

Title: How were the greatest achievement and worst atrocity of the 20th century related?

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Subject(s): Science, Technology, Social Studies

Topic(s): History, Space Science

Grade/Level: 7-8

Objective:

By the end of this lesson, students will be able to:

- Understand the issues relating to the concept of whether or not the “ends justify the means.”
- Understand that their perspectives and perceptions may be shaped by the selective use of data (“facts”) in the books, magazine articles, TV shows, Internet websites, etc, that they encounter.
- Have a better appreciation of the work that both scientists and historians must do in making informed decisions and judgments.
- Understand how a person, or historical figure, might be regarded as a hero by some and a villain by others.
- Understand how one individual could be connected to the atrocities of the holocaust as well as lead a pivotal role in getting mankind to the Moon.

Summary of Lesson:

Through the use of an Anticipatory Set or Hook (“Do Now”) students will be introduced to the nuance and complexity of the issue of whether or not the ends can be justified by the means. The students will then read the short biographies of the two scientists, Mr. X and Mr. Y, and make a judgment as to whether the scientists should be regarded as heroes or villains. The students will then visit various websites in order to ascertain additional information about the two men, and be asked to make refinements to their original judgments concerning the two scientists. The students will discover that Mr. X and Mr. Y are the same individual, Dr. Wernher Von Braun.

Time Allotment: 35-45 minutes



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Procedures/Instructions:

Activity 1: (@ 5 Minutes)

See “Anticipatory Set or Hook”.

Students will be given the “Do Now” dilemma scenario above and will write a sentence or two on whether or not they believe the means justify the ends. The instructor and students should discuss some of the student responses.

Activity 2: (@ 15 Minutes)

Instructor led exercise.

The students will read the short biographies of Mr. X and Mr. Y. The instructor will lead the students in filling out the “graphic organizer” table, and the instructor and students will discuss the various responses that the students have put in their tables. The instructor will ask the students if there is any additional information that they would like to have on the two scientists, and whether or not additional information would help them to clarify any of their responses. The instructor will lead a brainstorming discussion on what possible ways additional information could be obtained. Primary sources? Witnesses? Secondary sources? Web sites?

The students will expand their charts with columns for each scientist including:

Place of birth?

Other jobs or employment?

Other events in their lives?

Names of Mr. X and Mr. Y?

(Example questions: What happened to Mr. X after he was captured? What did Mr. Y do before working for NASA?)

The brainstorming session could also include topics such as: Do ethical concepts concerning “means” and “ends” change during times of war and peace? Is “following orders” an acceptable excuse?

Activity 3: (@ 15 Minutes)

Computer exercise.

The students will be given web sites where they may find some additional information about the two scientists.

The students will be divided so that half of the class investigates the web sites for Mr. X and half of the class investigates the web sites for Mr. Y. The students may work in groups of 2 – 3 at each computer if they wish. The students will use the additional information to fill in the expanded columns on their graphic organizer charts.

Activity 4: (@ 10 Minutes)

Instructor led discussion.

The students will return to the classroom and discuss their findings with the instructor and the rest of the class. The students will be asked to make refinements to their original judgments concerning the two scientists. It is expected that the students will have a better appreciation of some of the work and skills that historians are trained to do. It is expected that the students will find that making historical judgments can be a complex and difficult task when they discover the Mr. X and Mr. Y are the same individual, Dr. Wernher Von Braun.

Materials:

[Biographies of Mr. X and Mr. Y](#) (1 per student)

[Graphic Organizer](#) (1 per student)

[Do Now Dilemma](#) (1 per student or as transparency)

Internet accessible computers

Additional Resources (Web Links, File Attachments):

General Textbooks:

[The American Nation](#), Prentice Hall, 1995

[America – Pathways to the Present](#), Prentice Hall, 1995

[Probing America's Past](#), Thomas A. Bailey, D. C. Heath & Co., 1973

[American History](#), Richard N. Current, Alfred A. Knoph, 1971.

The textbooks published in the 1990's have more information on the Holocaust than the textbooks published in the 1970's. A comparison between textbooks and the

amount and selection of historical data presented in them, with regard to a variety of topics, could be used to create a valuable lesson plan for use in a high school history class.

The History Channel aired a television show on the German rocket program and its connection with the concentration camps called "Nordhausen." The DVD version of the show can be purchased at this web site: <http://www.historychannel.com/>

These web sites have overviews of the V1 and V2 rocket programs during WWII and short histories of the concentration camp prisoners forced to work at the Mittlebau-Dora facility and left to die at the Nordhausen camp. Some of the sites have pictures of the tunnel complex with remnants of the rockets built there as well as pictures of what the American forces discovered when the camps were liberated.

<http://www.constable.ca/v2.htm>

<http://www.geocities.com/lupinpooter/nordhausen.htm>

<http://www.jewishgen.org/ForgottenCamps/Camps/NordhausenEng.html>

<http://www.rudyfoto.com/hol/dm-v2rocket.html>

This web site has a short biographical sketch of Wernher Von Braun when he was inducted into the Alabama "Hall of Fame" academy in 1969. There is no mention of his connection to the atrocities associated with the concentration camps of WWII. This site is a good example of selective use of historical data.

http://www.archives.state.al.us/famous/academy/w_braun.html

These web sites (associated with NASA) have a more extensive and "pro" biography of Wernher Von Braun. There is some mention of his work during WWII, but the picture is painted of him as more of a Nazi resister.

<http://history.msfc.nasa.gov/vonbraun/index.html>

<http://liftoff.msfc.nasa.gov/academy/history/VonBraun/VonBraun.html>

<http://history.msfc.nasa.gov/vonbraun/excerpts.html>

These sites discuss the issue of Von Braun's association with the Nazi party in WWII. The third site is interesting because of the nature of the group that created it. The anti-socialist bias of the group could be used in a lesson for students to decide how to judge and evaluate the objectivity of web sites when accessing data and information. Likewise the fourth site may have a problem with its objectivity. It has information about a witness to the atrocities at the Nazi rocket

factory, but the web site is associated with the “Moon hoax” conspiracy theory that insists that man has not walked on the Moon.

http://www.space.com/news/spacehistory/vonbraun_020813.html

<http://www.houstonspacesociety.org/nazi.html>

<http://www.moonhoax.com/site/testimony.html>

National Science or Mathematics Standards:

Science

Unifying Concepts and Processes

CONTENT STANDARD: K-12

As a result of activities in grades K-12, all students should develop understanding and abilities aligned with the following concepts and processes

- Evidence, models, and explanation

Science and Technology

CONTENT STANDARD E:

As a result of activities in grades 5-8, all students should develop

- Understandings about science and technology

Science in Personal and Social Perspectives

CONTENT STANDARD F:

As a result of activities in grades 5-8, all students should develop understanding of

- Science and technology in society

History and Nature of Science

CONTENT STANDARD G:

As a result of activities in grades 5-8, all students should develop understanding of

- History of science

Assessment Plan:

The students will create a graphic organizer based upon the two scientists and they will be asked to make a judgment on whether or not they consider the scientists to be heroes or villains.

The students will be able to show their evidence of understanding about the concept of how the amount and selection of data can affect historical perspectives

and perceptions by expanding their graphic organizers and collecting additional information about Mr. X and Mr. Y.

Biography of Mr. X

Mr. "X" was a rocket scientist that worked for Germany in WWII. He designed and helped build two rocket-propelled weapons that were launched against England. The weapons were the V1 and V2 (The "V" stands for "Vengeance".) The weapons killed people and did a lot of damage to buildings in London. Mr. "X" was a member of the "SS", an elite and highly trained group of officers that were primarily responsible for many of the atrocities committed during WWII. Mr. "X" built his rockets using "slave" labor from the nearby concentration camps. Many laborers who broke rules were killed. Laborers who became too ill to work were taken to a camp where they were left to die without any medical attention. Mr. "X" was captured by American soldiers at the end of the war.

Biography of Mr. Y

Mr. "Y" was a naturalized citizen of the United States. In the 1950's he designed and built many rockets that were tested by the American military, and were used to launch the first satellites that the United States launched into space. He designed and helped build the Redstone rocket that was used by Alan Shepard who was the first American in space. Mr. "Y" designed the Titan rocket that was used by the Mercury and Gemini astronauts in the 1960's to learn how to perform the maneuvers in space that would be needed to get mankind to the Moon. Mr. "Y" is most famous for designing and building the Saturn V rocket that was used to get the Apollo astronauts to the Moon and back. Mr. "Y" received more than 50 honorary awards and more than 20 honorary degrees.

Do Now Dilemma

You hear that your friend that lives next door is going to ride her bike across town after school so that she can participate in a fight against kids from another school. You are afraid that she might get in trouble and possibly injured so after school you hurry home and puncture the tires on her bike so that she can't make the trip. When she asks you about her bike you tell her that you don't know anything about how the tires went flat but will help her repair them.

Was it okay for you to flatten her tires in order to keep her from getting hurt or getting into trouble? **Graphic**

Organizer

	What did he invent?	What did the invention(s) do?	Who benefited from the invention(s)?	Who was hurt, injured, or killed by the invention(s)?	Additional information	Hero or villain?
Mr. X						
Mr. Y						

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