Farrer High School- Cultivating Classrooms Professional Development

NSW DPI Schools Team

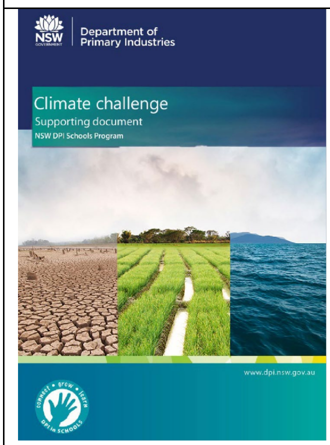
Find all our resources at: https://www.nswdpi-schools-program.com/

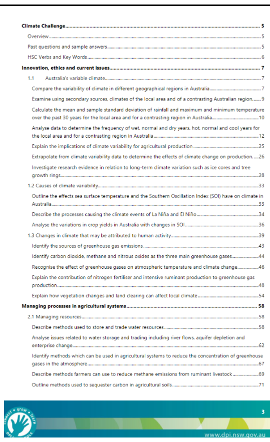
Climate resources

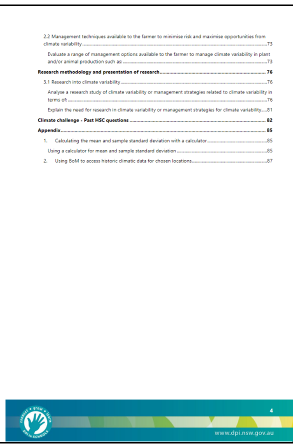
The Climate Challenge PD- Online $150 (in the process of seeking NESA accreditation) 6 hrs
https://www.nswdpi-schools-program.com/teacher-professional-development

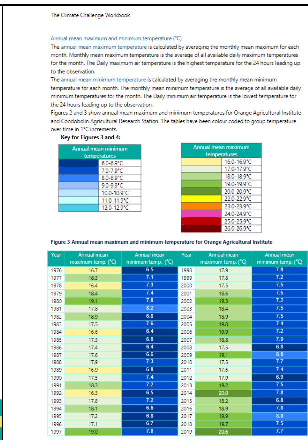
- **Description** This course will assist teachers of Agriculture and Primary Industries subjects in NSW to deliver up to date information related to weather and climate change. It specifically addresses the Stage 6 Agriculture elective *The Climate Challenge* but also provides general information in relation to the main drivers of weather patterns in Australia, impacts of climate change to our agricultural systems and risk management techniques. (Will be useful for new climate content in upcoming new Stage 5 syllabus)
- **Includes:**
    - 6 learning modules Each module includes a range of activities and information sources, and course notes to help you learn about climate, how climate variability affects agricultural production and risk management techniques.
        - An overview of weather and climate (1.5 hours)
        - Australia's variable climate (1 hour)
        - Climate variability (1 hour)
        - Managing processes in agricultural systems (1 hour)
        - Research into climate variability (0.5 hours)
        - Create your own fully resources teaching and learning unit program (1 hour)
    - Writeable students study guide covering all HSC elective outcomes and content (dot points) and past HSW questions
    - Example program (matching the study guide)
      Here's a sneak peak at the students workbook and learning modules

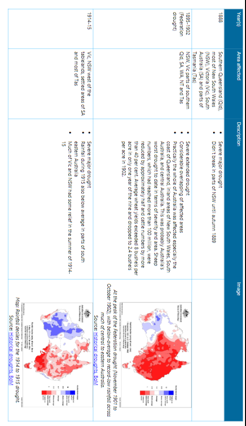
Students workbook

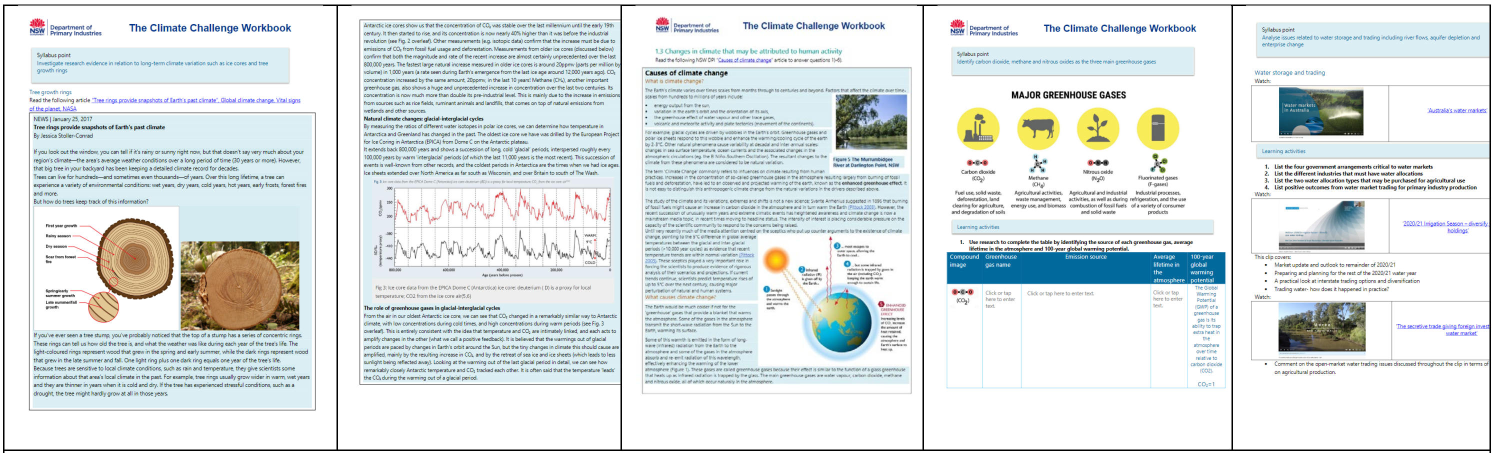




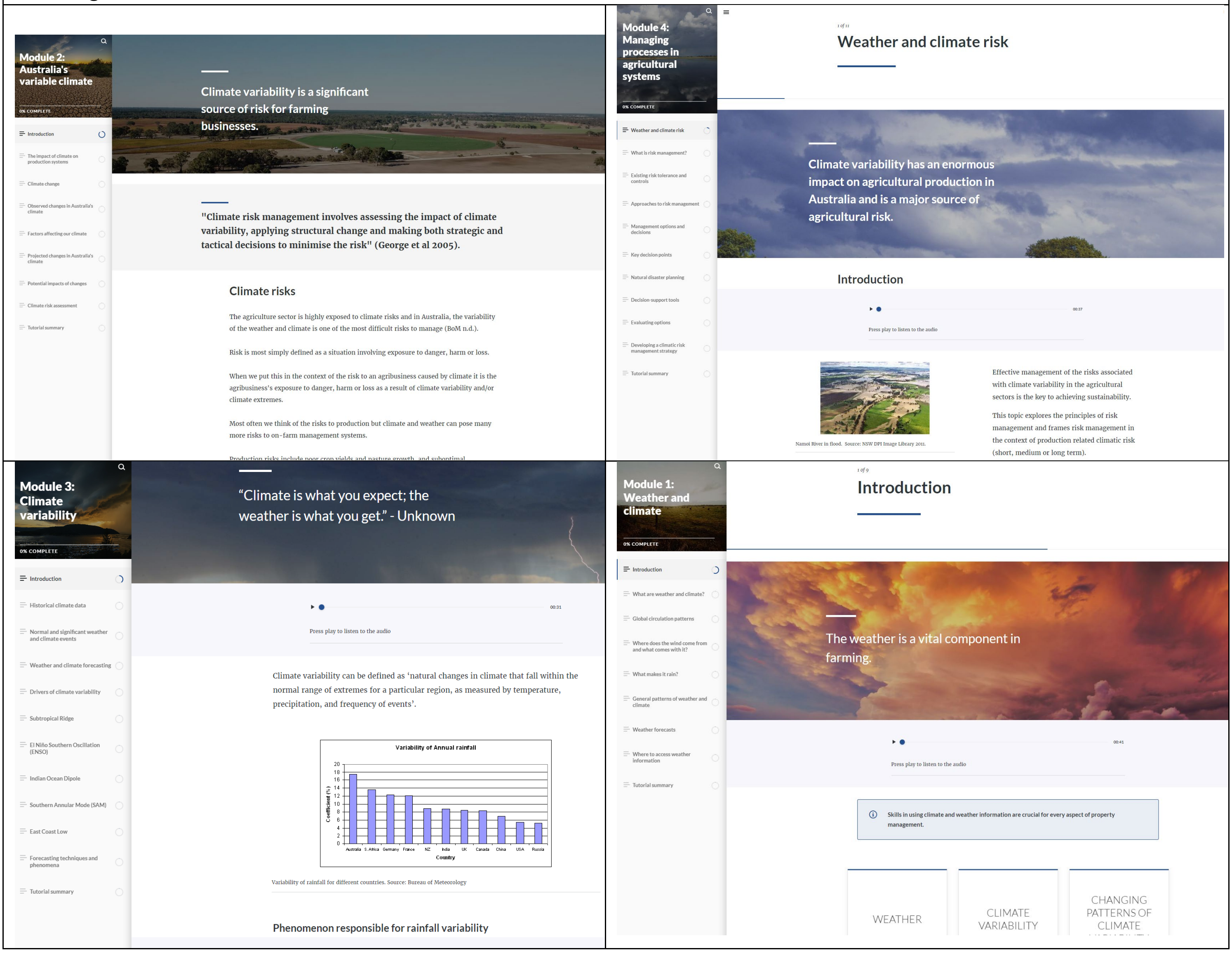








Learning modules



Module 5: Research into climate variability

This module identifies research into climate variability and related management strategies. Research is essential to Australia's food security now and into the future.

ACTIVITIES:

1. Review the range of research papers from those provided in the NSW DPI The CLimate Challenge workbook and list at the bottom of the page to identify the following syllabus outcomes required in the Climate Challenge elective. These w assist you in determining which example/s address the needs of your teaching program and students.
2. Syllabus outcomes: analyse a research study on climate variability or management strategies related to climate variability in terms of:
   - design of the study
   - methodology of the study
   - collection of data for the study
   - presentation of data
   - analysis of data
   - conclusions and recommendations
3. In this elective students are required to explain the need for research in climate variability or management strategies for climate variability. View the range of resources below and then develop your teaching strategy in your Climate Challe workbook.

Why study climate?

- State of the Climate 2018
- State of the Climate 2018: Behind the science - ocean temperatures and heat content
- State of the climate 2018: Behind the science - climate extremes
- Farmers plan for climate change using the Adapt NSW portal

Approximate time to complete: 30 minutes

Resources:

- Farms of the future digital resources - The NSW DPI *Climate Smart Pilots* project trials digital technologies that improve the information generated on natural resources and climatic variability. Check out the range of digital resources.

Module 6: Create your own fully resourced teaching and learning unit program

This module allows you to focus on developing your own resourced teaching and learning unit and program.

Provided are the NSW DPI Climate Challenge student study guide and the Analyse a Research Study- sample papers document. They are aligned to cover all syllabus outcomes for the NSW Agriculture Stage 6 syllabus, Elective 2- Climate Challenge

Provided is a sample program for the elective written by NSW Education Authority (NESA) HSC Agriculture – Unit of work – Elective 2 Climate Challenge

ACTIVITIES:

1. Take this time to modify the provided program or create your own to reflect your own teaching and learning plan. Make sure to link to any resources you plan to use throughout the unit, planned activities and assessments. NSW DPI Climate Challenge student workbook provided to get you started.

Resources:

- PD CLIMATE CHALLENGE writable.pdf
- NESA Sample unit Ag Climate Challenge-1.docx
- Analyse a Research Study- Climate Challenge papers

- Climate Dogs- animations for teaching/understanding the drivers behind Australian weather https://youtu.be/xk9LkrTEpBc

Climate influences on Australian weather

Published 8 March 2022

Meet the ClimateDogs

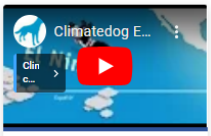
Understanding what influences Australia's climate at key farm decision making points throughout the year is crucial. The NSW ClimateDogs animation series uses sheep dogs to explain complex atmospheric phenomena. The series has been developed in collaboration with the Australian Bureau of Meteorology and Victorian Department of Primary Industries.

MOJO

Is the Madden Julian Oscillation of tropical systems near the equator, which can influence Australia's weather and climate, especially during the warmest months of the year.

RIDGY

Otherwise known as the Subtropical Ridge is the lead dog of the pack. RIDGY's position and intensity have a significant influence on weather in NSW. Recent changes in RIDGY's behaviour appear to be driving some significant changes to southern NSW rainfall patterns.

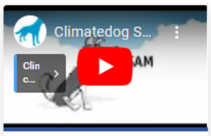


ENSO

Represents the El Niño Southern Oscillation. Changes in ENSO's behaviour has a significant influence on rainfall probabilities in inland NSW during the winter and spring period.

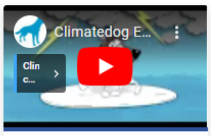
INDY

Represents the Indian Ocean Dipole. Like ENSO, changes in INDY's behaviour also has a significant



SAM

Represents the Southern Annular Mode and is a complex climate dog. Recent changes in SAM's



EASTIE

The East Coast Low phenomena represents the deep low pressure systems that are an important

Please reach out to for any inquiries to megs.dunford@dpi.nsw.gov.au

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