

Chasing a Storm

Specific Purpose Statement: To inform my audience how meteorologists chase storms and about the importance of storm chasing in meteorological research.

Central Idea: Storm chasing requires special tools and software; chases follow a general procedure on the chase day; and chasing has great importance in meteorological research.

Pattern of Organization: topical.

INTRODUCTION

It's September, 1900, in Galveston, Texas. Isaac Cline, a well-known climatologist, rides his horse and buggy along the beach. He's here to observe the unusually high, gusting winds and huge waves crashing onshore. He orders the people of Galveston to evacuate. [VISUAL AID] Little did he know, he had just chased the massive Galveston hurricane of 1900 that would proceed to kill at least 6,000 people in the area. According to "A Brief History of Storm Chasing" on the National Association of Storm Chasers and Spotters website, this is one of the first accounts of storm chasing that we have. How about this: how many of you have seen the movie *Twister*? [VISUAL AID] The basic storyline is that two people are storm chasers, and in the end they chase an epically huge tornado in the name of research. That is a more modern, albeit a bit inaccurate, account of storm chasing. I would like to inform you today about chasing storms, the way meteorologists do it. I plan to research severe storms as a career, so I have investigated the topic thoroughly and interviewed peers and professors on the subject. While storm chasing may seem like fun, there's actually a lot involved. When chasing a storm, you need special tools and software, as well as a very general procedure on the chase day; also, chasing has great importance in meteorological research.

BODY

Internal Preview: First, let me discuss the tools and software used in a storm chase.

- I. Before and during a chase, chasers constantly reference radar as well as other websites pertaining to severe weather.
 - A. One of the most important tools that meteorologists use is radar. [VISUAL AID]
 1. Dave Flory, professor of meteorology, uses Gibson Ridge radar software. According to Professor Flory, the Gibson Ridge software "gives you an up-to-the-second update of where you are with regard to the latest radar image"-very helpful technology.
 - B. The National Oceanographic and Atmospheric Administration, NOAA, has a website called the Storm Prediction Center. [VISUAL AID]
 1. The SPC website shows a weather overview, storm forecasts, current watches, warnings, and advisories, and much more.
 2. Forecasts help most...
 - C. Locally, chasers use the Iowa Environmental Mesonet, a website that collects weather data from different sites all around Iowa. [VISUAL AID]
 - D. Finally, you need your camera and tripod to record what you see.
 1. As Professor Flory says, "it is sometimes easy to forget your cameras...Never forget your tripod or your cameras."

Transition: Now that you know about the technology, let's cover a general storm chasing schedule.

- II. Although there is not a specific procedure in storm chasing, you should follow a general process on the chase day.

- A. The chase day begins with a look at the Storm Prediction Center or the Iowa Environmental Mesonet.
 - 1. If there is activity, gather your things!
 - 2. Check at what time the storm should approach: you don't want to get there too early and wait for hours.
- B. On the road, consistently check the radar to see storm reports and check where storms are firing.
- C. What do you want to look for?
 - 1. Typically, clouds forming a tower means updrafts—strong vertical winds. [VISUAL AID]
 - 2. Tornadoes mostly form in supercell thunderstorms.
 - a. According to the *Weather Forecasting Red Book* by Tim Vasquez, a supercell thunderstorm is “a highly organized thunderstorm” with “significant directional and speed shear with height.”
 - b. Often, you'll see an anvil cloud, [VISUAL AID] or a giant cloud that looks like an anvil in the air; sophomore meteorologist Elizabeth Suess says, “If you see an anvil cloud, go for it, no joke.”
 - c. Striations, [VISUAL AID] according to Elizabeth, are a sign that the storm is spinning and can therefore produce a tornado.
- D. When you see a storm, the chase is on.
 - 1. Follow the storm until:
 - a. Nightfall
 - b. The supercell turns into a line of storms or dies.

Transition: A chase is not over once the storm dies; chasing a storm can provide a lot of data for researchers.

III. Finally, storm chasing is not just for kicks; chasing has a large significance in meteorological research.

- A. According to Professor Flory, “we really know very little about tornado formation or what happens close to the ground in a tornado vortex.”
- B. Currently, a project called VORTEX2 places instruments in the paths of tornadoes in order to attain information on the birth of tornadoes, tornado structure, and relationships between tornadoes and their parent thunderstorms as well as tornadoes and their environments (according to www.vortex2.org)
- C. Information gathered from storm chasing may aid forecasters in predicting storms, and the forecasters can, in turn, better warn the public about severe weather.

Internal Summary: Data from a chase can help researchers immensely if the research pertains to severe storms.

CONCLUSION

As you can see, storm chasing may be more complicated than most people think. Chasing a storm requires specific tools and software; you should follow a general procedure when chasing; and, lastly, storm chasing is extremely helpful in research. Even though it is thrilling to chase a storm and it may look “cool” in the movie *Twister*, chasing can be very dangerous if you don't know what you're doing. Even the professionals take every safety precaution so that they can have a successful chase. So while you can have fun chasing a storm, you have to remember, as Elizabeth Suess says, “Chasing is nothing like *Twister*.”

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COLOR KEY

Credibility- blue

Attention- red

Reveal the topic- green

Relate to audience- orange

Preview body- purple

Signal end of speech- gray highlight

Reinforce central idea- blue highlight

Closing statement- green highlight