Log Book - Artificial Rain / Cloud Seeding

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Hypothesis

My hypothesis is that cloud seeding is a process when you pour some chemicals into a cloud, then after a couple hours the chemicals will absorb the water vapor that's already inside of the cloud to make big water droplets, leading the cloud to get heavier until it starts to rain.

Description of cloud seeding

Artificial rain / Cloud Seeding is a type of weather modification technique. It artificially changes the weather by Cloud seeding and produces artificial rain or snow, which can help to meet the precipitation needs of a particular region.

October 28, 2024

I Started to look for an interesting topic for my science fair project, I saw a lot of good topics but the one that caught my eye is “Artificial Rain” Because It was a topic that i have heard before so i thought it would be an amazing topic to research and not that many people have heard about it.

November 15, 2024

I Started my powerpoint presentation about cloud seeding, I made the title page, objective (concept, method and effectiveness of cloud seeding) and my hypothesis.

November 25, 2024

I worked on my introduction slide and looked for a couple of images explaining how artificial rain works.

December 14, 2024

I worked on my slides about cloud formation ( the process of Condensation) and natural precipitation (The process of Precipitation).

January 3, 2025

I started working on Background research, like who invented cloud seeding and how did he come up with the idea? (Slide about Dr. Vincent Schaefer).

February 14, 2025

I finished background research. Who invented / found the silver iodide technique for cloud seeding? (Dr. Bernard Vonnegut).

March 8, 2025

I prepared the slides about advantages and disadvantages of cloud seeding.

March 14, 2025

I added slides about which were the first countries to use cloud seeding technologie and a few Countries that have used them so far.

March 16, 2025

I was reviewing the powerpoint presentation and added techniques of cloud seeding ( static cloud seeding, ground generator cloud seeding, and rocket cloud seeding) Materials used for cloud seeding, Conclusion, and citations to finish the project

March 17, 2025

I revised my project to update necessary changes before submission.

Conclusion

My hypothesis was half correct because I thought that there was a chemical that would absorb all the water in the cloud. But silver iodide acts as a surface for the water vapor to mix together to form big water droplets. And I also thought that it would take several hours but it only takes a couple minutes for it to start raining.

Cloud seeding is a new technology that can help improve weather conditions in dry areas, by increasing rainfall or snowfall, it provides water for agriculture, reduces hail damage, and supports water supplies in regions that need it. However, scientists are still studying its effectiveness and environmental impacts.

After doing the research on this topic I have a wider knowledge of artificial rain, and learnt useful information about different methods to produce rainfall.

I think that in the future this technology will be very important because global warming is a major issue and it also helps to control hailstorms, pollution, fog and droughts. So cloud seeding will be a solution to these problems.