

Marine turtles are beautiful, gentle and amazing **reptiles** that have roamed the oceans since the time of the dinosaurs. With their oval-shaped bodies, triangular-shaped heads and **flippers** as limbs, they glide effortlessly through water.



Marine Turtles and You



MARINE TURTLES IN SOUTH AFRICAN WATERS

Four of the seven marine turtle species are often seen in waters off our coast. These are the Loggerhead, Leatherback, Green and Hawksbill turtles. The Olive Ridley turtle visits our waters occasionally. Scientists use satellite transmitters to study their **migration** routes and have found that they swim right around our coast, even as far as Namibia!

LEATHERBACKS

Leatherbacks are **enormous**, growing up to 1,8m and weighing more than 500kg. They differ from other turtle species in that they have thick, leathery skin instead of the hard shell, or **carapace**, of the other species. This allows them to dive to great depths to search for food. A unique blood supply system allows them to keep their bodies a bit warmer than the water.

LOGGERHEADS

Loggerhead turtles have extremely powerful **jaws** that they use to crush molluscs. They grow to about 1m and weigh around 115kg. They often have encrusting organisms such as barnacles on their backs.

A MARINE TURTLE'S DIET

Green turtles are **herbivores** and feed on sea grass and algae. Others are carnivores and eat crabs, sea urchins, sponges, fish and molluscs such as snails and clams. Leatherback and Loggerhead hatchlings' favourite snacks are bluebottles, while adult Leatherbacks love to eat **jellyfish**.



science
& technology

Department:
Science and Technology
REPUBLIC OF SOUTH AFRICA

**WIN A TRIP TO TAG MARINE TURTLES AT
SODWANA BAY DURING NOVEMBER 2006**

**COMPETITION FOR GRADE 10 – 12 LEARNERS IN KWAZULU-NATAL
CLOSING DATE: 30 SEPTEMBER 2006**





Marine Turtles and You!

NESTING TURTLES

During the summer (October to January), and only at night, Loggerhead and Leatherback turtles use the sandy beaches of northern KwaZulu-Natal to breed. A female slowly crawls ashore and digs a hole of about 50-70cm deep where she lays between 80 and 120 leathery-shelled **eggs**. Before heading back to water, she uses her hind flippers to cover the eggs with sand and front flippers to toss sand onto the nest as camouflage. She repeats this process between four and nine times per season! About 60 days later, the hatchlings dig themselves out of the nest and, after sunset, when the sand has cooled down, they crawl out and hurry to the water. They are guided to the sea by **moonlight and starlight**

reflected off the water's surface. During this stage artificial **light** can disorientate them and cause them to head the wrong direction so that they never reach the ocean. Predators such as sea birds and **sharks** eat many of the small turtles. Those who make it, swim frantically for a few days, before being swept away with the current into the Indian Ocean. About 20 or more years later, females return to breed at the beach where they hatched.

WHY ARE THE TURTLES IN DANGER?

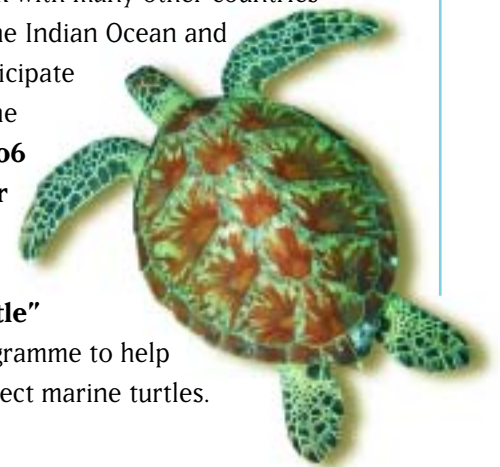
Marine turtles are all endangered, and some even critically endangered. People are a major threat to survival of sea turtles, because:

- They drown on **longline** fishing hooks or in fishing **nets**.

- They drown in bather protection (shark) nets.
- Illegal and careless driving on the beach destroys nests and hatchlings.
- People sometimes harvest the eggs or kill turtles for their meat. People also sell the shells or use it to make craft items.
- People kill turtles to use parts of the animal in the muti trade.
- They die after colliding with boats or when boat propellers injure them.
- They choke or their intestines get blocked from accidentally eating **plastic** or fishing line that people have dumped at sea. They may see a floating plastic bag as a jellyfish.
- Tourism developments destroy their nests and the beaches where they lay their eggs.

SAVING MARINE TURTLES

Sea turtles play an important role in marine **ecology** and, because they migrate over such long distances and inhabit different environments, they are good indicators of the general health of our oceans. South Africa's marine turtle conservation programme has been running for more than 40 years. We work with many other countries in the Indian Ocean and participate in the **"2006 Year of the Turtle"** programme to help protect marine turtles.





HERE'S WHAT YOU CAN DO TO HELP TURTLES

- Never disturb a turtle on the beach or a turtle nest or eggs.
- Never buy any product made from turtle meat, shell or eggs.
- Never discard any plastic, nets or fishing line on the beach or in the sea.
- Pick up any plastic or pieces of fishing line or nets that you find on the beach or rocks.
- Try to control any stray dogs that may destroy turtle nests.
- Ask boat owners to slow down and look out for turtles, especially in shallow waters.
- Ask fishermen to save live turtles they may find on their hooks or in their nets by returning them to the sea as soon as possible.
- Contact your local conservation agency or nearest aquarium if you find a stranded turtle that is still alive. They may be able to save it!
- Tell your teacher or parents if you find a dead turtle with a tag on its flipper, and return the tag to Ezemvelo KZN Wildlife.
- Encourage your friends and family to find out more about these amazing animals and how we can protect them.

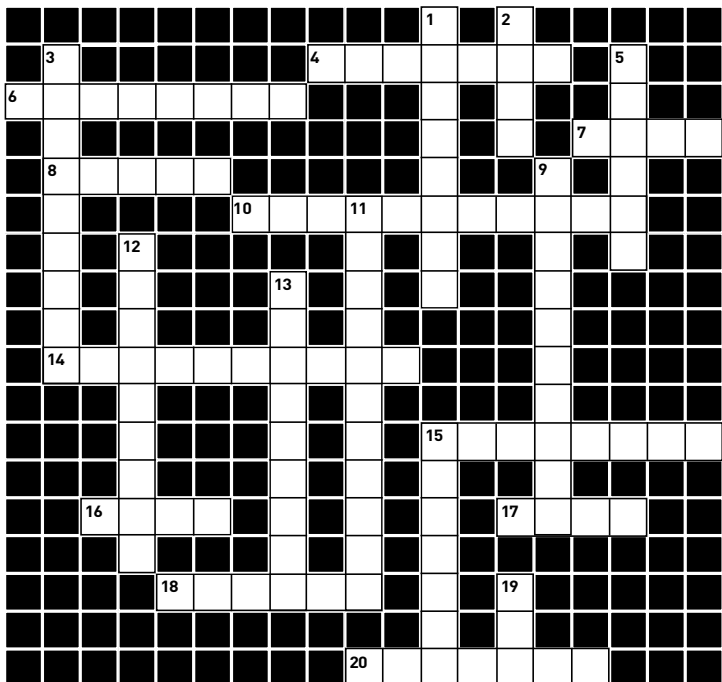
Marine Turtles and You!

WIN A TRIP TO TAG MARINE TURTLES AT SODWANA BAY DURING NOVEMBER 2006

CLOSING DATE: 30 SEPTEMBER 2006 (See back of this leaflet for entry form)



ENTRY FORM: MARINE TURTLE CROSSWORD CHALLENGE



HINTS

All the answers can be found in this brochure.
Use a pencil, so that you can erase words if necessary.

ACROSS

4. Sea turtles play an important role in marine -----.
6. Like snakes and crocodiles, marine turtles are also -----.
7. Loggerheads use their powerful ----- to crush molluscs.
8. Artificial ----- can confuse hatchlings on their way to the sea.
10. The biggest sea turtle found in the world's oceans.
14. Green turtles eat only plants and are therefore -----.
15. The hard outer shell of most sea turtles.
16. How many species of marine turtles are regularly seen in our waters?
17. Sea turtles often drown when they are entangled in fishing -----.
18. The year 2006 has been declared as the "Year of the -----".
20. Turtles can choke on pieces of ----- in the sea.

DOWN

1. The limbs of a sea turtle.
2. Females lay hundreds of these in one summer.
3. The favourite food of Leatherbacks.
5. Many hatchlings fall prey to predators such as seabirds and -----.
9. After laying the eggs, the turtle must provide this to hide the nest.
11. The ----- of the nest determines whether males or females will hatch.
12. Scientists study the ----- of turtles with satellite transmitters.
13. The ----- reflected on water guides turtle hatchlings towards the ocean.
15. The scientific name of the Loggerhead is *Caretta* -----.
19. Green turtles get their name from the colour of this part of their bodies.

WINNERS

Two learners and one educator will be selected to visit the breeding area of the turtles and spend a night on the beach during early November 2006. Together with a marine turtle researcher, we will try to find a nesting turtle and carefully observe the female laying her eggs. We will contact the winners by 25 October 2006.

Thank you for participating and showing that you care about our sea turtles! They need your help!

If you have access to the Internet you can find out more about marine turtles at:
www.ioseaturtles.org

I want to help protect marine turtles, because.....

Name: Grade:

School: Contact telephone number:

Fax your completed crossword puzzle and entry form to 086 6757 321 or mail it to Southern Science, PO Box 66087, WOODHILL, 0076 CLOSING DATE: 30 SEPTEMBER 2006.



Marine Turtles and You!

DID YOU KNOW?

- Only one or two out of every 1 000 hatchlings eventually reach adulthood.
- A marine turtle can live for up to a 100 years.
- Green turtles get their name from the colour of their body fat.
- The scientific name of the Loggerhead turtle is *Caretta caretta*.
- Sea turtles can hold their breath for hours and can dive to depths of more than 900m.
- They can swim as fast as 50km/h.
- The sand **temperature** around the nest determines whether that nest will hatch male or female turtles.



Project managed by Marina Joubert (Southern Science). Scientific advice from Dr Ronel Nel, Nelson Mandela Metropolitan University in collaboration with Ezemvelo KZN Wildlife. Funded as part of the Department of Science and Technology Biosciences Month 2006, via the South African Agency for Science and Technology Advancement. Photographs: George Hughes, Roger de la Harpe, Corali Taquet, Nicholas Pilcher, Paulo Luschi, Roner Munns, Geoff Spiby, Stefan Joubert and Dewald Reiners. Design and production: Loretta Steyn Graphic Design Studio – Pretoria

