



GETTING TO KNOW

SEVERE WEATHER

IN BRISBANE



Dedicated to a better Brisbane

IN OUR PART OF THE WORLD SEVERE WEATHER IS A PART OF LIFE

Brisbane's subtropical climate usually means we have great weather with lots of sunny days, but there is a downside: **extreme weather events such as storms, floods, cyclones and heatwaves.** This kind of weather is hard to predict, but the good news is that you can be prepared. In this booklet, Brisbane City Council shares a few clever tips on how to stay one step ahead of Mother Nature – and keep yourself and your loved ones safe.

LET'S GO, LET'S BE PREPARED!



A quick note to teachers

The material covered in this booklet is designed to be useful to children in years 5 & 6 studying natural disasters and severe weather. Information is designed to create discussion and further research into our local environment and complements the National Curriculum in the following areas.

English – Year 6

ACELA1518 - Language / Text structure & organisation

ACELA1524x - Language / Expressing & developing ideas

ACELA1526 - Language / Phonics & word knowledge

ACELY1712x - Literacy / Interpreting, analysing, evaluating

ACELY1713 - Literacy / Interpreting, analysing, evaluating

ACELY1714 - Literacy / Creating texts

ACELY1801 - Literacy / Interpreting, analysing, evaluating

ACELY1717 - Literacy / Creating texts

Science – Year 6

ACSSU096 - Science Understanding / Earth & space sciences

Mathematics – Year 6

ACMSP147 - Statistics & Probability / Data representation & interpretation

Humanities, Social Science, Geography – Year 6

ACHGS040 - Geographical Inquiry & Skills / Observing, questioning & planning

ACHGS044 - Geographical Inquiry & Skills / Interpreting analysing & concluding

ACHGS045 - Geographical Inquiry & Skills / Communicating

ACHGS042 - Geographical Inquiry & Skills / Collecting, recording, evaluating & representing





FREAKY FORECASTS

So, what kind of severe weather do we need to watch out for? Let's take a look at some of the events we experience, and what causes them.

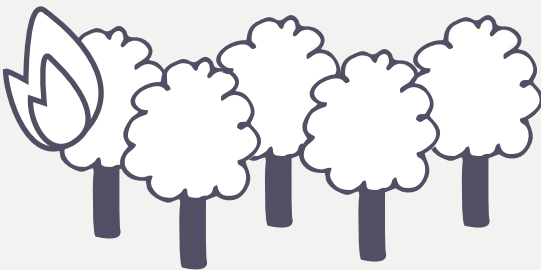
Serious storms

We've all experienced severe storms, especially in summer when heat and humidity build up. Big storms bring strong winds, heavy rain and even hail, which can cause all sorts of damage including power outages and flash flooding. Storms happen in winter too, but tend to be less severe.



Far-out floods

Floods that come and go in just a few hours are called flash floods. While they aren't always that dramatic, they can cause lots of damage and are dangerous. Never enter floodwaters.



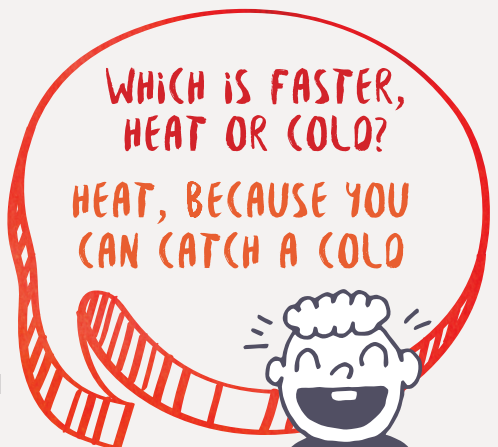
Blazing bushfires

Brisbane has been fairly lucky on the fire front unlike other parts of Australia. Even so, hot, dry, windy conditions can increase the risk of bushfire in areas with a lot of bushland nearby.



Hairy heatwaves

Everyone knows that summers in Brisbane get hot, but when temperatures hit the high-30s (and stay that way for three days or more) we call it a heatwave. During these times, it's especially important to stay cool, drink lots of water and take extra care of our pets.



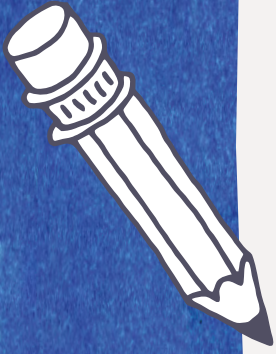
Dramatic droughts

When there's no rain for a long period of time, we experience what's called drought. Even though droughts happen gradually, they can still do a lot of damage, especially to farmland and animals – and our water supplies become low, even in the city.

Q1. What's Brisbane's annual average rainfall? Make a graph to show the annual rainfall for each of the last five years.

Q2. Can you think of three movies that feature some kind of severe weather?

(Quiz answers are on page 10)



IT PAYS TO PREPARE...

Severe weather can strike unexpectedly, and do a lot of damage quickly. That's why it's super important to be prepared. Here are a few smart tips.

1

Ask your parents to sign up to Brisbane Severe Weather Alert

at brisbane.qld.gov.au/beprepared
This means you'll get a head start before the weather hits.

2

Keep a list of emergency contacts handy

(there's one on the back of this booklet).

3

Put together an emergency kit

(we show you how on page 5).

4

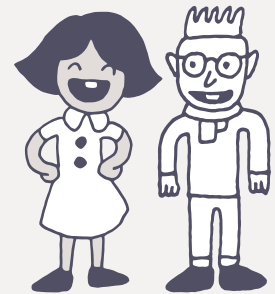
Talk to your parents

about your family's emergency plan (including when to evacuate and where to go).

5

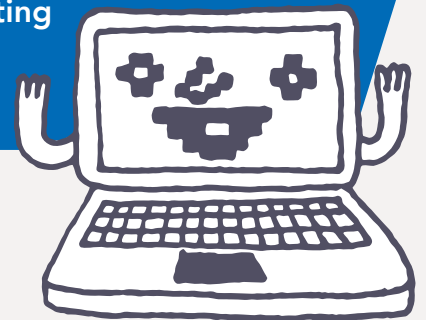
Use the checklist

at the back of this booklet to make sure your home is prepared.



RESEARCH TOPIC

Do you know what a meteorologist is? Google it and look up the Bureau of Meteorology to find out more about predicting the weather.



Q3. List five words that describe extreme weather.



Q4. How would you describe hail to someone who has never experienced it?

EMERGENCY • ESSENTIALS •



So when it comes to the crunch, what do you need to have on hand?
Here's a quick list of items we recommend including in your emergency kit.

EMERGENCY KIT



- ◆ Battery powered radio and details of local radio stations for emergency info
- ◆ Torch
- ◆ Spare batteries (to fit torch, lantern, radio, hearing aids etc.)
- ◆ Battery or rechargeable lanterns
- ◆ First aid kit
- ◆ Emergency supplies of fresh water and tinned/dried food
- ◆ Supplies of any essential medication
- ◆ Waterproof bags to keep clothing and valuables inside
- ◆ Sturdy shoes
- ◆ Rubber gloves
- ◆ Car charger for your mobile phone
- ◆ List of emergency contacts
- ◆ Hand sanitiser
- ◆ Baby food and nappies
- ◆ Pet food, supplies and registration
- ◆ Copies of important documents

ACTIVITIES

- 1 What else might you want to put in your emergency kit? Add the items to the drawing above.
- 2 Make your own hail by freezing shaved ice into different sized balls. Compare how much they weigh and imagine the damage they could do falling five km from the sky!
- 3 Imagine there's been a power cut. How could you communicate with people to organise an evacuation? Create a diagram or mind-map.
- 4 Draw a plan of your house showing the best places to shelter in a storm, the exits, where to turn off the water, electricity and gas, and where your emergency kit is kept.

GET SET FOR STORMS

What causes storms?

Thunderstorms are the result of three ingredients coming together: moist air, an unstable atmosphere and a low-pressure weather system (such as a trough or front). Simply, cooler air pushes warmer, humid air upward into the unstable atmosphere – where it forms clouds.

What about lightning and thunder?

Each cloud has positive and negative electrons (charges). When clouds grow rapidly, gaps appear between these charges, causing a spark – better known as lightning. When lightning strikes, it rapidly heats the air around it (up to 30,000 °C in just a fraction of a second). This results in the explosive sound of thunder.

Why does it hail?

Storm clouds contain water vapour that usually falls to the ground in the form of rain. However if the air around the cloud is extra cold, water vapour freezes and forms hailstones. These can range in size from millimetres to the size of a tennis ball (ouch!).

What's the difference between a storm and a cyclone?

When storms are really severe, they can evolve into tornados or tropical cyclones. Cyclones are basically really extreme, rotating storms, which can produce dangerous gale-force winds, heavy rainfall and storm surges (which can cause flooding of low-lying coastal areas).

When is storm season?

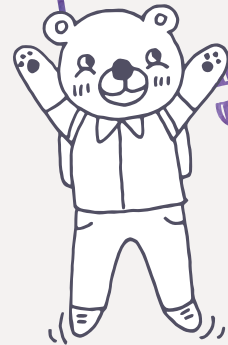
In Brisbane, storm season is September to March. However storms can happen any time, so it's best to be prepared all year around.

How can we prepare for storms?

Start by subscribing to free weather alerts (or asking your parent or carer to do so) and knowing what to put away in the yard or balcony before the storm. It also pays to prepare an emergency kit (which we showed you how to do on the previous page).

If a storm hits, stay inside away from windows, and in the strongest part of your house (usually the bathroom). You should turn off appliances and avoid using the phone, but you can stay tuned to your portable radio for updates. If you're caught outside, try to find emergency shelter but stand away from trees (as they can be struck by lightning).

WHAT DID THE RAIN CLOUD WEAR UNDER ITS RAIN COAT? THUNDERWEAR!



WHERE CAN WE FIND HELP?

The State Emergency Service (SES) is a volunteer service set up to help out after storms or floods. Volunteers give up their time to help with temporary repairs, cover roofs and saw fallen trees.

Q5. What does SES stand for?

Q6. What speeds can the wind reach in a Category 2 cyclone?

Q7. What's the difference between a cyclone and a hurricane?

WILD WEATHER WORD SEARCH



C T V E A E M E R G E N C Y K I T
 P Y R A I N P U Y W S W P R T E F
 R O C S E I R E T T A B G R M O L
 E M R L U A S T U W N O S P T N F
 V X D R O U G H T F D G E T O F P
 E O P L A N S K T W B R S R T E R
 N L R E C A E T Y W A O G R I V E
 T F E G E O B S J T G D A R P A P
 I W E R I F H S U B M W G W M W A
 O I D A R A S R R Y M I W A T T R
 N I K Y C N E T Y E N N Q T I A E
 F O R E C A S T A P L D W E L E D
 T X M R O T S T O W F O G R K H F

CAN YOU FIND THESE WORDS?



- | | | | | |
|----------|-------------|------------|---------------|-----------|
| CYCLONE | WIND | DROUGHT | WATER | FORECAST |
| STORM | RAIN | BUSHFIRE | EMERGENCY KIT | BATTERIES |
| PREPARED | HEATWAVE | PREVENTION | RADIO | SES |
| | TEMPERATURE | | PLAN | SANDBAG |

RESEARCH TOPICS

1. How does Brisbane City Council recommend preparing for storms?
Search 'be prepared Brisbane' to find out.
2. How much damage did the November 2014 Brisbane hail storm cause?
YouTube the footage or search for media stories to find out more.



FAR-OUT FLOODS



South Bank, 2022

Why do we get floods?

Brisbane is situated on a flood plain and in the warmer months, we're prone to flooding after heavy rainfall. Around the river and foreshore, the flood risk is especially high as this area can be affected by river flooding and high tides, sometimes called king tides, or storm surges.

How can we be flood-ready? The first important thing is to know your local area. Ask an adult if you're in a flood zone, and look up Council's interactive flood maps online. Just like with storm preparation, it's a smart move to put together an emergency kit, keep emergency phone numbers handy and sign-up for weather alerts.

If you're in a low-lying property, building a sandbag wall at the first sign of serious flooding can help protect your property. Council provides pre-filled sandbags available for collection 24 hours a day, seven days a week from September to March and also when there is severe weather predicted.

What if we do get flooded?

Don't panic – while floodwaters can rise quickly, Council will be watching closely. Listen to community announcements (this is why it's worth having a battery-operated radio!).

Remember, if it's flooded, forget it! Even if it looks like it'd be fun to have a dip, you never know what may be under the surface (things like drains, power lines, snakes and sewage – yuk!). Floodwater can also be deceptively fast-moving, with strong currents, so keep out.

Q8. What are the four different types of flooding we experience in Brisbane?

Q9. When are we most at risk of flooding in Brisbane?



Edward Street Brisbane CBD 1974

ACTIVITIES

- 1** What's your school's flood risk? Research this online, and come up with an evacuation plan, thinking about roads that flood.
- 2** Want to know how to build a sandbag wall? Watch the SES video for a demonstration.
- 3** Imagine there's been a flood in Brisbane and write a news report on how it's affected the city.



× BLAZING × BUSHFIRES

In Brisbane, bushfire danger is greatest from August to December, so we should take special care in these months – after all, bushfires can destroy homes and lives.

What sets off a bushfire?

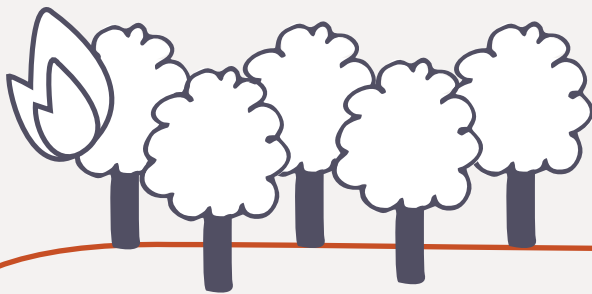
Bushfires can be started on purpose or by accident, often by lightning from storms. Sometimes, they start as a fire (or even a BBQ) someone has left unattended. Fires can also begin when flammable chemicals, such as petrol, are left out in the sun, or cigarettes or matches aren't put out properly. Even the light reflected by a mirror or glass can be enough to start a fire.

If the weather is hot, dry and windy, the fire danger is higher, as fire can spread and get out of control faster (if you want to check, look at the fire danger warning signs. Red is bad!).

How can we stay safe?

Keep a close eye on the fire danger rating, and take special care to keep your garden clear of sticks and twigs that will burn easily. Also remind your parents not to store fuel (like petrol for the lawnmower) near the house, or in the sun. Finally, talk to your family about your bushfire plan and local Neighbourhood Safer Place, which is where you'll go if you ever need to be evacuated.

Council sometimes does planned burns when fire danger is lower, usually March to August, which helps keep overgrown bush under control. That means if a bushfire starts, it won't have as much fuel to consume.



Q10. If someone sets a fire on purpose, what crime are they committing?

Q11. What are the six fire danger ratings?

Q12. Who fights fires in Brisbane?



HAIRY HEATWAVES!

When does just plain hot become a heatwave?

According to the Bureau of Meteorology, a heatwave is when maximum and minimum temperatures are higher than usual for three or more days in a row. While we're likely to notice the maximum temperatures in a heatwave, the minimum temperatures are important too. They often stay quite high, even overnight, which means it's hard for people and the environment to recover because they don't get a break from the heat.

How can we keep cool and carry on?

Staying hydrated is a must, so drink plenty of water. Also, staying out of the sun and in air-conditioning is a good way to stay cool – as is wearing loose, light-coloured clothes made from natural fibres, such as cotton. Finally, try not to do too much physical activity. It may be tempting to run around in the playground, but your body can't cope as well when it's really hot. Take it easy until the temperature returns to normal.

What about pets?

It's important to take extra care of your pets in any extreme weather, but particularly in heatwaves. Dogs and cats need access to plenty of water, and you can keep it cool for them by adding ice cubes. If they don't like regular ice cubes, try freezing beef stock. It's like a pet-friendly icy pole! And whatever you do, don't leave your pets locked in cars. Even five minutes can be deadly – on a 30 °C day, temperatures in cars can reach 70 °C.

WHAT DID ONE
PIG SAY TO
THE OTHER PIG
AT THE BEACH?
I'M BACON!



ACTIVITY

Design a How to Stay Cool poster including the handy hints from above.

Q13. How much water should we drink each day in hot weather?

Q14. What temperature does it have to reach for schools in Queensland to close?

QUIZ ANSWERS: 1. Average rainfall in Brisbane is 993 mm. 2. Wizard of Oz, The Perfect Storm, Twister, The Day After Tomorrow, Ice Age, 2012. 3. Scary, dangerous, unpredictable, loud (etc.). 4. Like being hit with little ice blocks. 5. State Emergency Service. 6. 117 km/hr (with gusts up to 164 km/hr). 7. Cyclones and hurricanes are different names given to the same weather patterns in different parts of the world. There is a difference though – in the southern hemisphere cyclones rotate clockwise; in the northern hemisphere they go anti-clockwise. 8. Creek flooding, river flooding, overland flow, and storm and king tide flooding. 9. November to May. 10. Arson. 11. Low, moderate, high, very high, extreme and catastrophic. 12. Queensland Fire and Emergency Services, Council and Rural Fire Service Queensland. 13. 1.5 litres (seven glasses) each day. 14. There's no rule about this, so it depends on what your school decides.

≡ HOW PREPARED IS ≡

YOUR HOME?



BE A NATURAL DISASTER DETECTIVE
WITH OUR HOME CHECKLIST! 🔍



Want to make sure your home is ready for wild weather? Take this handy checklist home and ask an adult to help you with it.



SEVERE WEATHER CHECKLIST

- Clear leaves from gutters and stormwater drains
- Trim tree branches away from the house
- Get an arborist to check large trees
- Check your flood risk on Council's flood awareness map
- Check your bushfire risk on the QFES bushfire map
- Develop an emergency and evacuation plan with your family (include pets if you have them)
- Pack an emergency kit with food and water, your medicines and first aid, torches and batteries, battery-operated radio and family essentials
- Display emergency contact numbers on the fridge
- Register for Council's Brisbane Severe Weather Alert service
- Know which outside items need to be put away before a storm
- Get to know your neighbours
- Check your insurance policy covers you for disasters





KEEP THESE NUMBERS HANDY IN
CASE OF SEVERE WEATHER.

EMERGENCY CONTACTS



Police, fire and ambulance 000 (triple zero)

State Emergency Service (SES) 132 500

Brisbane City Council 3403 8888

Energex (fallen powerlines) 13 19 62

RSPCA (animals) 1300 264 625



Queensland
Government

Brisbane City Council has tools and information
to help you be prepared for Brisbane's severe weather.

Visit brisbane.qld.gov.au/beprepared

Want to do some more research? Here's where to go:

bom.gov.au

getready.qld.gov.au

qfes.qld.gov.au

Brisbane City Council
GPO Box 1434
Brisbane Qld 4001



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information is correct at time of printing




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