





Storm activities

Junior	Middle	Senior
<p>1. Discuss with class:</p> <ul style="list-style-type: none"> • What is a storm? • What could happen in a storm? • Has our area ever suffered from a storm? <p>2. Identify the safest places in the class to shelter in a storm, and also the most dangerous places (such as windows, metal and electrical fixtures).</p> <p>3. Ask students to make a small handheld lollipop sign (red one side and green the other). Stand in different parts of the classroom and display the green side to show a safe area or the red side to show a dangerous area in a storm.</p>	<p>1. Discuss with class:</p> <ul style="list-style-type: none"> • What is a storm? • What could happen in a storm? • Has our area ever suffered from a storm? <p>2. Divide the class into groups to make a chart that shows the advice, which they think would appear on www.whatstheplanstan.govt.nz  about what to do before, during and after a storm.</p> <p>3. Groups compare their predictions with the actual information on the website. They can highlight matching ideas and add missing ones to their chart.</p> <p>4. Use their charts to make a poster about what to do before, during and after storms.</p>	<p>1. Discuss with class:</p> <ul style="list-style-type: none"> • What is a storm? • What is a tropical cyclone? • What could happen in a storm? • Has our area ever suffered from a storm? <p>2. Instruct students to research the <i>Wahine</i> storm (Cyclone Giselle) on the CD-Rom  or the internet.</p> <p>3. Ask students to identify the hazards that occurred on land during the <i>Wahine</i> storm, and to design safety guidelines that address each identified hazard.</p> <p>4. Ask students to compare their safety guidelines with those on www.whatstheplanstan.govt.nz  and the Yellow Pages®. Add anything they have not covered to their guidelines.</p>

Storm homework sheet

Junior	Middle	Senior
<p>1. Identify safe and dangerous areas in your house with help from an adult at home.</p> <p>2. Ask an adult at home if they have ever been in a storm. With their help, write a sentence about what it was like for them.</p> <p>3. Discuss with an adult what you should do with pets during a storm. Draw a picture showing what you should do.</p>	<p>1. Interview an adult at home if they have ever been in a storm. List key words and sentences about their experiences.</p> <p>2. Imagine there was a major storm tonight, and you had to rely on your emergency survival items as they are right now. Check the list of emergency survival items on www.whatstheplanstan.govt.nz  with an adult, and write down the items you have and those you don't.</p> <p>3. If there are items missing, tell an adult at home.</p>	<p>1. Interview an older person about their memories of the <i>Wahine</i> storm (Cyclone Giselle) in 1968, or another storm they experienced.</p> <p>2. Write a paragraph about the things the person did to keep themselves safe during the storm.</p> <p>3. Check your family's emergency survival items at home.</p> <p>4. If there are items missing, tell an adult at home.</p>

Fact sheet 4: Storms

What is a storm?

A storm is a disturbance of the atmosphere that can cause strong winds, rain, thunder, lightning, heavy snow and rough seas. A strong wind warning is issued by the MetService when winds of more than 87kph are expected over land.

New Zealand is particularly prone to storms, as it lies in the 'roaring forties', between 40 and 50 degrees latitude south, where mild air temperatures from the north meet cooler air from the south.

Tropical cyclones (called hurricanes in the Atlantic and east Pacific, and typhoons in the north-west Pacific) are large revolving storms which develop in the tropics, with a sustained wind speed of more than 120kph.

Tropical cyclones usually weaken as they encounter the cooler sea temperatures around New Zealand, but sometimes they can cause significant damage. In 1988 Cyclone Bola caused New Zealand more than \$200 million in damage, even though it was no longer a tropical cyclone by the time it reached our shores.

Storms have the ability to damage roads, railways, bridges, buildings and telecommunications. Crops and livestock can be affected. At sea, ships are at risk (the ferry *Wahine* foundered during Cyclone Giselle in 1968, with the loss of 51 lives).

Hazards from storms include fallen trees and poles, torn-off roofs, fast-flowing currents in streams and rivers, flying objects, land slips and flooding. Coastal areas can suffer from storm surges, which are extra-high tides caused by the high winds pushing the sea forward.

What is a snowstorm?

Even in small quantities, snow can be hazardous. It only takes a few centimetres on a road to make driving dangerous. In large quantities, snow can immobilise regions by disrupting communications, transport and supply lines, hampering the operation of emergency services, isolating communities, causing the loss of livestock, damaging forests and causing buildings to collapse under its weight. In the depths of winter, heavy snow can lie on the ground for weeks, denying livestock the ability to graze, keeping temperatures low and increasing the risk to the most vulnerable members of the community.

While the coldest winter outbreaks do not tend to bring very large quantities of snow, the combination of very low air temperatures and strong winds results in very low wind chill. Because this can occur even on sunny days, the danger it poses – hypothermia – may not be all that apparent.

Perhaps surprisingly, the heaviest snowfalls seldom occur in the coldest outbreaks. Major storms produce a lot of snow high up in the atmosphere, but most often this melts before reaching the ground. In winter, conditions near the ground are occasionally cold enough for snow to fall all the way to the land surface.

Heavy snow in the mountains often increases the incidence of avalanches. Because of the remoteness of most of New Zealand's mountains, avalanches are probably not significant hazards.

The likelihood of heavy snow is described in the severe weather outlooks, watches and warnings issued by MetService.

Primary concerns are the potential loss of heat, power, telephone service and a shortage of supplies if storm conditions continue for more than a day. It is important for people living in areas at risk from snowstorms to consider the need for alternative forms of heating and power generation.



What do we do before a storm?

When a strong wind warning is issued:

- Listen to your radio for information.
- Bring pets inside if possible.
- Help clear away anything outside that may become a flying missile in the wind.

When a snow warning is issued:

- Listen to your local radio station for information.
- Avoid leaving home unless absolutely necessary.
- If you have to travel, help make sure you are well prepared with snow chains, sleeping bags, warm clothing and essential emergency items.
- Remind your family to check fuel supplies for wood-burners, gas heaters, barbeques and generators.
- Bring pets inside if you can and help move stock to shelter.

What do we do during a storm?

- Stay inside. If outside find shelter quickly.
- Close all curtains to slow down flying glass.
- Stay away from doors and windows. If the wind becomes destructive, shelter further inside the house.
- Stay away from metal and electrical fixtures.

What do we do after a storm?

- Stay indoors and listen to the radio.
- Avoid dangling and broken power lines, if outside.