

Marine Sanctuary,
Beumaris



Sustainability
Education Centre,
Cheltenham



State Forest,
Toolangi



Your School,
Greater Melbourne



Welcome to our Marine Education Centre
at Ricketts Point

Boonwurrung (Bunurong) Country

ELC Teacher PD

Monday 26th February, 2024



SUSTAINABILITY • SCIENCE • GEOGRAPHY • STEM
ECONOMICS & BUSINESS

Excursions & Incursions

Making learning fun and engaging since 1909

Licensed Tour
Operator

2023-24



This presentation **was delivered** by Gould League General Manager Anne-Maree McInerney and Marine Educators at a recent Teacher PD Day.

It is shared in the interest of helping to build capacity within the Education System. We ask that you do not use it for commercial purposes or share it with others without our written permission.

Should you require further information or wish for this to be delivered in your ELC as a PD for Teachers or built on as a program for Students, please contact Gould League via gould@gould.org.au or Ph 9585 7860/0429 193 134.

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Celebrating 115 year of Environmental Education thanks to Victoria School Teacher Jessie McMichael

THE GOULD LEAGUE OF BIRD LOVERS OF VICTORIA



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B O C A O U

This is to Certify that

is a member of the
Gould League of Bird Lovers
J. A. Leach Hon. Secretary

BIRD LOVER'S PLEDGE.
 1. I hereby promise that I will protect native birds and will not collect their eggs.
 2. I also promise that I will endeavour to prevent others from injuring native birds and destroying their eggs.

Signed _____



TEACHER 2023 MEMBERSHIP CERTIFICATE

TEGAN RUSSELL

is a Teacher Member of the Gould League and Guardian of the Natural World committed to conservation and environmental education and protection.

2023 is the UN International Year of Millets, and to celebrate this amazing plant, we are featuring one of the many species that enjoy its seeds - the Eastern Ground Parrot (*Pezoporus wallicus*). Millets are incredible plants that not only withstand hot and dry climates but also suppress weeds and encourage healthy soil biota and microbes.

The Eastern Ground Parrot inhabits south-eastern Australia from southern Queensland through NSW to western Victoria. It also previously lived in South Australia, but has not been recorded since 1945. In NSW populations have declined due to land clearing and predation by foxes and cats. It's now contracted to islands of coastal or sub-coastal heathland and sedge land habitats.

The Eastern Ground Parrot is one of only five ground-dwelling parrots in the world. The others are the western ground parrot, the extremely rare Night Parrot, the Antipodes parakeet, and the highly endangered Kakapo from New Zealand.

Thank you for your ongoing commitment to student environmental education and support of Gould League so we can continue to advocate for ALL native flora and fauna species, so future generations can also enjoy them!


BLAIR ODOM
GOULD LEAGUE CHAIR



2023 celebrates the UN Year of Millets
and the Eastern Ground Parrot



The Gould League was one of the first environmental organisations and was established in Australia in 1909. Originally called the "Gould League of Bird Lovers", it aimed to protect birds and their eggs. It was named after the famous naturalist and artist, John Gould who, together with his wife Elizabeth, an artist in her own right, illustrated the birds and mammals of Australia, a heritage treasured all over the world.

The Gould League now aims to encourage the protection and care of ALL native wildlife, including plants, where ever they are found. It does this through its wide range of environmental education programs, tools and publications. These contain fascinating information about the natural world and also provide a huge range of exciting, hands on activities for schools and community groups.

One of the most important commitments individuals, families, businesses, schools and communities can make for current and future generations, is to commit to environmental conservation and protection by following the Gould League Conservation Code. It will help to protect the plants and animals where ever you work, live and play.

GOULD LEAGUE CONSERVATION CODE

Nature has many health benefits, so we encourage you to walk and play outdoors and visit your local parks, beaches and forests. And when you do, here are some guidelines that will help keep you and native wildlife safe.

- 1. Tread carefully and watch the ground beneath your feet.**
This is for both your safety as well as for the plants and animals well-being. Many can be crushed under your heavy feet, whilst some animals may be dangerous if disturbed suddenly (especially snakes).
- 2. Do not pollute the environment. Use bio-degradable products and avoid plastics especially plastic straws and bags.**
Do not put toxic materials on the land or into our waterways – they kill wildlife. Bottles, tins, plastic bags, straws, fishing line and other rubbish should be put in the nearest litter or recycling bin. Fishing lines can tangle around the legs and wings of many seabirds and marine life causing a painful death. Plastic bags and straws can also cause the death of native wildlife. By 2050, it is forecast more plastic in the ocean than fish – let's stop this prediction from becoming a reality!
- 3. Avoid touching living things with your hands.**
Some may be poisonous. Others may suffer from shock if handled. Touching a bird's nest can result in the parent bird abandoning it altogether. The best way to remember is: if you are not sure what will happen if you pick it up, leave it alone.

4. If an animal is found outside its natural environment, return it quickly.

Most animals cannot survive outside of their special habitat for very long. Many (like lizards) have special territories and should be put back as close as possible to where they were found in the first place.

5. If you have to look under rocks or logs, put them back.

These are special hiding, feeding and sheltering places for lots of small animals and plants which won't survive if exposed to sunlight for a long time. It's a bit like someone taking the roof off your house!

6. Explore in small numbers.

Not only will you see much more, but your impact on the environment will be much less. Large groups of people will usually be noisier and will scare away all but the bravest animals.

7. Check the legs and wings of any dead animals for bands and identification tags.

Scientists are trying to study the movement of many animals to work out how to best protect them. Send the tag to the return address indicated and you could be helping ensure the survival of a species.

8. Control your pets to take care of wildlife.

If you have a pet dog or cat not only should you be kind to it and look after it well, you should also take responsibility for its behaviour. Dogs and cats cause serious problems for wildlife if allowed to run loose. Many ground-dwelling animals have no protection and their nests, homes or the animals themselves can be quickly harmed, damaged or destroyed.

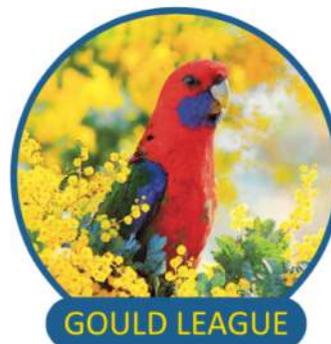
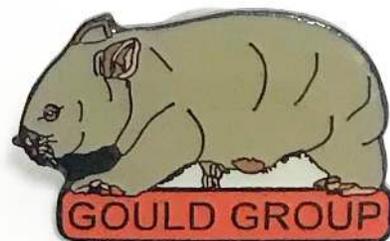
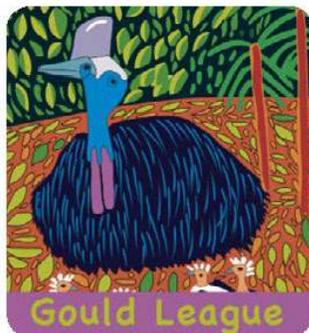
When out walking dogs, keep them on a leash unless they are in a specially designed off lead park. Cats should wear a bell and be kept inside during dawn and dusk. If you own a rabbit, ensure they cannot escape their enclosure as they can breed very quickly with wild rabbits and create significant damage to native ecosystems.

9. Help others to understand by your example

Showing and telling other people that you care for and respect the environment will help them to understand its importance.

10. Tread lightly.

Take nothing but photographs and leave nothing but footprints (and even try to not leave these!)



Programs across **3 locations** are engaging, hands on, explorative, FUN & year round- connecting students with the natural world, and helping them to reduce negative impacts such as waste – opening the door to new career pathways. and provides essential field work for VCE.



The more society are connected with the natural world, the more they want to fight to protect it. It's important to start them young!





The natural world not only underpins all life, it underpins all economic activity, and is worth an estimated **USD 125-140 trillion (US dollars) per year, i.e. more than 1.5 times the size of global GDP.**



The ocean covers a staggering 361 million square kilometres of the planet, **covering over 70% of the Earth's surface.** It is a major contributor to the global economy, while concurrently presenting significant opportunities to advance international development.

Overall, the value of key ocean assets is estimated at \$24 trillion, equivalent to 3% to 5% of global GDP, while the value of derived goods and services generated by the ocean is estimated at \$2.5 trillion annually, **equivalent to the seventh-largest economy on the globe.**

MAPPING OCEAN WEALTH

COASTAL PROTECTION

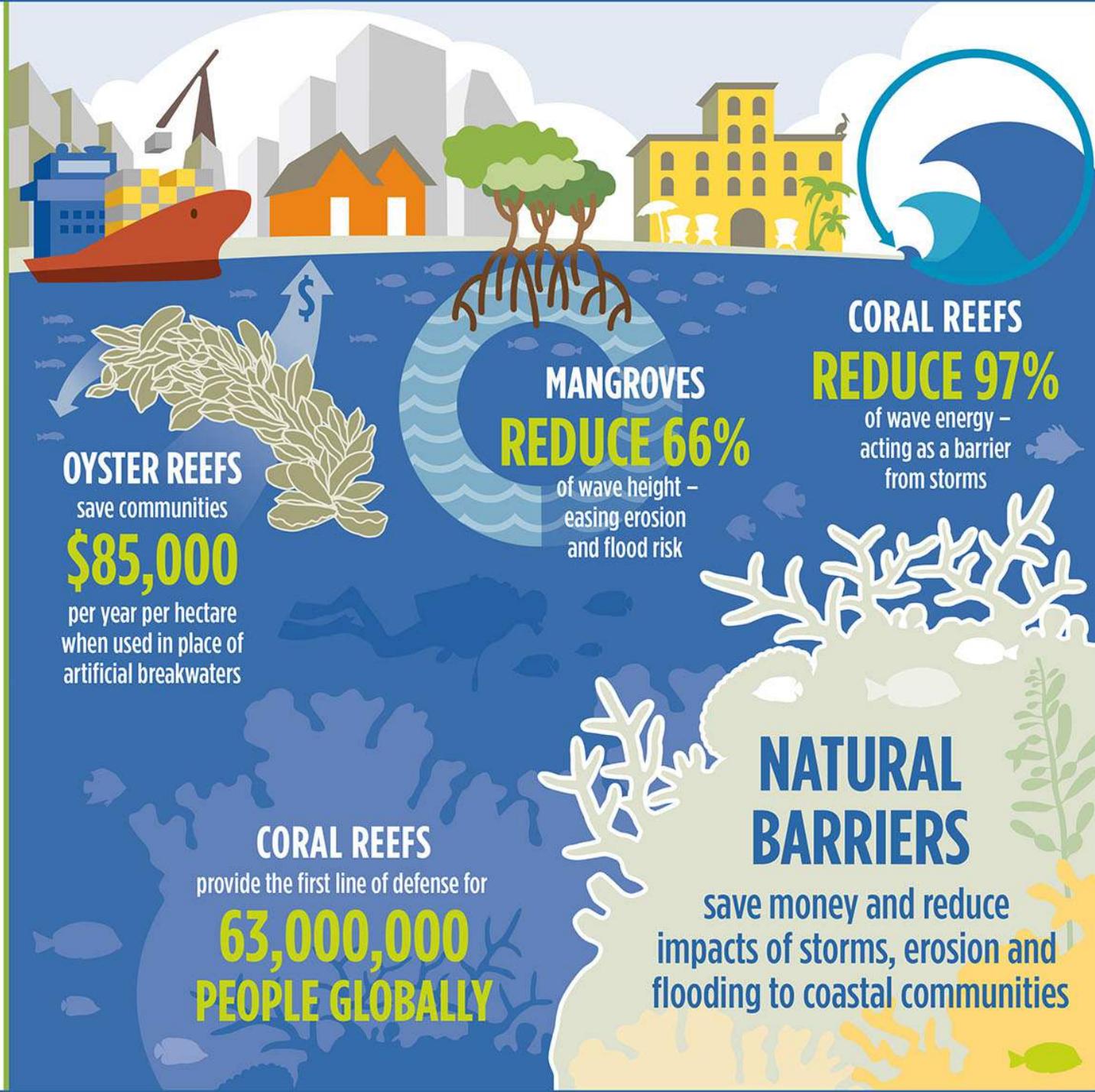
Nature is the first line of defense for coastal communities.

Coastal communities, planners, engineers and investors

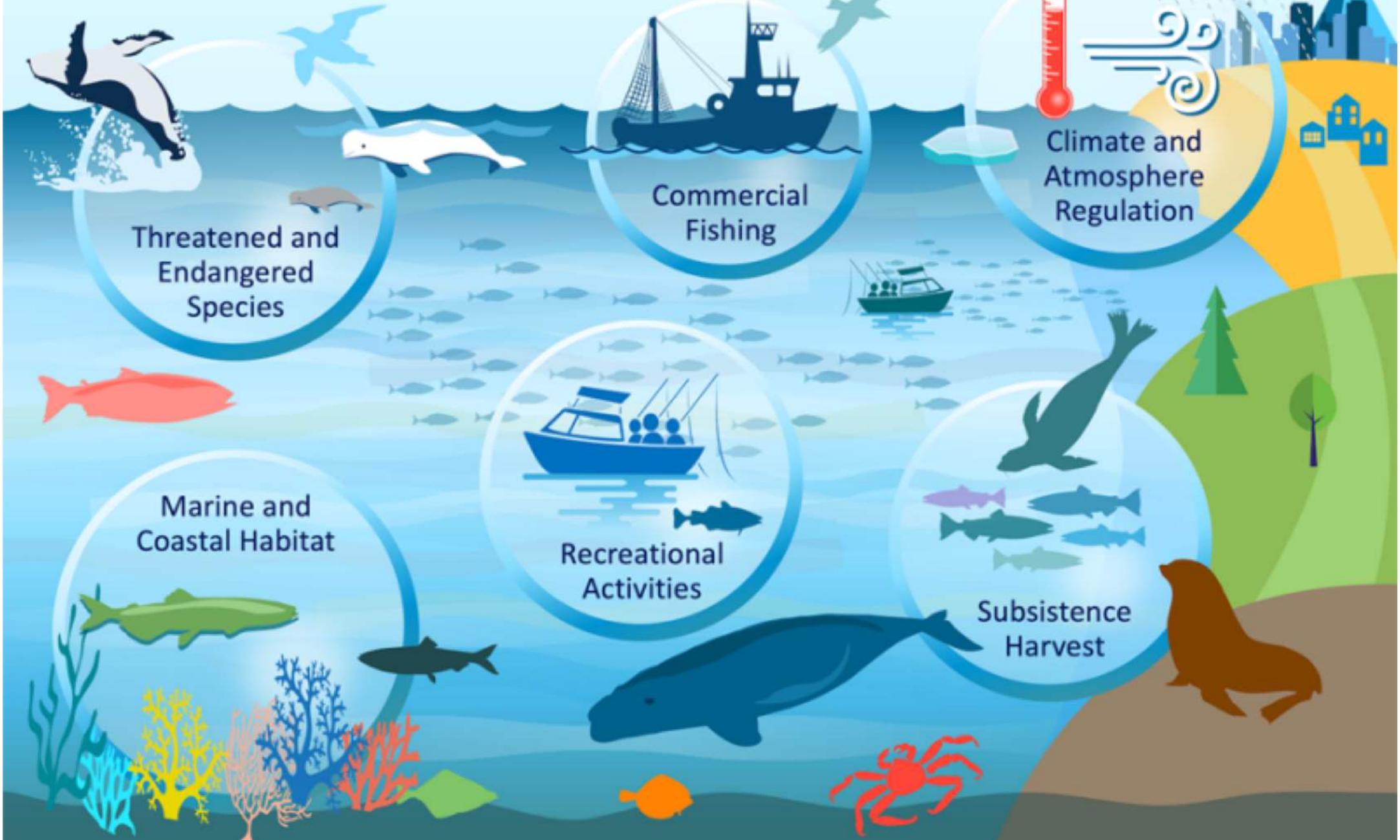
should integrate natural solutions into coastal infrastructure projects.

Mapping Ocean Wealth demonstrates what the ocean does for us today so that we maximize what the ocean can do for us tomorrow.

oceanwealth.org @ocean_wealth



Marine Ecosystem Services



Threatened and Endangered Species

Commercial Fishing

Climate and Atmosphere Regulation

Marine and Coastal Habitat

Recreational Activities

Subsistence Harvest



50 million visitors are attracted to the bay every year. You can snorkel or dive to see huge aggregations of spider crabs.

Shellfish reefs — reefs made up of oysters, mussels and other shellfish — play an essential role in water filtration, coastal protection and the provision of food for other animals, including humans.

Wetlands around the Bay provide refuge for rare and endangered bird species.

It's a place of historical and cultural importance for the tribes of the Kulin nation.

Port Phillip Bay supports a wide variety of natural habitats, from mudflats, mangroves and saltmarshes to rocky reefs, sponge gardens, seagrass beds and more. In turn, these habitats ensure a diversity of marine animals and plants can thrive, many of which are only found in the Bay and nowhere else on this planet.

Ricketts Point Marine Sanctuary

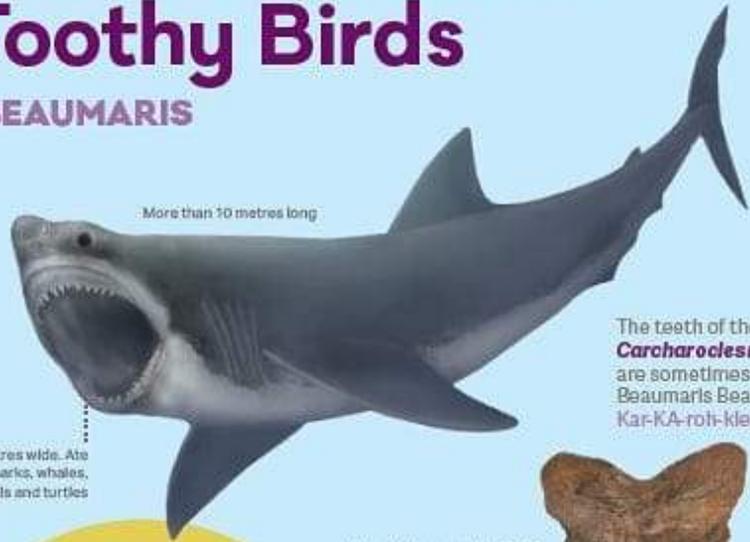
- Part of Victoria's Marine National Parks system, established in November 2002.
- The 11 sanctuaries and 13 national parks were introduced to protect Victoria's unique marine biodiversity.
- Areas are managed by Parks Victoria and are classed as "no take" zones.
- Four habitats found at Ricketts Point are representative of northern Port Phillip Bay.





Giant Sharks and Toothy Birds

BEAUMARIS



More than 10 metres long

A jaw 3 metres wide. Ate other sharks, whales, seals and turtles

The teeth of the giant shark *Carcharocles megalodon* are sometimes found on Beaumaris Beach. Kar-KA-rol-i-kleez MEG-a-to-don

Megalodon means 'big tooth'. Megalodon teeth are the largest known shark teeth (17 cm)



Tyrannosaurus rex tooth (30 cm)



Modern sperm whale tooth (20 cm)



Livyatan had the biggest teeth of any non-fusked animal (up to 36 cm)

WHAT ARE THEY?

Fossils found at Beaumaris range from large whales to small sea urchins. The site is important for studying the evolution of ancient penguins, sea turtles and land animals.



Pelagornis was a large seabird with a wingspan of 5–6 metres and jagged 'teeth' along its beak. It was found at Beaumaris. pel-a-GOR-nis

WHERE ARE THEY?

Beaumaris is a coastal suburb of Melbourne. It is one of the richest marine fossil sites in Australia.



Did you know?

Beaumaris is being considered as a World Heritage fossil site to protect it from coastal development.

Livyatan was a giant sperm whale and a fearsome predator. la-VIGH-aa-tan



Skull 3 metres long

Largest known teeth – up to 36 centimetres long

Hunted large prey like sharks, whales and squid

Weighted 40 tonnes

Up to 18 metres long

Pseudaptendytes macraei was one of many prehistoric penguins that once lived in Australia. sood-ap-TEN-oh-digh-tæz ma-KRAY-igh



Overview of Beach Secrets

- Introduction:
 - Acknowledgement of Country and why Ricketts Point is special
 - Introduction to marine species through storybook
- Rockpool Ramble:
 - Through-hands on investigation of the rock platform, children will uncover the creatures that make this special place their home
- Sandy Shore Discovery:
 - Children will discover the types of living things found under the water's surface by searching for clues washed ashore by the waves. They will also be exposed to the presence of marine litter, how it can affect habitats and how we can protect habitats.
- Play-based Activities:
 - Students develop their understanding of marine creatures and their habitats, by participating in activities that support their curiosity, creativity, imagination and problem-solving and communication skills.

Kinder Program – Beach Secrets

The Beach Secrets program delivers to outcomes under the Early Years Learning Framework:

- **Outcome 2: Children are connected with and contribute to their world (Community).**
 - Children become socially responsible and show respect for the environment
- **Outcome 4: Children are confident and involved learners (Learning).**
 - Children develop dispositions for learning such as curiosity, cooperation, confidence, creativity, commitment, enthusiasm, persistence, imagination and reflexivity
 - Children develop a range of skills and processes such as problem solving, enquiry, experimentation, hypothesising, researching and investigating
 - Children transfer and adapt what they have learned from one context to another
 - Children resource their own learning through connecting with people, place, technologies and natural and processed materials
- **Outcome 5: Children are effective communicators (Communication).**
 - Children interact verbally and non-verbally with others for a range of purposes
 - Children express ideas and make meaning using a range of media



Time to
break into 2
groups to
explore the
diverse
habitats of
Ricketts
Point and
Kinder
activities...

MORNING TEA

Chance to participate in
Marine Timeline Activity and
Swim with Whales!

Prizes to be won!



BREAK OVER

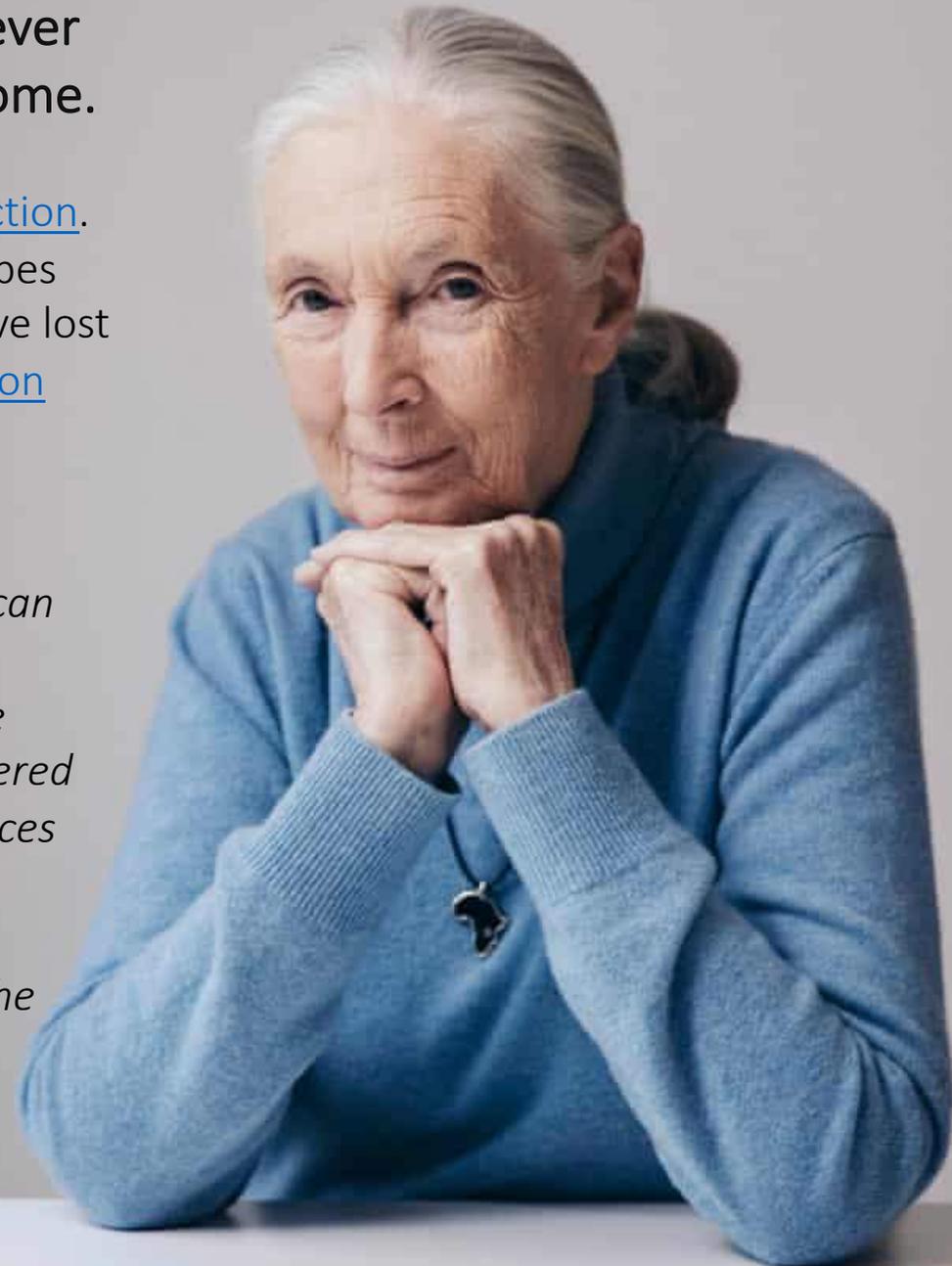
ime to continue exploring the diverse habitats of
Ricketts Point Marine Sanctuary

The most intellectual creature to ever walk earth is destroying its only home.

We are [experiencing the sixth great extinction](#). The most recent report from WWF describes the situation as **critical**. Since 1970 we have lost some [69% of all animal and plant species on Earth](#).

“I believe we have a small window of opportunity when, if we get together, we can start to heal some of the harm we have inflicted. Everywhere, where young people understand the problems and are empowered to take action – we must listen to their voices and help them take action.”

Nature is amazingly resilient. Species on the brink of extinction can be given a second chance.”



Being in nature
& understanding
nature can help
to reduce Eco-
Anxiety and
improve
wellbeing...

Over half of young people

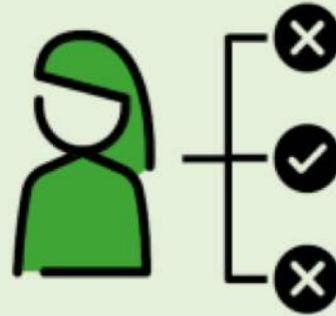


feel fearful of the future due to
climate change (53%)

1 in 5



say climate change is
affecting their daily lives
(22%)



Many are worried they won't have
access to the same opportunities
their parents had due to climate
change (42%)

One
third



say climate change is the
reason they are hesitant to
have children (34%)

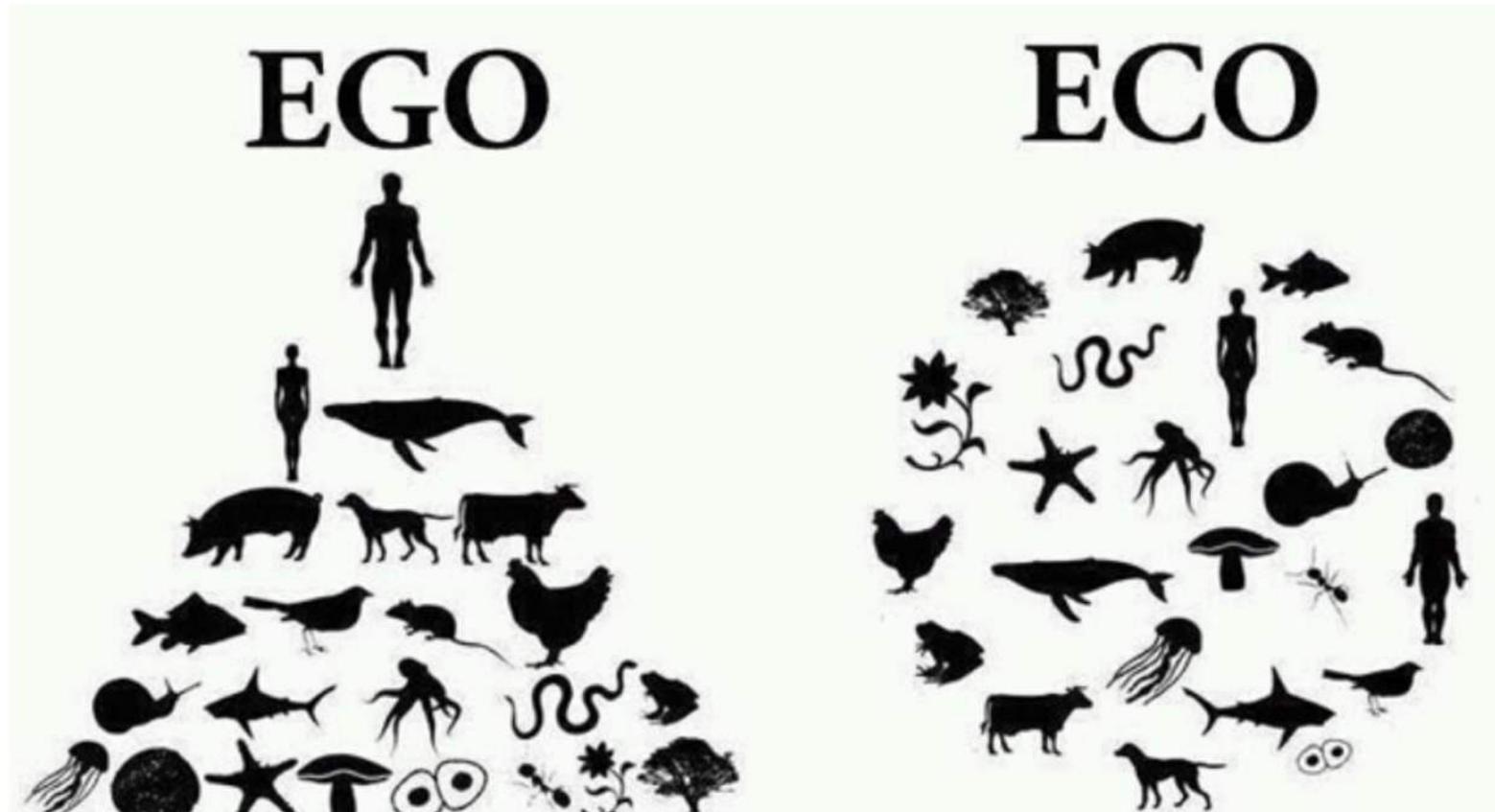


Almost half are worried whether they're personally
doing enough to have an impact on climate change
(46%) - while many feel their actions won't be enough to
make a difference anyway (50%)

The more society are connected with the natural world, the more they want to fight to protect it. It's important to start them young!



Teachers can play a vital role giving nature a fighting chance.
One way to do this is moving the needle from Ego to Eco.
And it starts with us!!



LUNCH

Chance to participate in
Marine Timeline Activity and
Swim with Whales!

Prizes to be won!