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# CELEBRATING MARINE MONTH

XXX

ADD TITLE

# Introduction



# Who are we?



CapeNature is the part of government that protects natural occurring plant and animal life (biodiversity) in the Western Cape.



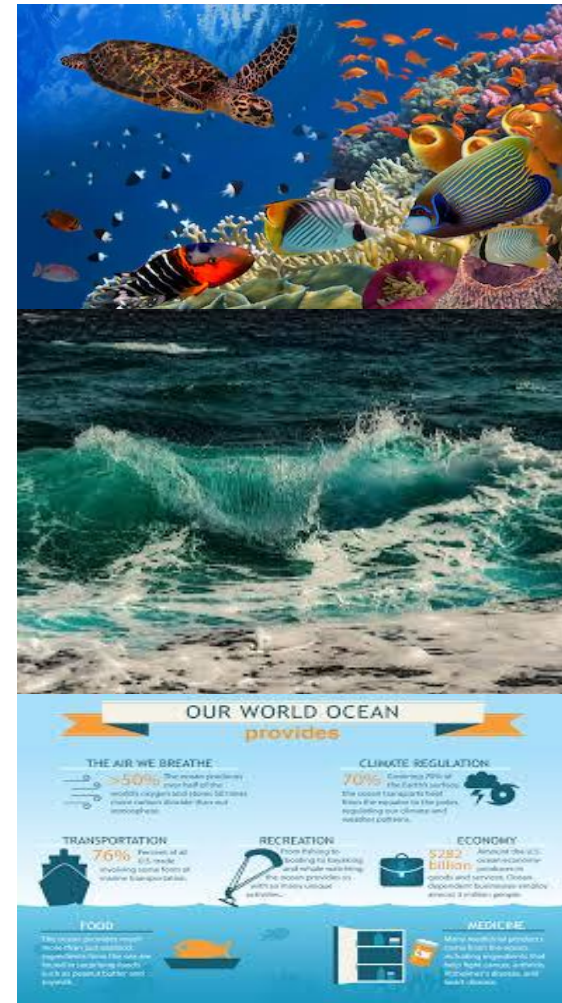
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# What are we going to do today?

- Learn about the marine animals that we find on our coast
- Learn why the oceans are so important to us
- Build a marine ecosystem
- Pledge to do something to save our oceans



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# What are the rules for today?



Listen to the speaker

Have fun!

Respect your teacher and classmates



RULES OF ENGAGEMENT

Take part in all the activities!

Be safe



What else?



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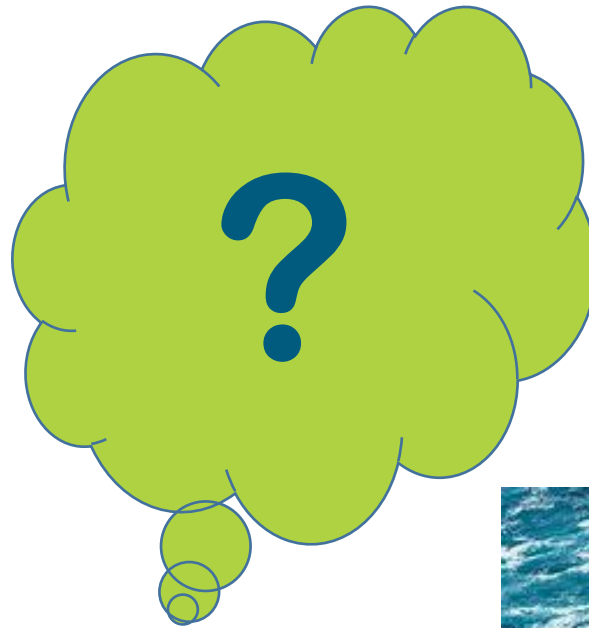
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# Tuning in

What is the difference between the two types of water in the pictures below? Which one supports a marine environment?



Quick activity: Divide into small groups.

Ask one person to pretend (move and make the sound) to me an animal that is found in the ocean – **THEY MUST NOT TELL YOU WHAT IT IS.**

Can the rest of the group guess what animal they are?

you spot where we are right now on this map of the Western Cape?



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# Marine Ecosystems and Food chains



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# Why is the OCEAN so important?

- Produces more oxygen than the Amazon
- Regulates earth's climate
- Provides food to both human and animals
- Many creatures depend on the ocean for life
- You can have the best holidays next to the ocean
- The ocean provides jobs to many people
- The ocean is very healthy to our bodies



# What is Marine month all about?



- National Marine Month creates awareness of South Africa's marine and coastal environments and the benefits that our oceans bring to our nation.
- Marine month is celebrated in October every year

Quick activity: If the first Marine month was in 1998, how old is it today? 2019 minus 1998?



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# An important fact about the ocean is that it covers 70% of earth



About 70% of the oxygen we breathe is produced by the oceans.

Quick activity: Think of what is your favorite seafood or fish. What would life be like without it?



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# Why are our oceans in danger?

According to the World Wildlife Fund (WWF), 80% of pollution in the ocean comes from land based activities. The plastic items we use and the sewage we create ends up in our oceans and harm the delicate ecosystems that lives in our waters ( WWF, 5 Jun,2018)



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# PLASTICS BREAKDOWN

WE USE TONS OF PLASTIC. IT'S IN EVERYTHING FROM PACKAGING TO TOYS, TO THE DASHBOARD IN YOUR CAR. MASSIVE AMOUNTS OF IT END UP IN THE OCEAN. IT CONTAINS TOXINS, AND ABSORBS MORE TOXINS. IT ENTANGLES AND KILLS SEA LIFE. IT CERTAINLY DOESN'T BIODEGRADE. BUT THERE ARE WAYS WE CAN HELP.



## BAD FOR THE OCEAN. BAD FOR US



54%

OF THE 120 MARINE MAMMAL SPECIES ON THE THREATENED LIST HAVE BEEN OBSERVED ENTANGLED IN OR INGESTING PLASTIC.



92.5% OF DEAD SEABIRDS [NORTHERN FULMARS] IN A STUDY HAD INGESTED PLASTIC IN AMOUNTS EQUAL TO 5% OF THEIR BODY WEIGHT.

AMERICANS USE ROUGHLY 100 BILLION PLASTIC BAGS PER YEAR. PLASTIC BAGS CAN TAKE 400 TO 1,000 YEARS TO DECOMPOSE, BUT THEIR

CHEMICAL RESIDUES REMAIN FOR YEARS AFTER.

CHEMICALS USED IN PLASTICS LIKE PHTHALATES AND FLAME RETARDANTS HAVE BEEN FOUND IN FISH, MOLLUSKS, SEA MAMMALS, AND OTHER SEA LIFE

### HOW BIG IS THE PROBLEM?

73.9 MILLION POUNDS OF PLASTIC ARE SPREAD THROUGHOUT THE WORLD'S GYRES.

### IT'S EXPENSIVE TOO...

AS OF 2009, SOUTHERN CALIFORNIA CITIES HAD SPENT OVER \$1.7 BILLION TO KEEP WATERWAYS FROM BEING OVER LEGAL TRASH LIMITS.

## HOW MUCH PLASTIC ENDS UP IN THE OCEAN?

CIRCULAR CURRENTS (GYRES) THOUSANDS OF MILES ACROSS COLLECT IMMENSE AMOUNTS OF PLASTIC IN ALL OF THE WORLD'S OCEANS.

MICROPLASTIC CONCENTRATIONS IN THE NORTH PACIFIC GYRE INCREASED 100X IN THE PAST 40 YEARS.

### CURRENTS CARRY THE PLASTIC EVERYWHERE.

RUBBER DUCKS LOST FROM A SHIPPING CONTAINER IN THE NORTH PACIFIC WERE FOUND NEAR SCOTLAND, IN THE NORTH ATLANTIC. TSUNAMI DEBRIS FROM JAPAN ARRIVED IN NORTH AMERICA, AFTER CROSSING THE LARGEST OCEAN ON EARTH IN JUST 10 MONTHS



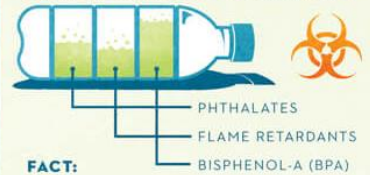
## PLASTIC IS MADE OF TOXINS



MILLION BARRELS OF PETROLEUM & NATURAL GAS LIQUIDS

WERE USED TO MAKE U.S. PLASTIC PRODUCTS, EQUAL TO ABOUT 5% OF THE NATIONAL PETROLEUM CONSUMPTION.

PLASTICS CONTAIN TOXIC CHEMICALS



### FACT:



MORE TOXINS ADHERE AS PLASTIC BREAKS DOWN

IN PLASTIC FROM THE NORTH PACIFIC GYRE:



40% CONTAINED PESTICIDES LIKE DDT. 50% CONTAINED PCBs (BANNED BY U.S. CONGRESS IN 1979, FOR HAVING VARIOUS NEUROTOXIC EFFECTS). 80% CONTAINED PAHs (MAY BE HIGHLY CARCINOGENIC).

FLOATING TOXIC MICROPLASTICS ARE OFTEN INGESTED BY MARINE LIFE, WHICH IN TURN IS CONSUMED BY US.

WHAT CAN WE DO TO HELP?

USE LESS PLASTIC

8 OF THE TOP 10 ITEMS FOUND ON BEACHES DURING LAST YEAR'S INTERNATIONAL COASTAL CLEAN-UP DAY WERE PLASTICS RELATED TO EATING & DRINKING.



TO GO CUPS > REUSABLE MUGS & CUPS

PLASTIC BAGS > REUSABLE BAGS, NO BAG

STRAWS > NO NEED

UTENSILS > USE NON-PLASTIC

ELECTRONICS > REPAIR OR UPGRADE. RECYCLE THE OLD ITEM WHEN YOU NEED SOMETHING NEW

BOTTLED WATER > REUSABLE WATER BOTTLE

PACKAGING > BUY ITEMS WITH MINIMAL PACKAGING

CLOTHING > BUY NATURAL MATERIALS. SYNTHETIC FIBERS END UP IN THE OCEAN



## What are these harmful activities

- Dumping of garbage and plastics in the ocean
- Untreated sewage flows
- Toxic chemicals from illegal dumping
- Fertilizer runoff from farms and lawns on coastal regions
- Oil spills
- Poaching



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# How does the marine food chain work?



Seaweed-Primary producer



Shell fish-Herbivorous consumer



Jelly fish-1<sup>st</sup> level consumer



Yellow tail snapper-2<sup>nd</sup> level consumer



Squid-3<sup>rd</sup> level carnivorous consumer



Great White shark-top carnivores



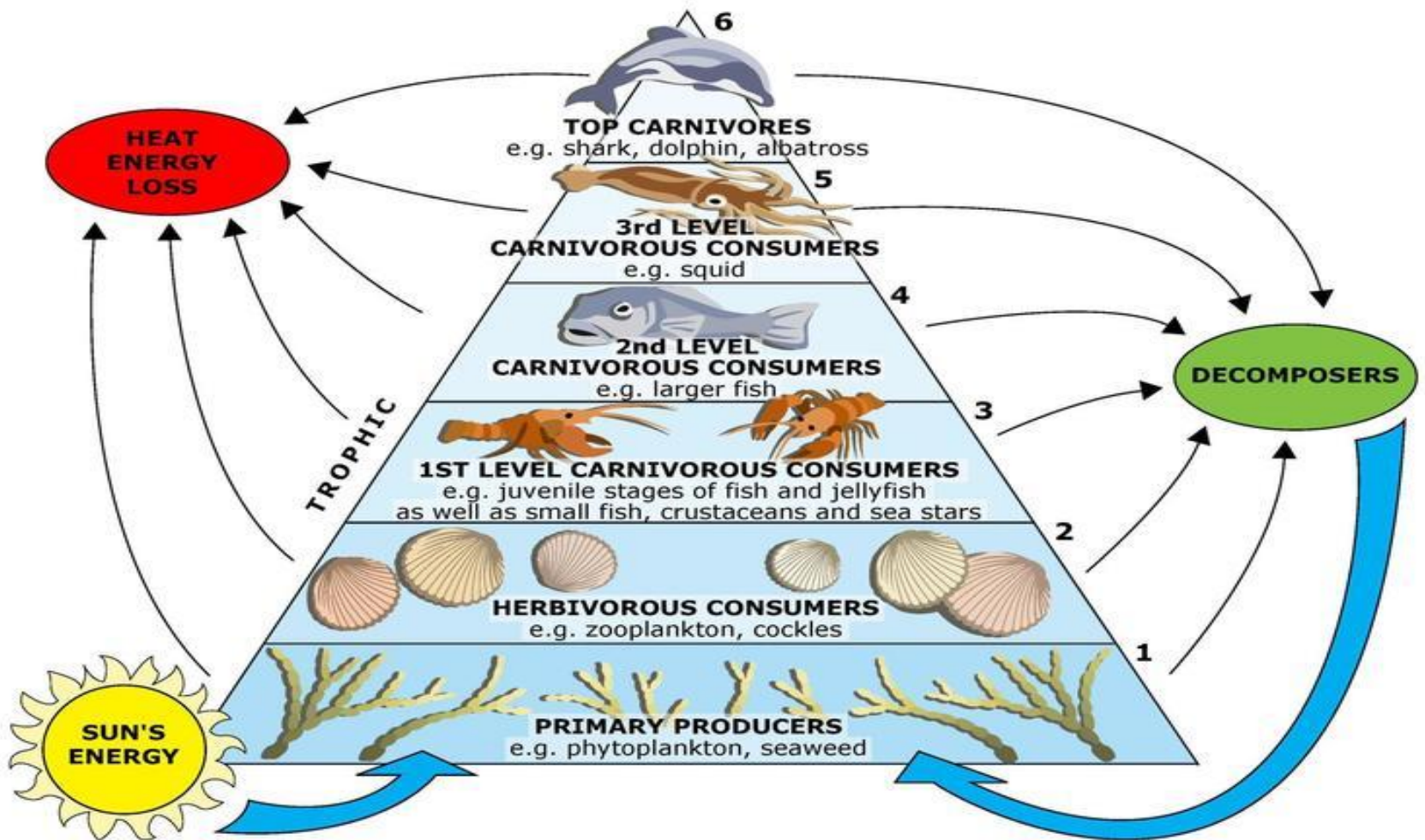
Fire worm-decomposer



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## Activity: Who am I? – Game

- Divide into groups
- Each group will be given a set of marine animal pics
- With your pictures, form a food web (show who will eat what)
- Indicate primary producers, herbivorous consumers, 1st level carnivorous consumers, 2nd level carnivorous consumers, 3rd level carnivorous consumers, top carnivores



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# Consolidation



# Lets pledge

- What will you do to protect our marine life?
- What actions are you planning to take to conserve ecosystems and food webs
- Each person must write one thing down that they will do when they leave here today



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# What were your answers? Here are some more things we can do

- Reduce our plastic consumption
- Make informed seafood choices-use the sustainable seafood guide
- **Green** means you can buy these species legally,
- **Orange** means that the species is vulnerable or threatened, and
- **Red** means that these species numbers have collapsed and it's therefore illegal to buy, sell and consume that species.
- Get rid of chemicals correctly-ask your local municipality
- Choose environmentally friendly detergents
- Find out about the practices of your holiday destination
- Plant indigenous plants
- Keep your beach visit clean





**THANK YOU.**