

MATHS TREATS

BY LUCIANA
THE POSSUM



BRIGHT - AUTUMN IN AN ALPINE VALLEY

Bright is a town in north-eastern Victoria located in the Ovens Valley between the Ovens River, Mount Buffalo National Park and the Alpine National Park. It is well known for its beautiful autumn foliage and is close to several high-country winter snowfields.

AUTUMNAL FOLIAGE COLOR



Australia doesn't have many native deciduous trees. Unlike temperate area deciduous trees, which lose their leaves as the weather gets colder, the majority of Australian native deciduous trees live in tropical or subtropical areas and lose their leaves leading up to the dry season. The wonderful autumn foliage displays in Victoria are primarily by exotic (imported) trees.

ACTIVITY

Find some deciduous trees near your home or school and make daily observations of the trees and environmental conditions (e.g., maximum, minimum and average temperature, time of sunrise and sunset, and rainfall). Chart your data. Can you find correlations between the tree type, changes in leaf colour, and environmental conditions? How do the timing and foliage changes near you compare to other parts of Victoria famous for their autumnal leaf colour?

REFERENCES AND FURTHER READING

DECIDUOUS PLANTS

<http://earthsky.org/earth/why-do-trees-shed-their-leaves>

Autumn leaf colour https://en.wikipedia.org/wiki/Autumn_leaf_color

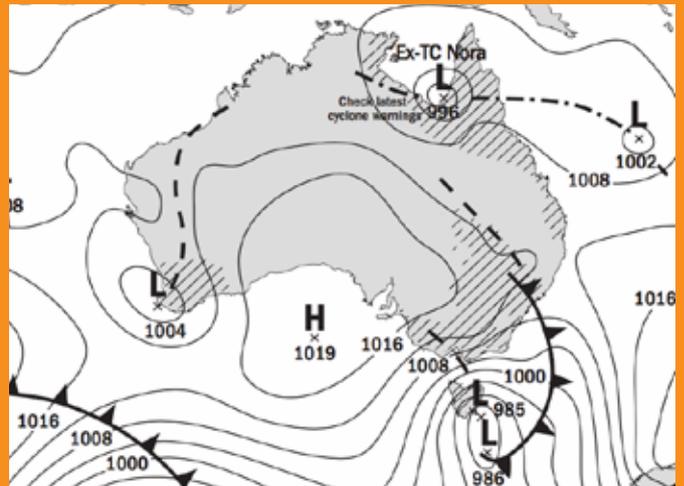
The science of colour in Autumn leaves www.usna.usda.gov/PhotoGallery/FallFoliage/ScienceFallColor.html

Why don't we have more native deciduous trees in Australia? www.abc.net.au/news/science/2016-03-07/deciduous-trees-in-australia/7200608

WEATHER

Bright's weather https://en.wikipedia.org/wiki/Bright,_Victoria#Climate
Follow the links to subtropical highland climate and the Köppen climate classification scheme and search for 'Numerical weather prediction'.

GEOGRAPHICAL IMPACT ON WEATHER



Bright is 319 metres above sea level and has a subtropical highland climate with four noticeable seasons. The weather in Bright is more consistent than other parts of Victoria due to the Great Dividing Range, which blocks many weather fronts from reaching that far north. Being in a valley, the weather can be quite localised, especially the rainfall.

ACTIVITY

Become familiar with topographic maps and air pressure maps. Research the main weather systems which influence Victorian weather. In what ways do you think the geography affects the weather in different parts of Victoria? Based on this, predict what the typical weather will be in different parts of Victoria during different seasons.

Interpreting the Mean Sea Level Pressure (MSLP) Analysis www.bom.gov.au/australia/charts/Interpreting_MSLP.shtml#howwhat

www.abc.net.au/radionational/programs/scienceshow/mathematics-improves-weather-forecasting/8820846 (audio)

www.theguardian.com/science/alexs-adventures-in-numberland/2015/jan/08/banking-forecasts-maths-weather-prediction-stochastic-processes

IMAGES

Leadbeater possum - Steve Kuitert

Leaves - Pixabay

Map - Bureau of Meteorology