use lots of different sounds to accompany characters through a movie. Every sound is intended to enhance our understanding or gut feeling of a character. Listen for any musical effects, the sound track or the score that is played while this person is on screen. (Remember the noises that always accompanied Jaws just before an attack...)

Reliance on Technology

At the heart of the story of Star Wars is the struggle for humans to make technology work within our world without letting it take over our world. This idea is visited again and again in Science fiction films and stories. Star Wars will explore the fragile connection between Technological things and organic or human things.

Characters

Make notes to yourself about each of these characters. Who are they?

Princess Leia
C-3PO
R2-D2
Darth Vader
Luke Skywalker
Obi-Wan Kenobi (Old Ben)
Han Solo
Chewbacca
Stormtroopers

Assessment

The following items will determine each student's unit grade:

- 10% Class discussion participation
 - Small group interactions on the "Technology of the day discussion"
 - Small group interactions with student predictions for 2102
- 10% Group's written responses to the "Intergalactic Object Identification" assignment
- 10% STAR WARS worksheet A on sound/light effects
- 5% Individual Story sheets for "The Veldt"
- 10% Students will turn in their two best story sheets for the Film portion
- 25% Individual "Device journal" entries
- 35% Unit wrap-up Poster or Presentation.