Chernobyl:
How a Tragic Incident Sparked a Change

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"In the early morning hours on April 26th, 1986, a flaw in Chernobyl's fourth reactor caused the machine to explode, sending radioactive gasses more than thirty-six hundred feet into the atmosphere. The catastrophic explosion of Chernobyl devastated nearby towns and the Soviet Government while causing damage to the environment and its inhabitants. Immediately following the incident, the barriers of safety and health regulations were broken, as other countries scrambled to make sure nothing this horrific could happen again." We found our topic by recommendations from others, and ultimately stuck with it through a fascination with both the science of it all, and how this tragic accident would affect people going forward. Thousands of lives were lost due to the radiation, and repairing the damage cost over 2.5 billion euros (2,797,607,500 U.S dollars).

Seeing as though our topic mostly consisted of advanced science and radioactivity, we had to search through more than a few books to find relevant topics while being careful to not accidentally go in over our heads. Kate Brown, author of "Manual For Survival: A Chernobyl Guide To The Future", was extremely helpful, and provided many examples of how Chernobyl now shapes present day. We used several books and websites, searching for facts that were informing, interesting, and most importantly, true. As we ventured more into our topic, my partners and I discovered just how badly the explosion damaged the surrounding area and it's occupants.

My partners and I believed that having a website would benefit us in the long run as it would serve as a new experience. We all thought using a website would allow us to create a somber atmosphere and make use of resources that we wouldn't be able to with an exhibit or documentary. In doing so, we made a shockingly tragic and informative website.

The explosion broke barriers in history as being one of the worst radiation incidents *ever*. The Chernobyl Explosion demanded new safety codes to be created after over 50,000 residents were forced to evacuate the town due to nuclear fallout, around 4,000 of which are still affected by the radiation today. After only being in use for 6 years, the sarcophagus that was built to prevent radiation broke and millions

were spent to build it again. Perhaps if we would of had better safety protocols, Pripyat, Ukraine would still be a thriving boomtown and the hundreds that died and suffered would still be living peaceful lives.

Axe, David. “All the Men and Women Who Marched to Their Deaths at Chernobyl.” *Medium*, War Is Boring, 9 Jan. 2017, https://medium.com/war-is-boring/all-the-men-and-women-who-marched-to-their-deaths-at-chernobyl-ef98b5c10df.

This source describes the horrors of radiation poisoning and how it affects human beings. It also provided insight on the names of several of the workers who were stationed at Chernobyl during the explosion. The article explains what the firefighters did to stop the reactors from further exploding, such as pulling irradiated patients from beside the reactor and preventing the fire from reaching the other side of the plant.

"Cancer." *Britannica School*, Encyclopædia Britannica, 4 Sep. 2019. school-eb-com.content.elibrarymn.org/levels/high/article/cancer/106118#224783.toc. Accessed 30 Oct. 2019.

The source “Cancer”, although not specifically about the Chernobyl nuclear disaster, gave information about how the radiation from Chernobyl can cause certain cancers, and the scientific debate as to whether this accusation about cancer-causing radiation is valid.

Chernobyl Briefing Book: Fact Sheets on the Chernobylaccidentand Its Consequences, and the Role of U.S. and Europeancompaniesand International Organizations in Improving the Safety OfSovietand Eastern European Nuclear Energy Plants. USCEA, 1991.

“Chernobyl Briefing Book” gave a ton of insight as to how nuclear plants improved after the disaster that was Chernobyl. The way WANO (World Association of Nuclear Operators) works to make sure that nuclear plants are safe is covered, along with each of the new (and old) safety regulations among USA nuclear plants/operators.

“Chernobyl accident - Ukraine: 1986.” When Technology Fails, edited by Neil Schlager, Gale, 2008. Gale In Context: High School, https://link.gale.com/apps/doc/CV2645800027/SUIC?u=mnsminitex&sid=SUIC&xid=0b0c066c. Accessed 14 Oct. 2019.

The website “Chernobyl Accident.”, helped to show the background of Chernobyl’s reactors, and gave a good understanding of the details of the accident. It did a good job of also displaying what was done after the accident to cease the radiation spreading. It also included some of the key events that lead to the nuclear explosion.

“CHERNOBYL Disaster.” Apr. 2009, pp. 1–5

This article gave the specifics on the amount of money required to fix the damage done by the Chernobyl disaster, as well as other short term (and eventually long term) effects that the incident had on people involved in the accident, as well as close by.

"Chernobyl: The secrets they tried to bury - how the Soviet machine covered up a catastrophe." *Telegraph Online*, 9 Mar. 2019. *Gale In Context: High School*, https://link-gale-com.content.elibrarymn.org/apps/doc/A577697025/SUIC?u=mnsminitex&sid=SUIC&xid=5dfa99fb. Accessed 30 Oct. 2019

The website, “Chernobyl, The secrets they tried to bury”, really helped us to see more in depth about when it exploded, like the sounds that the reactor made before it exploded, or what the workers saw as it exploded. It described what the workers, and safety personnel did in the aftermath of Chernobyl to make sure the radiation didn’t spread, such as building dams to hold back the now radioactive Pripyat river. It was great at including some of the guidelines that the people who lived in the surrounding area of Chernobyl were supposed to live by after the accident.

"Five myths about Chernobyl." *Washingtonpost.com*, 5 July 2019. *Gale In Context: High School*, https://link.gale.com/apps/doc/A592326151/SUIC?u=mnsminitex&sid=SUIC&xid=3271ecc8. Accessed 25 Oct. 2019.

The source “Five myths…” gave insight on how the public (USA) typically viewed the Soviet Union and the incident of the nuclear disaster itself. The article identified which stories, or “myths”, about the Chernobyl disaster were inaccurate (ex: “the Soviet government didn’t care to help those affected by Chernobyl’s aftermath).

Illesh, A. V. *Chernobyl*. Richardson & Steirman, 1987.

This article provides the reader with several different points of views of the workers who helped fight the radio activity. It also describes the chaos that followed weeks after the incident, including how the towns and cities nearby reacted. The book explains how the reactor exploded and why it was so important to stop the machine from further destroying the plant.

“Javascript Required!” Chernobyl | Chernobyl Accident | Chernobyl Disaster - World Nuclear Association, https://www.world-nuclear.org/information-library/safety-and-security/safety-of-plants/chernobyl-accident.asp

This source describes who was affected and how anyone 20 to 130 km away were majorly affected by the explosion and the residual radiation). The article also describes the circumstance of the reactor’s explosion, as well as why this was so impactful to the surrounding areas/environment.

Petryna, Adriana. “Chernobyl’s Survivors: Paralyzed by Fatalism or Overlooked by Science?” Bulletin of the Atomic Scientists, vol. 67, no. 2, Mar. 2011, p. 30. EBSCOhost

This article was good at showing both sides of the scientific debate whether the cancers caused after the nuclear accident were due to situational stress or radiation. “Chernobyl’s Survivors…” was very insightful as to how the public reacted to the sudden radiation and health threats and as to how the Soviet government handled the issue (by sugar-coating the situation and underplaying the events) as well.

Parry, Vivienne. “How I Survived Chernobyl.” *The Guardian*, Guardian News and Media, 24 Aug. 2004, https://www.theguardian.com/world/2004/aug/24/russia.health.

The author interviewed Mr. Sasha Yuvchenko, who was a worker during the Chernobyl explosion who went under urgent care after he was severely irradiated. Yuvchenko described the aftermath of radiation poisoning, what it was like during treatment, and how he overcame the damage set by the explosion. He also vividly described how radiation affected his shoulder, which sustained the most damage, and how it took him years to recover the destroyed tissue.

Ramberg, Bennett. “Chernobyl Is Everywhere : CHERNOBYL A Russian Journalist’s Eyewitness Account <i> by Andrey Illesh (Richardso.” *Los Angeles Times*, Los Angeles Times, 31 Jan. 1988

This article shows us what an outside reporter thought about the accident and why he believed other writers to be false, considering there were many points of view at the time.The amount of people killed while trying to stop the fire was also noted, instead of the overall casualties. It describes the Chernoyl radiation to be in “hot spots” around Europe and Ukraine.

Revkin, Andrew C. “Chernobyl, Fires and Radiation.” *The New York Times*, The New York Times, 11 Aug. 2010, https://dotearth.blogs.nytimes.com/2010/08/11/chernobyl-fires-and-radiation/

This newspaper article explained the long term aftermath of Chernobyl’s radiation and its effects on the ecosystem. Because of the radiation poisoning leaking into the area’s surrounding plants, the entire diameter is at risk for wildfires and pollution.

"A view from the bridge; Revisiting Chernobyl." *The Economist*, 9 Mar. 2019, p. 75(US). *Gale In Context: High School*, https://link-gale-com.content.elibrarymn.org/apps/doc/A577449130/SUIC?u=mnsminitex&sid=SUIC&xid=4187bd48. Accessed 1 Nov. 2019

This magazine article was very informational around the topic of experts who have researched extensively around the topic of Chernobyl, and their input on it. It also covers some of the health statistics, such as how some of the workers were diagnosed with cancer shortly after. It talked about what the radiation caused to happen afterwards as well.

"Thirty Years After Chernobyl..." *Youngzine*, 29 Apr. 2016. *Gale In Context: High School*, https://link-gale-com.content.elibrarymn.org/apps/doc/A556746975/SUIC?u=mnsminitex&sid=SUIC&xid=63b74efd. Accessed 30 Oct. 2019.

This website article really gave some good insight on things that happened 30 years after such as that it was placed under military control. It talks more about what was done to contain the radio activity. It also talked about some wildlife that is slowly coming back to the location. They also talked about some of the negative effects of Chernobyl on animals.Some of the birds living near Chernobyl have a brain size five percent smaller than birds living in different places of the same species.