



CONVERSATION GUIDE: EXPLAINING CLIMATE & WEATHER

It's easy to get into a typical conversation about the weather. It's harder to talk about how changing weather patterns relate to climate change - especially when climate and weather can often get confused.

In Australia, we've experienced it all: extreme heat, devastating droughts, raging bushfires, floods and cyclones. But these extreme weather events are getting worse as the world heats up.

So we've put together some ways to **turn an ordinary conversation about the weather into something a lot more interesting, and far more important: climate change.**



WHEN SOMEONE BRINGS UP HOW HOT IT IS OVER THE SUMMER, YOU COULD...

TALK ABOUT HOW TEMPERATURES HAVE BEEN RISING NOW FOR DECADES FROM THE BURNING OF COAL, OIL AND GAS, WHICH IS INTENSIFYING CLIMATE CHANGE, AND BACK IT UP WITH STATS ABOUT RECORD BREAKING HEAT HERE IN AUSTRALIA.

How hot is it today?!

So hot! Did you know that climate change is causing a significant, rapid increase in average global temperatures? And as you can tell, we're already feeling it here in Australia, where 9 of the 10 hottest years on record have all occurred since 2005. If you're younger than 40 years old, you won't have experienced average or below average annual global temperatures in your lifetime. And if we don't reduce our greenhouse gas emissions, experts say it's only going to get hotter.

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Read more here: [The Angriest Summer](#) or [read this explainer](#)

TALK ABOUT HOW HEATWAVES ARE BECOMING MORE FREQUENT, INTENSE AND LASTING LONGER THAN EVER BEFORE DUE TO CLIMATE CHANGE.

This heatwave feels like it's been going forever!

If it feels like heatwaves are getting longer, that's because they are! They're also becoming more frequent and more intense, and it's all due to climate change. Heatwaves are deadly: more Australians have died due to heatwaves since 1890 than bushfires, cyclones, earthquakes, floods, and severe storms combined. So it's critically important that we stop burning coal, oil and gas, which is intensifying climate change. Otherwise, heatwaves are likely to worsen as our planet continues to warm.

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Read more here: [The Silent Killer: Climate Change and the Health Impacts of Extreme Heat](#)

TALK ABOUT MARINE HEATWAVES, AND HOW THEY RESULT IN MASS BLEACHING EVENTS OF OUR CORAL REEFS.

At least all this hot weather might mean the water is warm enough for a swim!

Yeah, too warm! Rising ocean temperatures are harming marine life. Climate change has driven a *54% increase* in the number of marine heatwave days each year (between 1925-1954 and 1987-2016). Back-to-back marine heatwaves in 2016 and 2017 resulted in mass coral mortality on the Great Barrier Reef, putting our precious natural wonder at serious risk.

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Watch this: [The biggest threat to the Great Barrier Reef](#)

WHEN THE CONVERSATION SHIFTS TO EXTREME WEATHER, LIKE SUPER-CHARGED STORMS, CRAZY RAIN, OR A LACK THEREOF, YOU COULD...

TALK ABOUT HOW CLIMATE CHANGE IS MAKING EXTREME WEATHER WORSE ACROSS THE COUNTRY, AND HOW WE'RE ALREADY EXPERIENCING THE IMPACTS OF THIS NOW.

Did you see the crazy storm on the weekend? It went from hot and sunny to rain with hail in the space of minutes!

Yes I did, it was wild! And unfortunately, a storm like that is just the beginning. Climate change is influencing extreme weather events, because they're occurring in a more energetic climate system. For example, as the climate warms, heavy rainfall is becoming more intense, which increases the risk of flooding. At the same time, some parts of southern Australia are getting less rainfall, exacerbating droughts. Dangerous bushfire weather is also worsening over most parts of Australia. Australia is one of the most vulnerable developed countries in the world to climate change, and we're already feeling the impacts.

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Read more here: [*Report: Weather Gone Wild*](#)

TALK ABOUT THE INCREASED RISK OF BUSHFIRES DUE TO CLIMATE CHANGE, AND USE RECENT FIRES AS AN EXAMPLE.

It's so hot, dry and windy today.

Yeah it is - which means prime bushfire weather. Hotter, drier conditions mean that bushfire weather across Australia is becoming more dangerous. *Since the 1980s*, scientists have warned that climate change would increase bushfire risk in Australia. We're seeing that play out now, with fire seasons extending and conditions worsening, making fires harder to fight than they used to be.

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Watch this: [*This is Not Normal - Climate Change and Escalating Bushfire Risk*](#)

TALK ABOUT HOW CLIMATE CHANGE IS EXACERBATING DROUGHT CONDITIONS ACROSS THE COUNTRY.

My backyard is so dry and dusty, I wish it would rain!

Me too. But climate change is causing temperatures to rise, which is influencing rainfall patterns in Australia (with less cool season rainfall across mainland Southern Australia). This is exacerbating drought conditions. For example, Southeastern Australia is currently gripped by a devastating and prolonged drought, with rainfall from January 2017 to October 2019 the lowest on record for the Murray-Darling Basin and for New South Wales.

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Watch this: [*Dangerous Summer: Escalating Bushfire, Heat and Drought Risk*](#)

ONCE YOU'VE SUCCESSFULLY CONNECTED THE TOPIC OF WEATHER TO CLIMATE CHANGE, YOU COULD CONSIDER...

EXPLAINING THE DIFFERENCE BETWEEN WEATHER AND CLIMATE, WHILE MAKING THE LINK EXPLICIT.

Weather, climate... what's the difference, anyway?

Although related, weather and climate are different. Climate refers to the average weather conditions over a period of 30 years or longer. Weather, on the other hand, refers to what you see and feel outside from day to day (e.g. sunny, rainy). So, climate change is any change in the climate, lasting for several decades or longer, including changes in temperature, rainfall or wind patterns.

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Read more about what this means in 'So, what even is climate change?', below.

TOUCHING ON THE SOLUTIONS TO CLIMATE CHANGE - AND THERE ARE MANY - TO MAKE SURE YOUR FRIEND KNOWS THAT WHILE THE ISSUE IS URGENT, WE HAVE THE SOLUTIONS AVAILABLE NOW TO FIX IT.

Thinking about how to fix this is making me sweat! How do we do it?

The good news is, the solutions already exist. Switching to renewable energy and storage technologies is the fastest way to drive down greenhouse gas emissions in Australia. Even better - renewable energy sources, like solar and wind, are now cheaper than new coal! And more than two million Aussie households have solar panels on their rooftops. We're leading the world!

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Read more here: [*Powering Progress: States Renewable Energy Race*](#)

SO, WHAT EVEN IS CLIMATE CHANGE?

Long-term air and ocean temperature records clearly show the Earth is warming. The global average temperature has already risen by 1.1°C since the pre-industrial period. This might not sound like a lot, but 1.1°C represents a massive amount of extra heat and energy.

Already at 1.1°C warming, we're experiencing devastating droughts, unprecedented bushfires, and deadly heatwaves, among many other things. These climate problems have human impacts, affecting our communities, health, economies and livelihoods.

International efforts to limit global temperature rise to no more than 1.5°C are critically important. Even at 1.5°C of global warming, coral reefs, for example, are likely to experience a further decline of 70-90%. And impacts amplify rapidly between just 1.5°C and 2°C of temperature increase: 2°C would see a further decline of 99% of coral reefs ([*click here for a full explanation of the difference between 1.5°C and 2°C warming*](#)).

For decades, scientists have been telling us that burning fossil fuels (among other human activities, like deforestation and agriculture) is causing the Earth to warm. But now, scientists are saying our climate is changing much faster than originally predicted. This means we have to act faster to reduce our dependence on fossil fuels for energy. The actions we take now will determine our future.

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Read more here: [*What is Climate Change and What Can We Do About it?*](#)