Annotated Bibliography

Primary Sources

"1986: Space Shuttle Challenger disaster Live on CNN." *Youtube*, uploaded by CNN, 27 Jan. 2011, <www.youtube.com/watch?reload=9&v=AfnvFnzs91s>.

This video is important because it provided clips of the Challenger exploding that we used
in our documentary. It was shot live by CNN when the Challenger launched. This was the first video that we all saw of the Challenger as it exploded.

Broad, William J. "6 in crew and High School Teacher teacher are killed 74 seconds after liftoff."
The Shuttle Explodes, The New York Times, 29 Jan. 1986, <http://movies2.nytimes.com/learning/general/onthisday/big/0128.html>.

This newspaper article helped us get a credible (it was the NY Times) and detailed explanation regarding the who, what, when, where, and how of the Challenger disaster. It gave some information that other sources didn't have, like what happened right before and right after the Challenger exploded.

Forrester, Bob. Interviewed by Caroline Johnson. 9 Mar. 2019.

This source was very important and crucial to the creation of our documentary. It was one of the interviews that we had in the documentary. We were able to learn vital and very interesting information from Mr. Forrester. The information that was given to us not only furthered our knowledge, but also improved the documentary as a whole. This was a primary source because we were able to get information directly from a source that both witnessed the Challenger disaster, and was also highly involved with the program.

Fuqua. "Investigation of the Challenger Accident." Government Publishing Office, 29 Oct. 1986, <www.govinfo.gov/content/pkg/GPO-CRPT-99hrpt1016/pdf/CHRG-101shrg1087-1.pdf.

The investigation of the Challenger accident was a thorough investigation of what caused the Challenger to explode. It also contained suggestions on how NASA should continue the Space Shuttle Program. This investigation was very valuable to our research because in it we found exactly why the Challenger had exploded. Other secondary sources' reason(s) why the Challenger has exploded were not consistent. Although the investigation was conducted in 1986, it was conducted by the Committee on Science and Technology.

McDonald, Allen. “Truth, Lies, and O-rings: Inside the Space Shuttle Challenger Disaster.” Langley’s October Colloquium, NASA, 2 October. 2012, H.J.E Reid Auditorium, Langley AFB, VA. Lecture.

This primary source is a lecture by Allan McDonald, a Morton Thiokol engineer with a bachelor of science in Chemical Engineering. The lecture had a firsthand account of his experience with the Challenger disaster and how he tried to stop the launch. In it he also talked about his work to improve the space shuttle program. Those improvements were a triumph.

“President’s Commission on the Space Shuttle.” C-span, 10 June. 1986, https://www.c-span.org/video/?150007-1/presidents-commission-space-shuttle.

We used this source as one of the videos that we put into the documentary. This video helped us to understand what truly happened during the President’s Commission report on the Challenger. Before seeing this video, we had only read the report.

Rogers, William P. “Report to the President By the Presidential Commission on the Space Shuttle Challenger Disaster.” Armstrong, Neil, Acheson, David, Covert, Eugene, Feynman, Richard, Hotz, Robert, Kutyna, Donald, Ride, Sally, Rummel, Robert, Sutter, Joseph, Walker, Arthur Jr, Wheelon Albert, Yeager, Charles, *Spaceflight. NASA*, 6 June. 1986, <www.spaceflight.nasa.gov/outreach/SignificantIncidents/assets/rogers_commission_report.pdf>.

The report to President by the Presidential Commission on the Space Shuttle Challenger Disaster, or the Rogers Commission, was commissioned by the President. It was a comprehensive investigation of the Challenger disaster. It was meant to recommend how NASA should continue and to prevent any future failures. Retired astronauts and other experts made this report, and is therefore credible.

Ronald, Reagan W. “Explosion of the Space Shuttle Challenger Challenger Address to the Nation,
January 28, 1986.” *NASA History Office*, NASA, 28 Jan. 1986, <history.nasa.gov/reagan12886.html>.

This powerful speech, written by Ronald Reagan, helped us know how the nation felt after the Challenger disaster. It shows that in spite of tragedy, the American people were still able to recover. The Challenger astronauts were extremely brave and met this challenge with eagerness to explore the unknown. We used this source to learn about the speech that President Reagan addressed to the nation. Which then, lead us to finding the video of the actually speech, which is currently in the documentary.

Photographs

"An orange fireball fireball marks the explosion of the Space Shuttle Challenger on January 28, 1986." NBC. Web. 28 Jan. 1986. <www.nbcnews.com/slideshow/space-shuttle-challenger-disaster-devastated-nation-30-years-ago-n505606>.

This primary picture was taken live when the Challenger exploded by NBC. We used it as the opening slide in our documentary.

Atkinson, Joe. "During NASA Langley's October Colloquium, Allan McDonald, a skilled engineer and executive, relives the Challenger tragedy from where he stood at the Launch Control Center." NASA. 2 Oct. 2012. Web. <www.nasa.gov/centers/langley/news/researchernews/rn_Colloquium1012.html>.

This picture is important because it shows Allan McDonald, one of the engineers who warned NASA that the Challenger would explode. He was important to the story and lesson of eliminating risks to make sure the mission was safe.

Berkes, Howard. "Bob Ebeling in his home in Brigham City, Utah." Howard Berkes/NPR. 28 Jan. 2016. Web. <www.npr.org/sections/thetwo-way/2016/01/28/464744781/30-years-after-disaster-challenger-engineer-still-blames-himself>.

This picture is important to our documentary because it shows Bob Ebeling, one of the engineers who warned NASA that the Challenger would explode. The source was able to show us the ignorance that NASA displaced during the the time of when the Challenger exploded.

Bos, Carole "Challenger on Launch Pad Morning of Launch" AwesomeStories.com. Oct 07. 2013. , <http://www.awesomestories.com/asset/view/Challenger-on-Launch-Pad-Morning-of-Launch>. Accessed Apr 09. 2019.

This picture is important because it shows the Challenger ready for launch. This image is important to the documentary, because it is one of the images we used. We displayed this image while we were talking about the previous delays of the Challenger's launch.

"Challenger Crew in the White Room." NASA. 28 Jan. 1986. Web. <www.nasa.gov/multimedia/imagegallery/image_gallery_2437.html>.

This image is important because it shows the Challenger crew right before they boarded the Challenger. This photograph showed the crew before they boarded the Challenger; right before the disaster happened.

"Challenger Liftoff." NBC. 28 Jan. 1986. Web.
<https://www.nbcnews.com/slideshow/space-shuttle-challenger-disaster-devastated-nation-30-years-ago-n505606>.

This photograph is important because it shows the Challenger lifting in a way that kind of emphasizes the shuttle. This was also a reliable source because it was from nbcnews, a well-known news source.

"Challenger's crew leaves their quarters at Kennedy Space Center." NBC. 27 Jan. 1986. Web.
<https://www.nbcnews.com/slideshow/space-shuttle-challenger-disaster-devastated-nation-30-years-ago-n505606>.

This photo is important because it shows the crew walking out to the shuttle with a smile and a brave look on their face. This photo came from a reliable news source, nbcnews.

"Classmates of the son of America's first teacher-astronaut cheer as the space shuttle Challenger lifts skyward from Launch Pad 39B on Jan. 28, 1986." NBC. 28 Jan. 1986. Web.
<http://www.nbcnews.com/slideshow/space-shuttle-challenger-disaster-devastated-nation-30-years-ago-n505606>.

This photograph is important because it shows what the reactions of the people watching the Challenger lift off were. This helped us understand what the people felt like as they watched it lift off. Before they knew that the Challenger was going to explode.

"Icicles on the Launch Tower." NASA on The Commons, *Flickr*. Web. 28 Jan. 1986.
<www.flickr.com/photos/nasacommons/16308270989>.

This image was important to our documentary because it shows the icicle on the launch tower. One of the indicators of the cold weather the partially caused the field joint to malfunction. It was taken by NASA on the day of the launch. This helped us understand our topic more because it showed us the massive amounts of ice that were there the morning of the launch, and how it could've affected the Challenger's launch.

"International Space Station." NASA Archives. 15 May. 2015. Web.
<www.nasa.gov/image-feature/international-space-station-39>.

This image is important because it is the image displayed while we talk about how NASA made improvements to their agency to make sure all of the future missions would not fail like the Challenger did. It is proof of how hard NASA worked to make sure all of their further missions are as safe as they can be. It also shows that NASA did their best to eliminate all risks.

Jackson, Nicholas. "Early Quasar is Brightest Object Ever Found in the Universe." The Atlantic. 30 June. 2011. Web. <www.theatlantic.com/technology/archive/2011/06/early-quasar-is-brightest-object-ever-found-in-the-universe/241294/>.

This picture was important in the documentary because it showed the triumph and light through the disaster. It showed one of the latest discoveries that shows how far NASA has come from that disaster. They have improved beyond belief and continue to grow today. By learning from the Challenger disaster, they have come very far.

Kauderer, Amiko. "Astronaut Sharon Christa McAuliffe." NASA Spaceflight. 26 Sept. 1985. Web. <spaceflight.nasa.gov/gallery/images/shuttle/sts-51l/html/s85-41239.html>.

This picture is important because it allows the viewers of our documentary to know what Christa McAuliffe looked like. The photograph helped us further understand our topic because it allowed us to know what the people that were involved looked like.

"Rogers Commission Title Page." Report to the President by the Presidential Commission on the Space Shuttle Challenger Accident. 6 June. 1986. Screenshot. <spaceflight.nasa.gov/outreach/SignificantIncidents/assets/rogers_commission_report.pdf>.

This image is important because it shows what the Rogers Commission looks like. It was used in our documentary as a picture to go along with what the Rogers Commission was.

"Ronald Reagan." NASA Spaceflight. 28 Jan. 1986. Web. <www.nasaspaceflight.com/2011/01/1983-1986-missions-history-space-shuttle-challenger/>.

This source was able to provide us with an abundant amount of photos. This photograph is important because it shows the seriousness and solemness that was felt not just through President Ronald Reagan, but the entire nation after the Challenger accident.

"STS-51-L Accident." NASA on The Commons, *Flickr*. 28 Jan. 1986. Web. <www.flickr.com/photos/nasacommons/16307098620/in/album-72157650682898116/>.

This picture is important because it shows the severe explosion of the Challenger. It was taken shortly after the Challenger exploded.

"The Shuttle Explodes." The New York Times. 29 Jan. 1986. Web. <http://movies2.nytimes.com/learning/general/onthisday/big/0128.html>.

This is a picture of the Challenger exploding in a newspaper article. It lets the viewers of our documentary know how serious the Challenger exploding was, as the story is seen on the front page. This source was also able to show us just how big of coverage was given to this disaster.

"The STS-51L crew members are: in the back row from left to right: Mission Specialist, Ellison S. Onizuka, Teacher in Space Participant Sharon Christa McAuliffe, Payload Specialist, Greg Jarvis and Mission Specialist, Judy Resnik. In the front row from left to right: Pilot Mike Smith, Commander, Dick Scobee and Mission Specialist, Ron McNair." NASA on The Commons, *Flickr*. Web. 15 Nov. 1985, <www.flickr.com/photos/nasacommons/15871993874>.

This picture gave us an understanding of what the crew members looked like and their jobs on the Challenger. It was taken by NASA. This photo was a formal picture of the entire Challenger crew.

"Water Pipes at the Launch Pad." NASA. 28 Jan. 1986, Web. <https://www.nbcnews.com/slideshow/space-shuttle-challenger-disaster-devastated-nation-30-years-ago-n505606>.

This image is important to our documentary because it shows the icicles, and indicators of the cold weather that could contribute to a failure if the Challenger to launch. The picture is able to show just how extreme the cold temperatures were for the launch on January 28th.

Secondary Sources

Atkinson, Joe. "Engineer who opposed Challenger Launch Offers Personal Look at Tragedy." *The Researcher News, NASA,* 5 Oct. 2012, <www.nasa.gov/centers/langley/news/researchernews/rn_Colloquium1012.html>.

In this secondary source, Joe Atkinson interviews and analyzes what Allan McDonald, (a primary source) says about the cause of the Challenger accident and his experience with NASA. It helped us and viewers to understand how it felt to have known the Challenger crew, and what it might have been like to see the Challenger explode.

Bangert, Dave. “What if ... for WL teacher 30 years after Challenger”. *Opinion,* Journal and Courier, 27 Jan. 2016, <https://www.jconline.com/story/opinion/columnists/dave-bangert/2016/01/27/what-if-wl-teacher-30-years-after-challenger/79415746/>.

This source was able to provide us with information about Bob Foerster. This information helped us further our knowledge in the topic because we didn’t know a lot of the people that were involved with the teacher in space program. It also lead us to becoming interested in possibly contacting Mr. Foerster.

Crane, Rachel. “30th anniversary: How the Challenger Changed NASA.” *Space + Science*, CNN, 28 Jan. 2016, <www.cnn.com/2016/01/28/tech/challenger-disaster-space-shuttle-anniversary/index.html>.

This source was important to our research because it provided vital information regarding the triumph aspect of the Challenger accident. The tone of the article goes from heartfelt and sad, to joyful and positive. It explains how the families of the astronauts were able to spread STEM. It also talks about how the Challenger left behind an important legacy.

Dunbar, Brain. “NASA Orbiter Fleet.” *NASA*, Page Editor by Jeanne Ryba, 12 April. 2013, <www.nasa.gov/centers/kennedy/shuttleoperations/orbiters/challenger-info.html>.

This source from NASA’s website is a secondary source because it was most likely written by someone who gathered information from a NASA researcher who witnessed the event. Then put it together into an article for the NASA website. It was important to us because we were able to learn why the Challenger mission was created.

Gebhardt, Chris. “1983-1986: The Missions and History of Space Shuttle Challenger.” 28 Jan. 2011, <www.nasaspaceflight.com/2011/01/1983-1986-missions-history-space-shuttle-challenger/>.

This article was important because it gave us background knowledge on the Challenger. It gave us information about the tragedy of the Challenger.

Holloway, C. Michael. “Truth, Lies, and O-rings: Inside the Space Shuttle Challenger Disaster.” *Colloquium: October 2, 2012*, 2 October 2012, <colloqsigma.larc.nasa.gov/past-colloquium-lectures/all-colloquium-lectures/colloquium-october-2-2012/>.

This secondary source was important to our research because it provided details like the time and date of Allan McDonald’s lecture that we used in our documentary.

Jenab, Kourosh. Maslenpour, Saeid. “Failure Analysis: Case Study Challenger SRB Field Joint.” International Journal of Engineering and Technology, Vol. 8, No. 6, December. 2016, <http://www.ijetch.org/vol8/921-T10045.pdf>.

This article was published in a journal about the field joint that failed in the Challenger. It was important to our research because it helped us learn more about how the field joint in the Challenger worked.

Santana, Maroo. Spear, Kevin. “Shuttle Challenger tragedy 30 years ago: What lessons were learned?” 28 January. 2016, <www.orlandosentinel.com/business/space/os-challenger-disaster-30-years-later-20160122-story.html>.

This source is a news source that interviewed NASA researchers about the Challenger, which makes it a secondary source. It was important in our project because it had quotes from many important and influential people at the time.

Tate, Karl. “The Space Shuttle Challenger Disaster: What Happened?.” Human Spaceflight, Space.com, 28 January. 2016, <www.space.com/31732-space-shuttle-challenger-disaster-explained-infographic.html>.

This source provided us with a detailed explanation of how the field joint failed in more simple terms. Unlike the official reports, as some of the wording in them were hard to understand. It also had some useful diagrams the helped us understand the parts and engineering of the Challenger.

Wall, Mike. “Documentary Probes Challenger Disaster on 30th Anniversary.” Entertainment, space.com, 5 January. 2016, <www.space.com/31527-space-shuttle-challenger-tragedy-documentary.html>.

This source talks about what Christa McAuliffe was going to do in space, and how important it was for her to be in space. It also talked about what caused the Challenger to explode. It uses primary sources and videos to help us understand it.

Photographs

“Fig. 1. Original vs. Redesign.” Failure Analysis: Case Study Challenger SRB Field Joint. 6 Dec. 2016. Web. <http://www.ijetch.org/vol8/921-T10045.pdf>.

This image is important because it shows the redesigned field joint. This furthered our understanding of it.

History.com Editors. "Challenger Explosion." A & E Television Networks, 15 February, 2010. <www.history.com/topics/1980s/challenger-disaster>.

This source was useful to us because it provided information about how the Challenger exploded and how the cold weather affected the o-ring causing them to fail. This source also told us other information. For example it also told us that Christa McAuliffe's backup went into space after her.

Pearlman, Robert Z. "NASA Exhibits Space Shuttles Challenger, Columbia Debris for the First Time." Spaceflight, Space.com, 29 June. 2010. <www.space.com/29794-space-shuttles-challenger-columbia-debris-exhibit.html>.

This webpage informed us about background information and what happened. It also showed pictures of some artifacts that were owned by crew members and two pieces of the Challenger that they were able to find and get.

Pruitt, Sarah. "5 Things You May Not Know About the Challenger Disaster." *History Channel*, 28 Jan. 2016. <www.history.com/news/5-things-you-might-not-know-about-the-challenger-shuttle-disaster>.

This source is a historical website. This source was important to us because it told us that the Challenger didn't actually explode. Instead, it was engulfed in a ball of flame. This was our first time hearing this, and at first we were shocked. Another thing that we learned from this source was over the years two pieces of the Challenger space shuttle have washed up onto the beach.

"Redesigned Field Joints- Shuttle Solid Rocket Motor." NSTS Shuttle Reference Manual. Web. 1988. <www.awesomestories.com/asset/view/Redesigned-Field-Joints-Shuttle-Solid-Rocket-Motor>.

This diagram is important to our documentary because it shows the difference between the original and redesigned field joint. It is a drawing, which makes it a secondary source.

The Editors of Encyclopedia Britannica. "Challenger disaster." United States History, Encyclopedia Britannica, inc., 7 December. 2018. <www.britannica.com/event/Challenger-disaster>.

This is a tertiary source because it uses both primary sources and secondary sources. This source was helpful to our research because it was able to summarize the Challenger disaster, and it gave us a lot of the main details of the disaster.

Weaver, Bruce. “A look Back: Challenger Shuttle Disaster.” CBS News. <www.cbsnews.com/pictures/challenger-shuttle-disaster/8/>.

This source showed us some pictures of things relating to the Challenger, such as the crew and the launch. Also, it gave us explanations of what the pictures were of. These picture able to enhance our knowledge of the Challenger.