



Introducing the Science

Climate Science

- Evidence of climate change include global temperature rise, warming oceans, melting ice sheets, sea level rise and increase in extreme weather events
- Impacts of climate change in Australia include increased bush-fire frequency and intensity, food insecurity, heatwaves and biodiversity loss
- Specific impacts of climate on Australia's biological world remain largely unknown (until now...)

Biology & Phenology

- Everything is connected, changes in one part of an ecosystem inevitably impact other parts, which impact others (and so on)
- Indicator species are organisms whose presence, absence or abundance reflects a specific environmental condition
- Indicator species can be used as a "cheat sheet" to monitor changes in ecosystem health or function
- Phenology studies the timing of life cycle events of plants and animals, and how these are influenced by variations in climate (e.g. flowering times or nesting times etc.)
- ClimateWatch monitors the phenology of a suite of scientifically selected indicator species

Helpful Resources

- [TEAL tool](#) - Allows educators and students to visualise the world's changing climate
- [What is the greenhouse effect?](#) - Engaging and informative short video by NASA Space Place
- [It's Us](#) - Short video detailing the evidence that points to humans being the main cause of contemporary climate change (chemistry focus)
- [Phenology and Nature's Shifting Rhythms](#) - TED ED style video that explore the science of phenology with an easy to grasp example!