

# Introduction

Julian Edmund Tenison Woods was cofounder of the Sisters of Saint Joseph with Mary MacKillop and founder of the Sisters of Perpetual Adoration.

Julian was a priest, missioner, scientist, educator, poet, journalist, scholar, artist and musician. He used his many talents as gifts for others. He especially loved to learn about the natural sciences. He was a deep thinker who recognised the presence of God in all the little moments of life. He found no difficulty in combining Science and Religion as he regarded

the sacredness of all creation as a foundation for his love of God. In fact, his God was an ever-present God for whom "music, paintings, sculpture are handmaids of devotion" JTW 1881

Elements of Father Woods' scientific work is still being used today, and in his time his work was widely accepted. His body of work covered the areas of geography, geology, marine biology, botany and palaeontology. His published work included six books and approximately 175 published articles.

To commemorate Julian's anniversary, we invite people of all ages to make time to experience and appreciate our world by taking part in activities that reflect Julian's passions. In this year of Saint Joseph as we take this opportunity to ground ourselves in relationship with our natural world, we can join with Julian who says: "St Joseph... can and will do wonders for you if only you ask him (JTW 1887)



# Activity 1:

Observing a sunset and sunrise

Julian said:

All created things give us ideas and glimpses of the beauty of the infinitely beautiful Creator (JTW 1881)

Set your alarm and see if you can wake up for a sunrise or catch a sunset

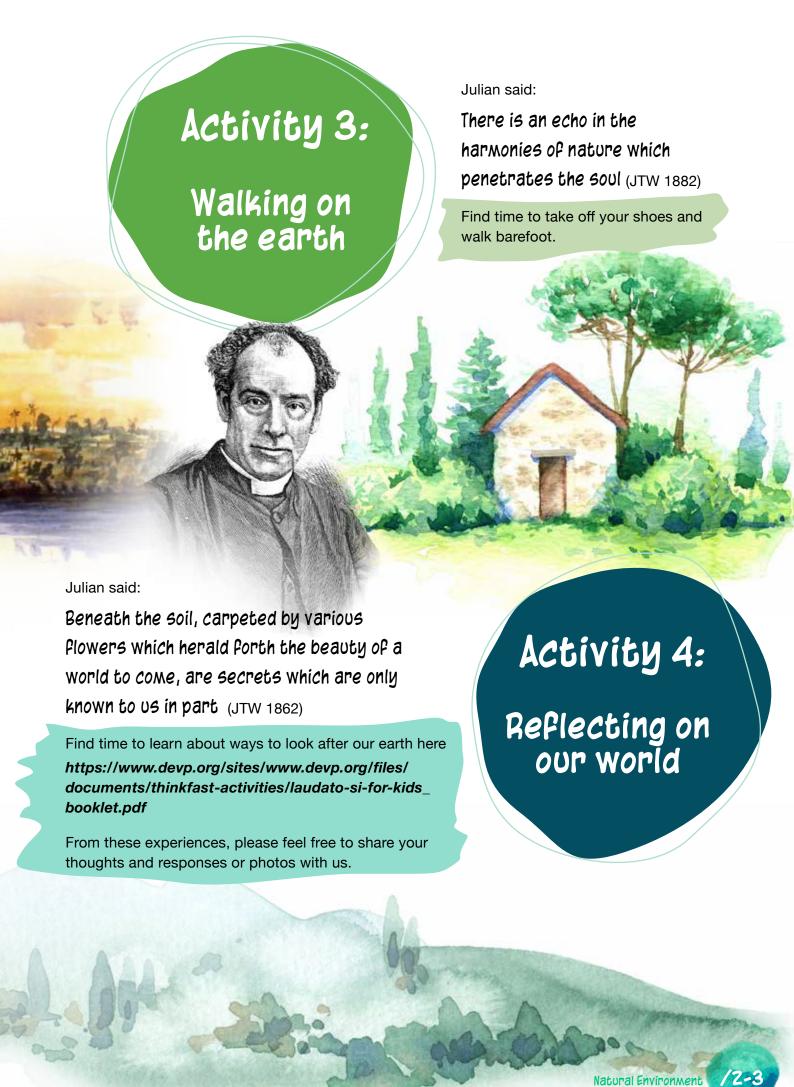
Activity Z: Reaching out to the sky

Julian said:

All our discoveries enlarge our small ideas of the immensity of Omnipotence... Beneath the soil ... are secrets which are only known to us in part. But these revelations, small as they are, stretch far beyond our comprehension. We learn that the dust we tread upon was once alive, the rock on which we stand has lived and died - has been a thing of life and is now a stone: and this is a time that reaches so far back as only to be understood by the One who was from eternity ... and whether we search in earth, or sky, or sea, we are everywhere met by the visions of the Illimitable.

(From J E Tenison Woods (1862), Geological Observations in South Australia.)

Find time to lie on your back and look at the sky (make sure you are not looking directly at the sun).



# Trees

Julian was a trailblazer in his understanding of the ecology of plants, he recognised their symbiotic relationships with one another and more than that he understood that this relationship was God's own design.

Julian learnt so much about our world by examining life through a microscope.

"There is not a grain of sand cast forth from the bosom of the earth that is not stamped with marks innumerable to show the nature of its origin. As truly as every coin bears a stamp to mark the place of coinage, so each tiny grain of dust bears its impress unmistakably. It is almost proverbial to say that grains of sand are as like one another as things will be. But direct the tube of the microscope upon them and what a number of differences are revealed. The volcanic grain with its freshly molten certificate of character, its glassy inclusions, its gas cavities, and its optical properties has entirely peculiar qualities of its own which no other grain of sand in the world can pretend to" (p311).

(From J E Tenison Woods, The Desert Sandstone, in Journal Royal Society of NSW (7 Nov, 1888), p. 200-335)



Julian loved forests, he said "every rock, every leaf, every insect has something beautiful, nay, wonderful to tell (JTW 1880)

Keep courage whatever you do. The best and strongest trees you know are the slowest growing (JTW 1875)

The flowers will unveil the hidden secrets of their beauty; the stones reveal their crystalline structure, and the tiniest insect displays wonders.... (JTW 1880)

# **Under 3yrs**

Go out to the yard or a park and touch all the different parts of a tree, the trunk, the leaves, the branches, the flowers, the roots. Try a different tree.

let's go...

# 3-5 yrs Get a very small brush or cloth and gently wipe the dust from all the leaves on your house plants, now gently give them some water and carefully put them in a sunny spot for 30 mins. 5-8 yrs Find a magnifying glass, or an iPhone app to use. If you don't have either of those, you can make a magnifying glass with a paper clip and some water. Find some leaves, bark or flowers to look at under the magnifier. 8-12 yrs

Click here to a look at the rainforest superpowers and what plants would suit your garden. Do you live in a temperate Biome or a tropical Biome?

https://www.rbgsyd.nsw.gov.au/Learn/Living-learning/Primary-school-resources/Gardening-by-Biome/The-Tropical-Biome



# 12-15 yrs

Click here to look at the Season of Creation website https://www.youtube.com/watch?v=h9YPN84q3S8

# Mountains

Mountains can be sacred places that help lift our eyes to God. "I look to the mountains; where will my help come from? My help will come from the Lord, who made heaven and earth." Psalm 121: 1-2



Julian said:

"Try to think of God often through the day" (JTW 1862) and "Let us always be on the watch for [God's] word and will. Always watching and waiting to obey immediately ... let us be ever ready to follow His will, no matter how or where. Always watching and listening for his voice, ready to hasten to do all he will ask (JTW, Explanation of the Rule, Chapter 6).

# **Under 3yrs**

Make some fingerpaint and draw some big mountains and some little mountains.

# 3-5 yrs

this is excellin

Make some playdough and find some mountains to build, look at the mountains around you or find some pictures from the internet.



### 5-8 yrs

Have a look at the rainforest superpowers and what plants would suit your garden. Do you live in a temperate Biome or a tropical Biome?

https://www.rbgsyd.nsw.gov.au/Learn/Living-learning/Primaryschool-resources/Gardening-by-Biome

Explore your local area with the National Virtual Herbarium https://avh.chah.org.au/

### 8-12 yrs

Can you do this quiz and put these 10 mountains in order starting with the tallest in the world https://quizlet.com/subject/top-10-highest-mountains/

In the Bible the mountains were special places where people went to be close to God and to listen to Him. See if you can find out the names of some of these mountains.

Explore your local area with the National Virtual Herbarium https://avh.chah.org.au/

what have you learned so far

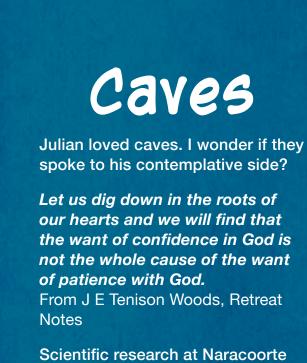
### 12-15 yrs

Can you find out about the mountain that was named after Julian Tenison Woods, it is in the D'Aguilar Ranges Woods named and described at least 156 species of marine fossils and 292 species of living shells, as well as corals, bryozoa sea urchins and fossil plants.

Check out the livestream of Mt Wellington in Hobart https://www.hobartcity.com.au/ Community/kunanyi-Mt-Wellington/kunanyi-Mount-Wellington-webcams

Explore your local area with the National Virtual Herbarium https://avh.chah.org.au/

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Scientific research at Naracoorte Caves, South Australia dates back to the mid nineteenth century, with the discovery of fossils in Blanche Cave by Father Julian Tenison Woods. Over the last 150 years, the Naracoorte Caves National Park has been a centre for research.

# **Under 3yrs**

Play with some rocks in a bowl of water and compare them, what happens when they are wet and when they are dry.

## 3-5 yrs

Make a cubby cave with some blankets, read some books and draw some pictures in your cubby.

### 5-8 yrs

Near the caves is a park named after Fr Julian, you can find out about it here https://monumentaustralia.org.au/themes/people/religion/display/111583-father-julian-tenison-woods

See if you can find it using google maps.

visit these sites for some facts

## 8-12 yrs

Make a list of all the flora and fauna that can be found in caves.

Look up the story about the miraculous cave rescue in Thailand.

https://www.youtube.com/watch?v=a4GqD0B-Kjl

### 12-15 yrs

You can visit the website of the Naracoorte Caves https://www.naracoortecaves.sa.gov.au/

Follow this link for a short biography and a map of the collecting locations attributed to Julian's scientific work in Australia. https://www.anbg.gov.au/biography/tenison-woods-julian.html

# Shells and Fossils

Julian loved to study shells and fossils. He had a particular talent and memory for plant, animal and fossil classification. This enabled him to collect and classify flora and fossils during his pastoral work which involved long journeys on horseback. His analysis of the fossil records in Australia added significantly to the knowledge of the development of the Tertiary Era in Geology. Woods named and described at least 156 species of marine fossils and 292 species of living shells, as well as corals, bryozoa sea urchins and fossil plants.



# **Under 3yrs**

Can you find some shells or pictures of shells to sort, big/small, flat/round, or into different colours?



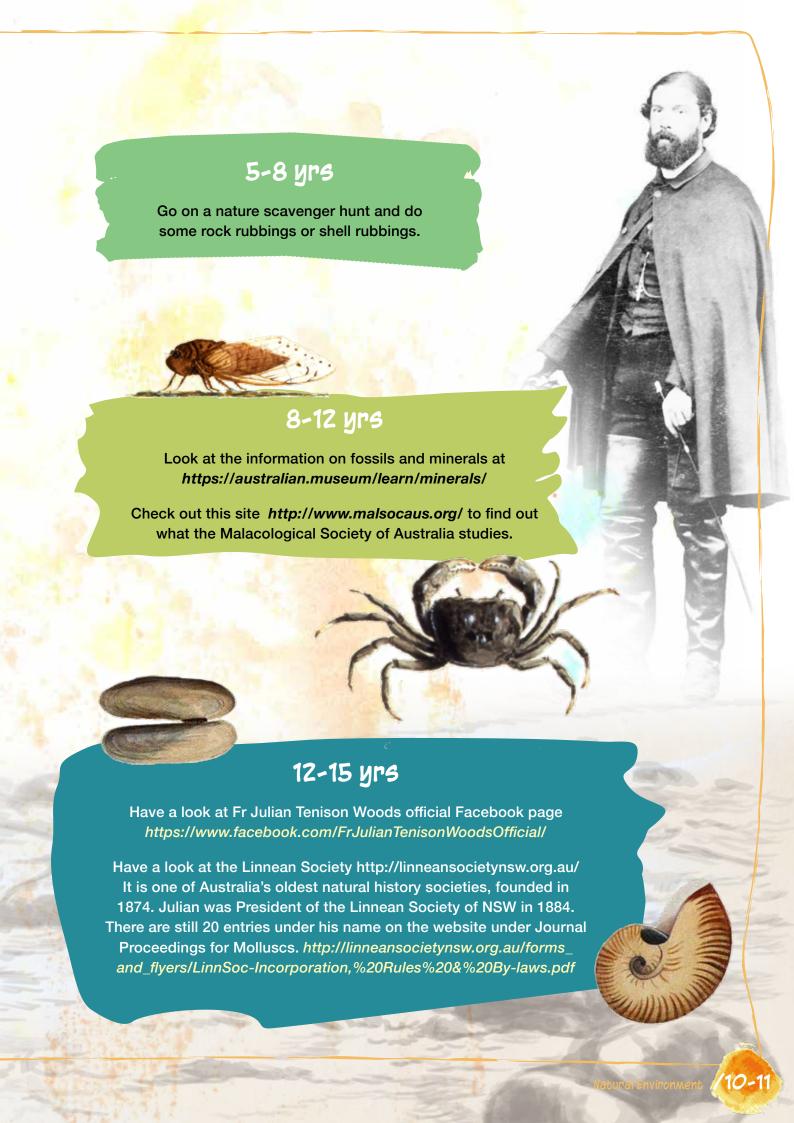
# 3-5 yrs

Go on a nature scavenger hunt https://homemadeheather.com/20-nature-scavenger-hunt-ideas/

start your shell collection







# Natural environment

Julian loved studying the natural environment. "Towards the end of his life he began to develop the fundamental concepts of plant ecology. Plant ecology is the study of vegetation rather than species, and looks at the complex inter-relations which exist between plants themselves and between plants and environmental factors such as climate, topography and soil. In this, he was way ahead of his time, as ecological studies are usually thought to have begun in the early part of this century with Tansley's (1911) pioneering manual on the ecological approach to the description of vegetation."

From: Peter K Anderson, (1989), Bush Scientist: Geologist (A Paper presented by as part of a symposium on the life of Julian Tenison-Woods, priest and scientist, during the celebrations, in Brisbane, of the centenary of his death).





Mix some soil and water and sand together in a bowl.

3-5 yrs

Can you plant some seeds in soil or put the top of a carrot or a pineapple or the bottom part of celery in water? Watch carefully to see what happens over the next few days.



# 5-8 yrs

Look at the ABC site 'five ways to grow food from scraps' and have a go.

https://www.abc.net.au/everyday/growing-new-veggies-from-scraps/12128496

8-12 yrs





Listen to the song 'What's an 'ologist?'
by Pamela Walker and see how many types of study are
listed in the song. Look up any ones you are not sure of the
meaning. Music and lyrics available on the SOSJ website.

("What's an "ologist?" Copyright (2010) by Pamela L Walker OAM)

Learning from nature



Have a look around the Laudato Si Action Plan site https://laudatosiactionplatform.org/

Since 1878 The Royal Society of New South Wales have awarded the prestigious Clarke Medal to scientists who have undertaken distinguished research in the natural sciences.

Go to this link and you can find Julian Tenison Woods on that list.

https://royalsoc.org.au/awards/clarke-medal

If you search Julian's name on this site you will find there are 11 entries of scientific papers that he has presented and published.

Have a look at this letter that Julian wrote to his brother Terry's wife Sarah, it tells us about Julian's experience of quarantine during a pandemic almost 136 years ago.

JMJ

Arima, Japan 31 Dec<sup>r</sup> 85.

My dear Sarah

I have been very unfortunate in one way in my travels. I had to leave south China because of the Cholera & no sooner had I got to Japan when it broke out there. I went up to the mountains & then when the epidemic moderated, I went to Yokohama but got put into quarantine.

I returned to Kobe as soon as I could & I was scarcely there when the small-pox broke out with such severity that a strict embargo was laid upon all vessels leaving the port. There was nothing for it except to go to the mountains again & here I am waiting until the quarantine regulations are removed.

It is winter time & all the country around is covered with snow in a way that I have never seen except in the severest winters in Europe when I was a boy. I am living in a Japanese house amid Japanese people entirely with no language to speak except Japanese but I suppose I could not be more comfortably lodged or better taken care of in any country in the world even though their houses are only of paper & of wood.

I was spending my time in botanizing and examining the geology of the country until the snow fell so heavily & now I am only waiting until the small-pox moderates to get away.

I would have written before if I could have done so but there was no means of getting a messenger. But I hope to explain this all to you when I get back & you will then see all I have had to go thro in consequence of these dreadful epidemics.

I have a nice little oratory here & can say Mass every day & you may be sure that Terry is not forgotten. I don't like to write to him now until I hear exactly how he is, but I send you all my best love & blessing & hope I shall see you soon.

Yrs most truly in Jesus

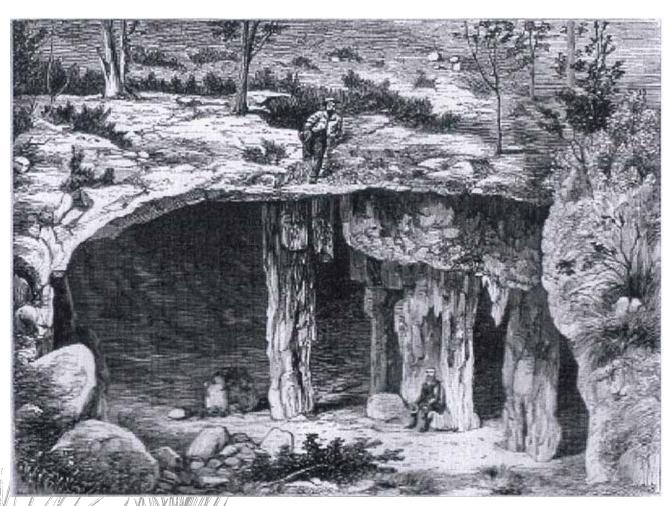
Mary & Joseph,

Fr Julian.

This picture is from the book written by John G Wilson, Julian Tension Woods in South Australia: Priest and Scientist. The picture is on page 42 and below it is written:

From Geological Observations in South Australia 1862,

Can you see picture of Julian Tenison Woods himself standing above the cave?



© ???John G Wilson 2012

Take inspiration from Father Julian

# Ecological Examen



In Laudato Si' Pope Francis asked us to care for creation and to reconcile our relationship with God, creation and one another. Borrowing from the great Ignatian tradition of examens, this Ecological Examen asks you to reflect on your personal relationship with creation, to acknowledge and amend your ways and to promote ecological justice by standing in solidarity with those most impacted by environmental harm.

Developed by St. Ignatius Loyola, the Examen is a technique of prayerful reflection on the events of the day in order to detect God's presence and discern God's direction for us. Begin the Examen by placing yourself or your group in a posture that allows you to be open to the ways the Spirit is working in you.

There are six steps in the Examen and we invite you to pray with the audio from here: https://pray-as-you-go.org/player/prayer%20tools/ecologicalexamen

#### Gratitude

I give thanks to God for creation and for being wonderfully made. (Where did I feel God's presence in creation today?)

#### Awareness

I ask for the grace to see creation as God does – in all its splendor and suffering. (Do I see the beauty of creation and hear the cries of the earth and the poor?)

#### Understanding

I ask for the grace to look closely to see how my life choices impact creation and the poor and vulnerable.

(What challenges or joys do I experience as I recall my care for creation? How can I turn away from a throwaway culture and instead stand in solidarity with creation and the poor?)

#### Conversion

I ask for the grace of conversion towards ecological justice and reconciliation. (Where have I fallen short in caring for creation and my brothers and sisters? How do I ask for a conversion of heart?)

#### Reconciliation

I ask for the grace to reconcile my relationship with God, creation, and humanity, and to stand in solidarity through my actions.

(How can I repair my relationship with creation and make choices consistent with my desire for reconciliation with creation?)

### Closing Prayer

I offer a closing prayer for the earth and the most vulnerable in our world.

#### References

J E Tenison Woods, Geological observations in South Australia: principally in the district south-east of Adelaide, (1862)

J E Tenison Woods, The Desert Sandstone, in Journal Royal Society of NSW (7 Nov, 1888), p. 200-335)

J E Tenison Woods, Retreat Notes.

Julian's Letter 19 - From Sr Anne Player's book 'Yrs Most Afftly' Published by Sisters of Perpetual Adoration, abriged version on Pages 108-109

John G Wilson, "Julian Tenison Woods in South Australia". Publication details unknown.

"What's an "ologist?" Music and Lyrics. Copyright (2010) by Pamela L Walker OAM

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