

LESSON PLAN IDEAS

I. Research on Space Settlements (could be paired with a science unit about gravity, history on space exploration, or an art project)

First, have students, in groups, talk about the space settlements in AVALON (with textual evidence). Have them brainstorm and make a list of what environmental circumstances and human needs a space settlement might need to accommodate.

Then, have students explore NASA's Space Settlements website: <http://settlement.arc.nasa.gov>.

Students could do a number of different things with this website:

Fill in information on a worksheet answering questions designed around the Who? What? Where? How? Why? When? How Much? sections on the website.

Every year NASA Ames sponsors a space settlement design project for sixth to twelfth graders. Have each group look at a different winning proposal and complete a worksheet in which they 1) summarize the main idea of the project and 2) identify five challenges to living in space and how their proposal solved them. Each group presents these to the class. The class can vote on their favorite settlement.

In the 1970s, NASA Ames conducted three space settlement studies to imagine what human settlements in space might be like. Have students look at the artist illustrations from these studies: <http://settlement.arc.nasa.gov/70sArtHiRes/70sArt/art.html>. Students could illustrate their own visions for space settlements, as an art activity.

II. Research Project on Net Neutrality (current events or social sciences unit)

Research the topic with resources including: Vlog Brothers video, President's statement <http://www.npr.org/blogs/alltechconsidered/2014/02/06/272480919/when-it-comes-to-high-speed-internet-u-s-falling-way-behind>

Stage a class debate on net neutrality

III. Research Project on Gilded Age Monopolies (history unit)

Define "monopoly."

Have students research railroads and monopolies during the Gilded Age, with resources including:

PBS article on the Interstate Commerce Act and history of government railroad legislation:

<http://www.pbs.org/wgbh/americanexperience/features/general-article/streamliners-commerce/>

PBS railroad timeline:

<http://www.pbs.org/wgbh/americanexperience/features/timeline/streamliners/>

Digital History site on the Gilded Age (focus on The Rise of Big Business Section):

<http://www.digitalhistory.uh.edu/era.cfm?eraID=9&smtID=2>

Have students pick, from a list, key figures and terms from the era and research them on the Digital History site and others. For example: J.P. Morgan, Standard Oil Company, Carnegie Steel, GM, Sherman Antitrust Act, Jay Gould.

* This unit and the research on net neutrality could be combined *

IV. Science Fiction (English unit)

CLASS 1:

Definitions of Science Fiction. Have students brainstorm individually, then in groups what they think science fiction is and what works of science fiction they are familiar with (page 1 of HANDOUT 1). Provide students brief definitions of science fiction (pp. 2-4 of HANDOUT 1) and have them, in groups, discuss them and decide which one they like the best and why. (30 minutes)

Presentation of research project. Present project to students and assign topics, from a list of famous works of science fiction, authors, and terms. Let them know that they will be creating a timeline of science fiction as a class. (15 minutes)

Possible works, authors, and terms for students to research: *Frankenstein*, H.G. Wells, Jules Verne, Hugo Gernsbeck, *Brave New World*, *Twilight Zone*, Mystery Science Theater 3000, Philip K. Dick, *Dune*, Golden Age of science fiction, [Robert A. Heinlein, Isaac Asimov, Arthur C. Clarke (or combined as the “Big Three” science fiction writers)], Ursula K. Le Guin, Octavia E. Butler, *Trekkie*, *Star Wars*, Worldcon, fanzine, space opera, cyberpunk, hard vs. soft science fiction, steampunk.

Homework. Student research on topics. (HANDOUT 2) (If there is extra class time, they can start researching, if there are resources in the classroom to do so.)

CLASS 2:

Creation of timeline and presentations. Students can present in chronological order, or can fill in a timeline on the board or chart paper as they present. Or they can even make a timeline with software like this (<http://thetimelineproj.sourceforge.net>) following the presentations. (35 minutes)

Follow up with a short discussion to synthesize information (TEACHER MATERIALS ATTACHED). (10 minutes)

Homework or third class. Have students write science fiction stories

Definitions of Science Fiction

Do you know what science fiction is? How would you define it? What works of science fiction have you heard of, read, or watched?

My definition:	
Works of science fiction I know of:	

Our group's definition:	
Works of science fiction our group knows of:	

Below are six different definitions of science fiction, written by literary scholars.

Read the definitions and underline the main idea of each of them.

1.

"The supernatural is explained in a rational manner, but according to laws which contemporary science does not acknowledge. . . . Contemporary science fiction, when it does not slip into allegory, obeys the same mechanism: these narratives, starting from irrational premises, link the 'facts' they contain in a perfectly logical manner." (56-57)

Todorov, Tzvetan. *The Fantastic: A Structural Approach to a Literary Genre*. Ithaca: Cornell University Press, 1975.

2.

"Science fiction is the branch of literature that deals with the effects of change on people in the real world as it can be projected into the past, the future, or to distant places. It often concerns itself with scientific or technological change, and it usually involves matters whose importance is greater than the individual or the community; often civilization or the race itself is in danger." (ix)

Gunn, James E. "Introduction." *The Road to Science Fiction: From Wells to Heinlein*. Volume 2. Edited by James E. Gunn. Lanham, MD: Scarecrow Press, 2002. (Originally published 1979)

3.

"Science fiction [tells] the stories of what does not exist but could exist, of what was not but could have been: stories that, skirting the limit of the impossible, nevertheless both have and require rational explanations. Science fiction: the fiction of the improbable.... If science fiction deals with the improbable, fantastic literature deals with the impossible: with what does not have nor requires a rational explanation."

Ana María Shúa.

4.

"The difference between fantasy and science fiction lies in the fact that fantasy takes place in a world in which the rules of everyday experience do not apply, and science fiction in the world of everyday experience extended. That is, fantasy creates its own world and its own laws; science fiction accepts the real world and its laws. . . . When we read science fiction, we recognize that it applies to the real world, and we ask it real questions. The first one is: How did we get there from here?"
(9)

Gunn, James E. "Toward a Definition of Science Fiction." In Gunn, James E. and Matthew Candelaria. *Speculations on Speculation: Theories of Science Fiction*. Lanham, MD: Scarecrow Press, 2005.

5.

"Science fiction is a genre of popular culture, commonly considered to have emerged as a literature in the West in the nineteenth century, which addresses what it means to live in technologically saturated societies. Since its consolidation in mass cultural pulp magazines and novels in the 1920s, the genre has . . . developed distinct forms in comic strips, radio, cinema, television, and computer games. Thus, for some commentators, it has become less a strictly identifiable genre than a generalized *mode of technocultural apprehension**."

Luckhurst, Roger. "Science Fiction." *The Encyclopedia of Literary and Cultural Theory*. Hoboken: Wiley, 2011. Credo Reference. Web. 7 January 2015.

* A way of understanding the relationship between technology and culture

6.

" 'Science fiction' suggests a hybrid, not quite ordinary fiction, not quite science, yet partaking of both. Beneath the label, we might find utopianism/dystopianism, fantasy, horror, or books on UFOs.... It challenges readers to decide whether what they are reading is within the bounds of the possible.... Another broad definition of science fiction is that it considers the mythologies of power: to travel through time or

space, to enter the thoughts of another, to overcome death, or the process of evolutionary forces.”

“Science fiction.” *The Concise Oxford Companion to English Literature*. Edited by Dinah Birch and Katy Hooper. Oxford: Oxford University Press, 2012. *Oxford Reference*. 2013. Web. 7 January 2015.

In groups, discuss:

What similarities can you identify among these definitions? What themes and ideas repeat?

What differences can you identify between these definitions?

Which of these definitions seems most useful to you and why?

Which of these definitions best describes the works of science fiction you know? How so?

Do you think anything is missing from these definitions?

Science Fiction Research Project

The term I am researching: _____

Time period (if there is one): _____

My notes (can continue onto back):

My sources:

1.

2.

3.

4.

5.

Discussion questions to be used after student presentations, to synthesize the information on and history of the genre they have researched and heard:

- * In what ways has science fiction changed over time? In what ways has it stayed the same?
- * What do you think science fiction will look like / be about in the future?
- * What kind of science fiction story would you like to read that you have never read? (To get them brainstorming for their stories)

In his "Introduction to *Trillion Year Spree: The History of Science Fiction*," Brian Aldiss argues that "There is no such entity as science fiction. We have only the work of many men and women which, for convenience, we can group together under the label 'science fiction' " (Aldiss and Wingrove 157). In Gunn, James E. and Matthew Candelaria. *Speculations on Speculation: Theories of Science Fiction*. Lanham, MD: Scarecrow Press, 2005.

- * What do you think of this statement? What are the pros and cons of labeling stories by genre?