



CLIMATE DETECTIVES 2020 – 2021



INVESTIGATING STORMS AND HOW THEY AFFECT THE LOCAL Fenor NS Fenor NS

RESEARCH QUESTION

How are storms formed and how do they affect our local environment? What can we do to prevent damage to the local environment?

SUMMARY OF PROJECT

We have noticed in recent years that there appears to be more frequent and severe storms in Ireland. The storm warnings appear more severe and the damage caused to the local environment is apparent. The media shows us images of this damage and the fact that there are many closures of schools affect us too.

We want to investigate what storms are, where they come from and the possible causes of the severity and frequency of storms.

We plan to identify and implement simple measures that can be used to reduce the risk of damage to the local environment and help the climate in the long term.

MAIN RESULTS

Here is what we discovered:

Storms have the potential to harm lives and property via storm surge, heavy rain or snow causing flooding or road impassibility, lightning, wildfires, and vertical wind shear. Systems with significant rainfall and duration help alleviate drought in places they move through.

From gaining this information we explored some of the most severe storms in Irish history and identified four of them.

Here are 4 of the worst storms ever in Ireland:

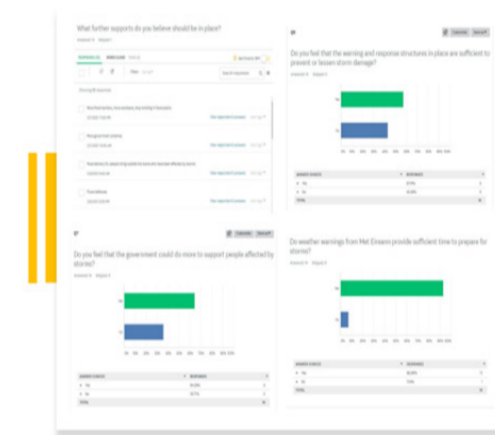
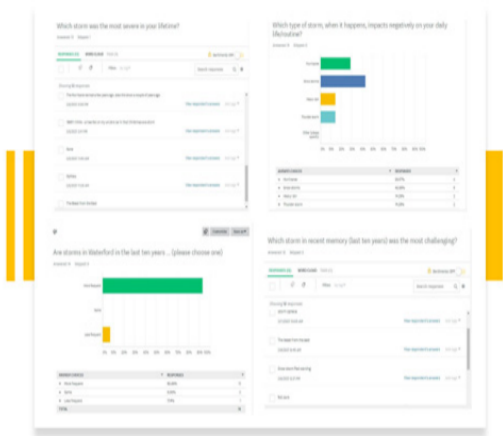
1. Night of the Big Wind - 1839
The Night of the Big Wind hit Ireland on January 6th, 1839, wreaking havoc, with up to 300 people killed and tens of thousands left homeless. The category three hurricane came after heavy snowfall on January 5th and quickly took a grip nationwide.
2. The Big Snow arrived in Ireland at the end of February 1947 and brought the country to a standstill, as roads and railways became completely covered in snow.
3. Hurricane Katia hit Ireland in September 2011. Around 4,000 homes were left without power as winds of up to 110kph battered the country. Trains were cancelled as overhead power lines were damaged and fallen trees blocked roads as the storm caused chaos with transport.
4. Hurricane Charley arrived over Ireland at the end of August 1986 and was one of the worst storms to ever hit Ireland. Charley was later downgraded to a tropical storm. Media coverage from newspaper articles, both local and national gave us an insight into the devastation caused by storms on a local and national scale. We found these articles from the Munster Express, Irish Independent and Irish times.

Next, we created some projects based on storms- one of which is found in the presentation.

Survey of Peoples perspectives- Overview

- Data Collection using a survey and analysis of results:
- Contributors identified Storm Ophelia as the worst storm in recent history in Waterford.
 - Contributors felt that storms are more frequent in recent years.
 - Contributors felt that Climate Change has a direct impact on severity of storms.
 - Contributors felt that Weather forecasting is effective regarding storm warnings.
 - Contributors identified areas in which the Government could improve on to help individuals during storms.
 - Contributors identified ways in which individuals can combat 'Climate Change'.

Data collected from survey.

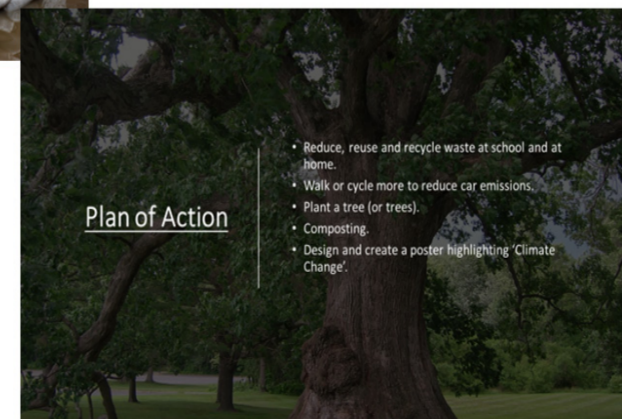


- Responses within this survey were discussed by the students and a plan of action was created using the question: What can we do in our locality?
- These responses were divided into two sections-
- Advice for others- protecting property etc.
- Children's response to climate change.



Figure 2: Summary

ACTIONS TO HELP LESSEN TO THE PROBLEM



In conclusion we identified ways in which adults can reduce the effects of storm damage by:

- installing impact-resistant shutters over all large windows and glass doors. They protect your doors and windows from wind-borne objects. They can reduce damage caused by sudden pressure changes when a window or door is broken.
- Minor flooding can cause severe damage. There are two ways to protect doorways, the most likely place for water to find a way into your home using sandbags and urethane foam.
- Secure outdoor items like trash bins and patio furniture that could blow away. Take down items like hanging plants that could be blown into windows or patio doors.
- Remove any dead or rotting trees and limbs that could fall and cause damage.

Some of the actions which we have undertaken or plan to undertake are:

- Reduce, reuse and recycle waste at school and at home.
- Walk or cycle more to reduce car emissions.
- Plant a tree (or trees).
- Composting.
- Design and create a poster highlighting 'Climate Change'.



Figure 1: Overview

Figure 3: Conclusion