WILDTRUST™

TURTLE HATCHLINGS

SESSION PACK

SESSION PACK CONTENTS PAGE – TURTLE HATCHLINGS

MATERIALS REQUIRED FOR SESSION

- Corks
- Craft paints
- Blank paper/cardboard
- Marker buoys (could be a cone, or a flag, or pieces of paper with labels)
- Headbands or stickers
- Skipping rope
- Tin cans (about 10)
- Blindfold

INFORMATION PAGES: TURTLE HATCHLINGS

DESCRIPTION:

Sea turtles have roamed the world's oceans for millions of years. There are seven species of sea turtles in the world, five of which are found in South African waters and two of which nest on the beaches in South Africa namely the leatherback and loggerhead turtles.

DIET:

Leatherback turtles' favourite food is jellyfish, and like all turtles, the leatherback has no teeth. It uses its strong, sharp beak to catch its food. They often mistake plastic packets in the water for their food, contributing to their massive decline in numbers.

The loggerhead is named for its large head with strong jaws used for crushing its favourite food, including crabs, bivalves, and conch shells. They also eat fish, algae, and jellyfish.

FACTS:

- Turtles spend almost their entire lives in the ocean. Only adult females leave the water and crawl onto the beach to lay their eggs during the nesting season, which in South Africa falls over the summer months from October to January.
- At iSimangaliso Wetland Park, two species nest on the beaches: the loggerhead and leatherback turtles.
- The adult female turtles, eggs, and hatchlings are the most vulnerable over the nesting season.
- The female turtles lay wet and pliable eggs, about the size of a ping pong ball. Female turtles dig deep holes in the sand with their back flippers and then lay and bury their eggs in these holes. The females also make more than one visit to the beach to nest in a single season, sometimes coming back up eight times per season, depending on the species. So, several hundred eggs may be laid in a single season. Once the eggs are buried, and the nest is camouflaged in the sand, the female returns to the sea.
- The eggs remain hidden in the nest for about two months. During this time, they are vulnerable to predation from crabs, red ants, feral dogs, honey badgers, and humans called 'poachers,' although nests on South African beaches are well protected.
- It is the temperature of the nests that determines the sex of the hatchlings (baby turtles). The warmer the nest, the more girls will hatch; when the nest is cooler, more boys will hatch.
- The eggs that survive will hatch, and the baby turtles dig their way up through the sand and crawl down the beach to go out to the sea. You can witness this at iSimangaliso from

January to March.

- The hatchlings' journey across the sand is dangerous as they are predated by crabs, red ants, and sea birds. Once they make it to the water, their struggle is not over, as fish, sharks, and sea birds find them to be a tasty snack.
- Other threats they face in the ocean include nets, oil spills, and boats. Only about 5% of sea turtles survive the first year in the ocean. Depending on the species, it takes about 20 years before they mature and can reproduce.
- Humans contribute to the death of turtles for several reasons, including disruption of nesting sites by vehicles, specimen hunters, beach development, fishing nets, food sources, pollution, products (leather, jewellery), etc.
- The leatherback turtle does not have a hard top shell but instead has thick leathery skin with seven long ridges, hence the name. They are the largest of all sea turtle species, with adults weighing up to 900 kg and growing up to 2m and can live for over 50 years. They are super swimmers and can reach depths of 1000m easily.
- The loggerhead turtle is much smaller than the leatherback and has a hard shell, like all other sea turtle species, besides the leatherback. Adult loggerheads usually weigh about 80-100 kgs and are just under 1m in length.
- Our leatherback turtles are Critically Endangered, and our loggerhead turtles are Near Threatened on the IUCN Red List of Threatened Species. Globally, South Africa has the second longest-running beach turtle monitoring programme to help protect and conserve them.
- There are about 70 female leatherback turtles and over 1000 female loggerhead turtles nesting in the iSimangaliso Wetland Park annually. Conservation efforts have successfully recovered the loggerhead population but not yet the leatherbacks.

SESSION PLAN: TURTLE HATCHLINGS

SESSION OBJECTIVES:

Learners will understand sea turtle hatching dynamics and the predatory threats that come along as they try to make their way from their nests on the beach out to sea.

INTRODUCTION ACTIVITY:

- Show the learners pictures of the turtle life stages adults, eggs, and hatchlings *(see PRESENTATION provided below)*
- Ask the learners if they have ever seen a turtle nest or turtle hatchling before.
- Ask the learners to suggest some of the challengers they think turtle hatchlings encounter.
- Watch the turtle video links:
    - Educational Turtle Video English Version: https://tinyurl.com/3wx7d3zc
    - Educational Turtle Video isiZulu Version: https://tinyurl.com/bdeu84za

MAIN ACTIVITY:

- Play Turtle Hurdle Hatchling Games *(see GAMES provided below):*
    - Sea Turtle VS Crab.
    - Complete the turtle hatchling obstacle course.
    - Reflect and discuss the outcomes of these games.

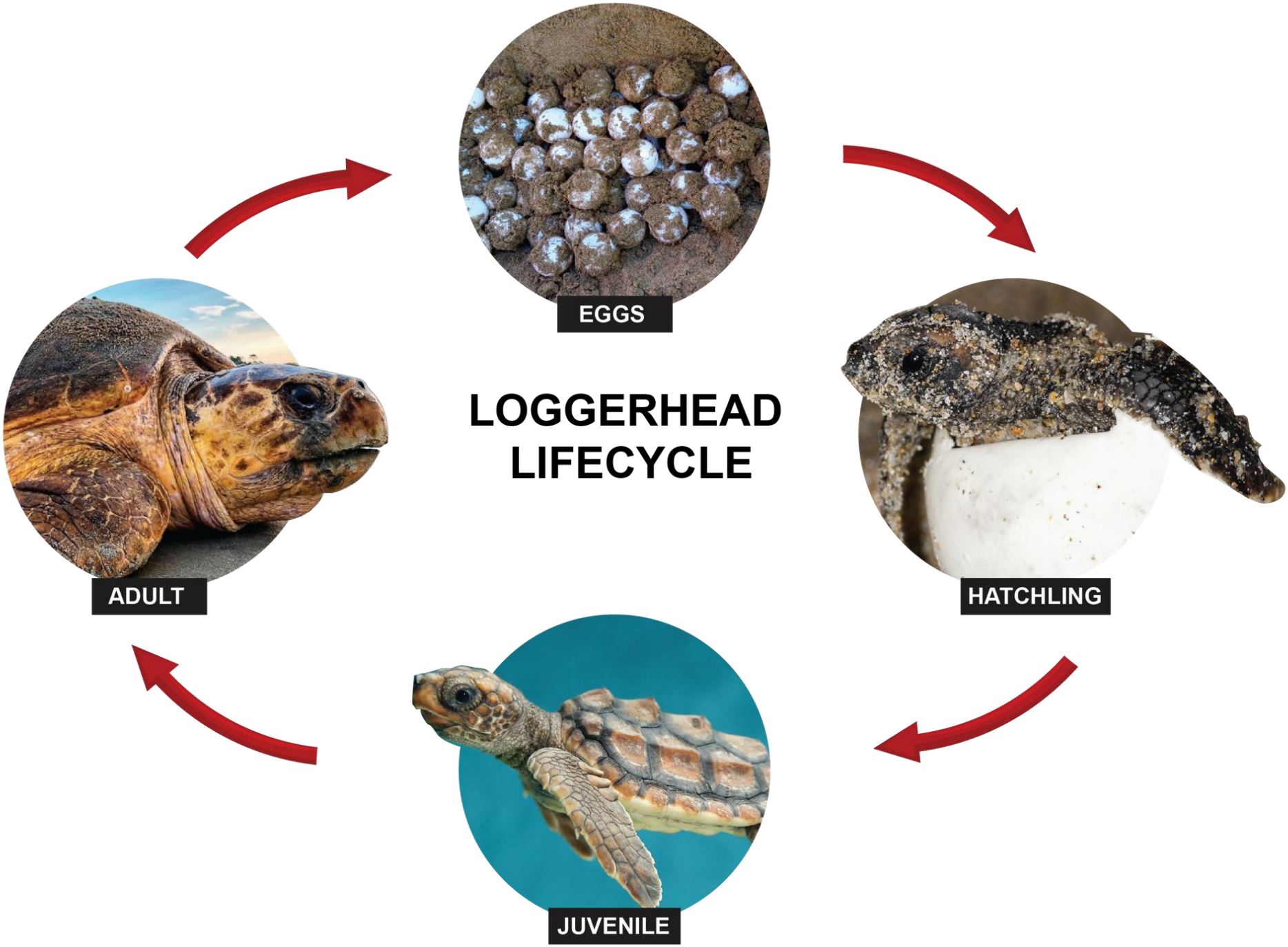
CLOSING EXERCISE:

- Learners make their own turtle hatchlings picture to take home. *(see CRAFT provided below)*
- Advanced options: the picture could reflect the turtle life cycle or some of the obstacles the turtle hatchlings encounter.

FOLLOW UP SUGGESTIONS:

Allow the learners some time to reflect and think about how we as humans could help to improve the turtle hatchling chances of survival.

PRESENTATION: TURTLE LIFE CYCLE



LEATHERBACK LIFECYCLE

EGGS

HATCHLING

JUVENILE

ADULT

GAMES: TURTLE HATCHLINGS

Baby sea turtles do not have any protection from their parents. They rel
speed, and determination to make it out of their nest and into the ocean without being eaten by crabs, birds or even dogs! Getting into the water is just one successful step in the process of swimming far out into a major ocean current and taking shelter under a patch of floating vegetation to escape predators. Baby turtles have to survive all of this, before they enter what are known as ¨the lost years". During these years, young sea turtles remain in the open ocean, which is the reason why scientists do not know a lot about what happens during this time of their lives.

SEA TURTLE VS CRAB GAME

OBJECTIVE:

Pupils will understand sea turtle hatching dynamics and the predatory threats that come along as they try to make their way out to sea. Hatchlings have no deference mechanisms apart from moving quickly towards water. As you will see, chances of survival diminish as the number of predators (crabs) increases.

RESOURCES:

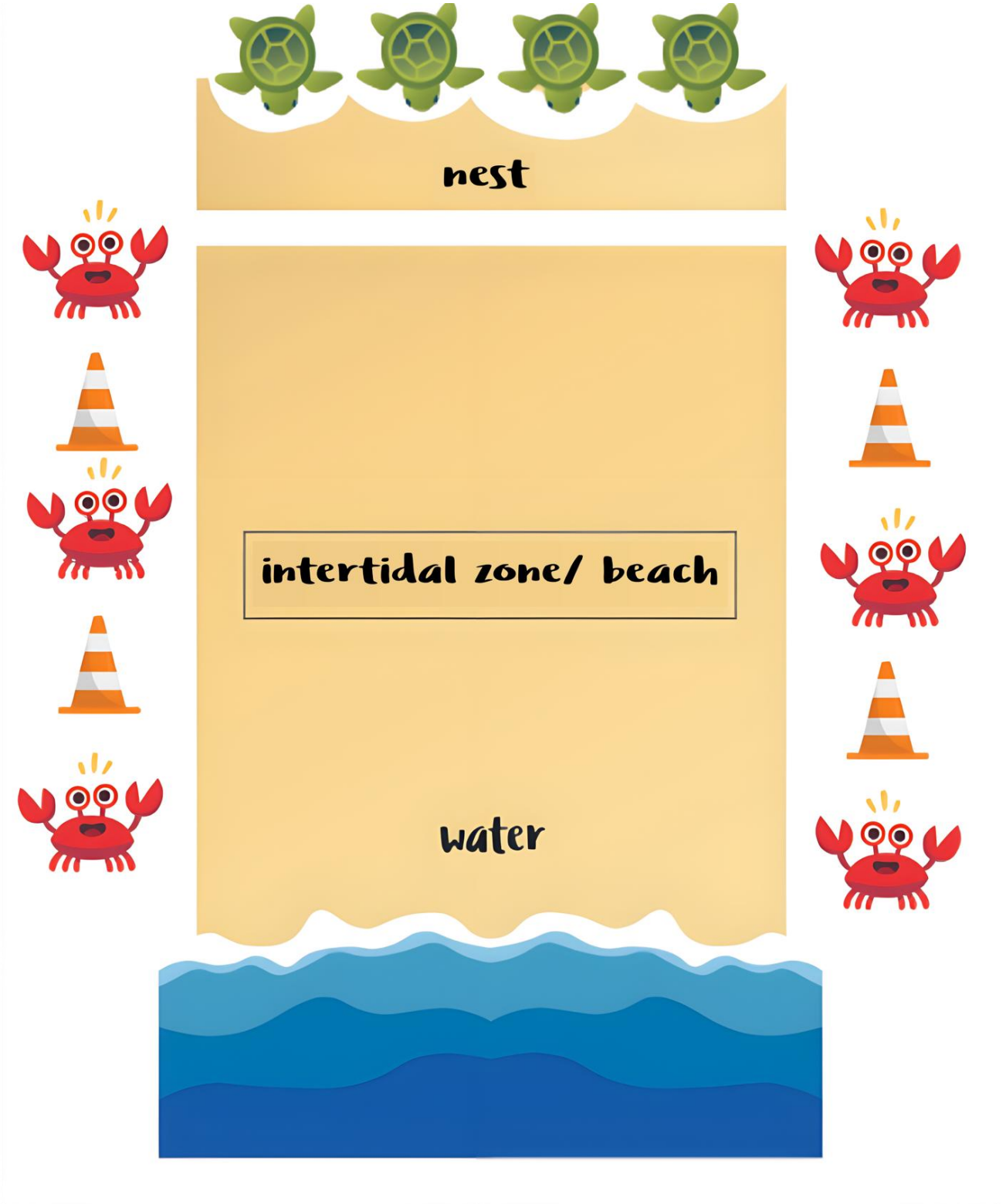
- Water + Nest Markers (could be a flag, landmark, a whiteboard, or pieces of paper with labels).
- Turtle Hatchling Headbands / Stickers
- Optional: Cones to mark intertidal zone boundaries.

HOW TO PLAY

Make sure there is a leader available to supervise the game and give out instructions for "hatching" and "attacks". Divide the group between crabs(predators) and sea turtle hatchlings (prey). Half of the players will be crabs and half of the players will be sea turtles. This can be changed for the following rounds.

Sea turtles will line up parallel to each other right behind the nest boundary. Half of the crabs will line up on one side of the intertidal zone and half on the other. When the leader shouts "hatching time", the crabs must do their best to tag the hatchlings (equivalent to eating them), at which point the hatchling would be out of the game.

The hatchlings will run as fast as they can to get to safety (water). For each round played the leader should know how many turtle hatchlings go out of the nest and how many crabs attack. They can call one crab and one sea turtle, two crabs versus one sea turtle, all crabs versus 4 sea turtles, etc. to show how the amount of surviving sea turtles decreases as the number of crabs increases and the other way around.



SEA TURTLE HATCHLING OBSTACLE COURSE

Gather materials for obstacles and use chalk to draw challenges that mimic the real dangers hatchlings face on their journey to the sea. Then, race learners to see who can complete the course the fastest.

Obstacle 1: Dig in a bucket of sand for a hidden item (turtle digging out of nest).

Obstacle 2: Crawl from point A to point B blindfolded (baby turtles use natural light plus wave crests to guide them to the ocean – other lights such as resorts can detour them).

Obstacle 3: Jump over a set of objects (tin cans will work); these represent a swarm of crabs – Predator alert.

Obstacle 4: Skip with rope 30 times before moving forward – getting out of a hole can be exhausting – a hole in the sand kids forgot to refill.

Obstacle 5: Spin around 10 times – a bird caught you as you were getting out of the hole but then dropped you, and you spun around before hitting the sand again.

Obstacle 6: Climb over a log (anything that can represent a log) – piece of driftwood in your way on route to the sea.

Obstacle 7: A round of hopscotch indicates the end (drawn in the sand or on the ground with chalk).

CRAFT: TURTLE HATCHLING

OBJECTIVE:

Create adorable turtle hatchling prints using a cork and water-based paint while learning about turtle hatchlings.

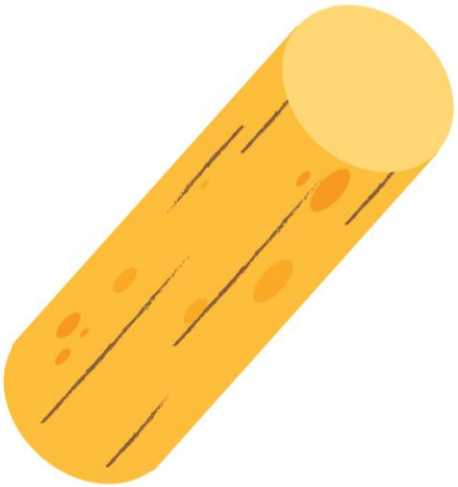
HOW TO MAKE

1. **Get Ready**
    - Put paper on a flat surface.
    - Pour green paint onto a plate.
2. **Make the Turtle Shell**
    - Dip the flat side of the cork into the green paint.
    - Press it onto the paper to make round turtle shells.
3. **Add the Body**
    - Use a brush or fingertip to paint four small flippers and a head.
4. **Draw Details**
    - Use a marker to draw eyes and a mouth.
    - Add small dots on the shell with red or brown paint (optional).
    - Let It Dry.

01.

PAPER

02.



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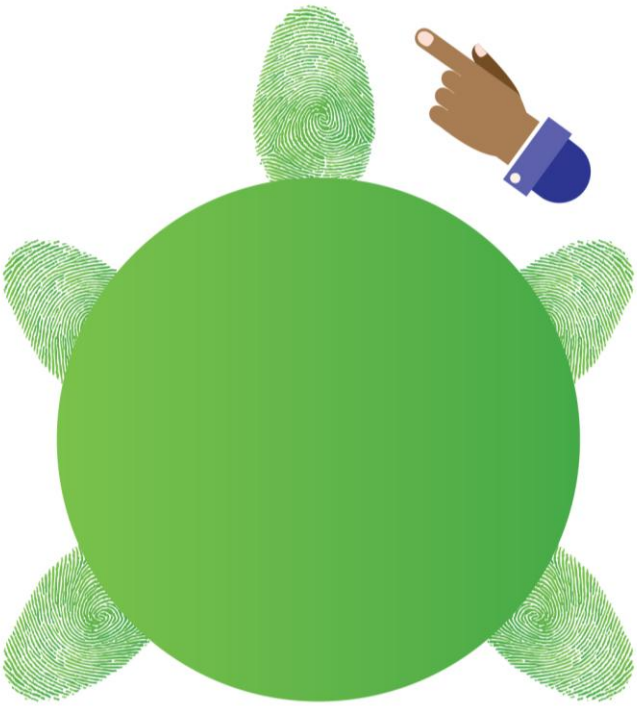

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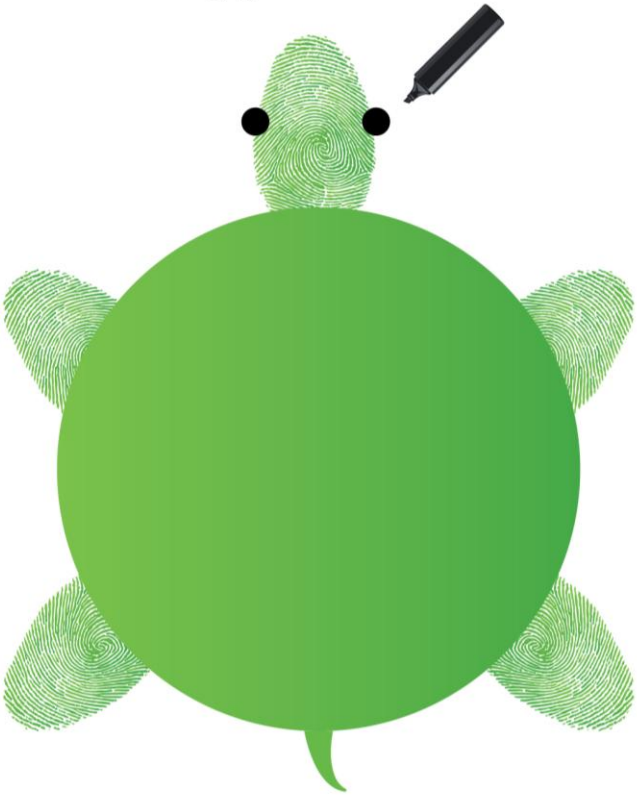
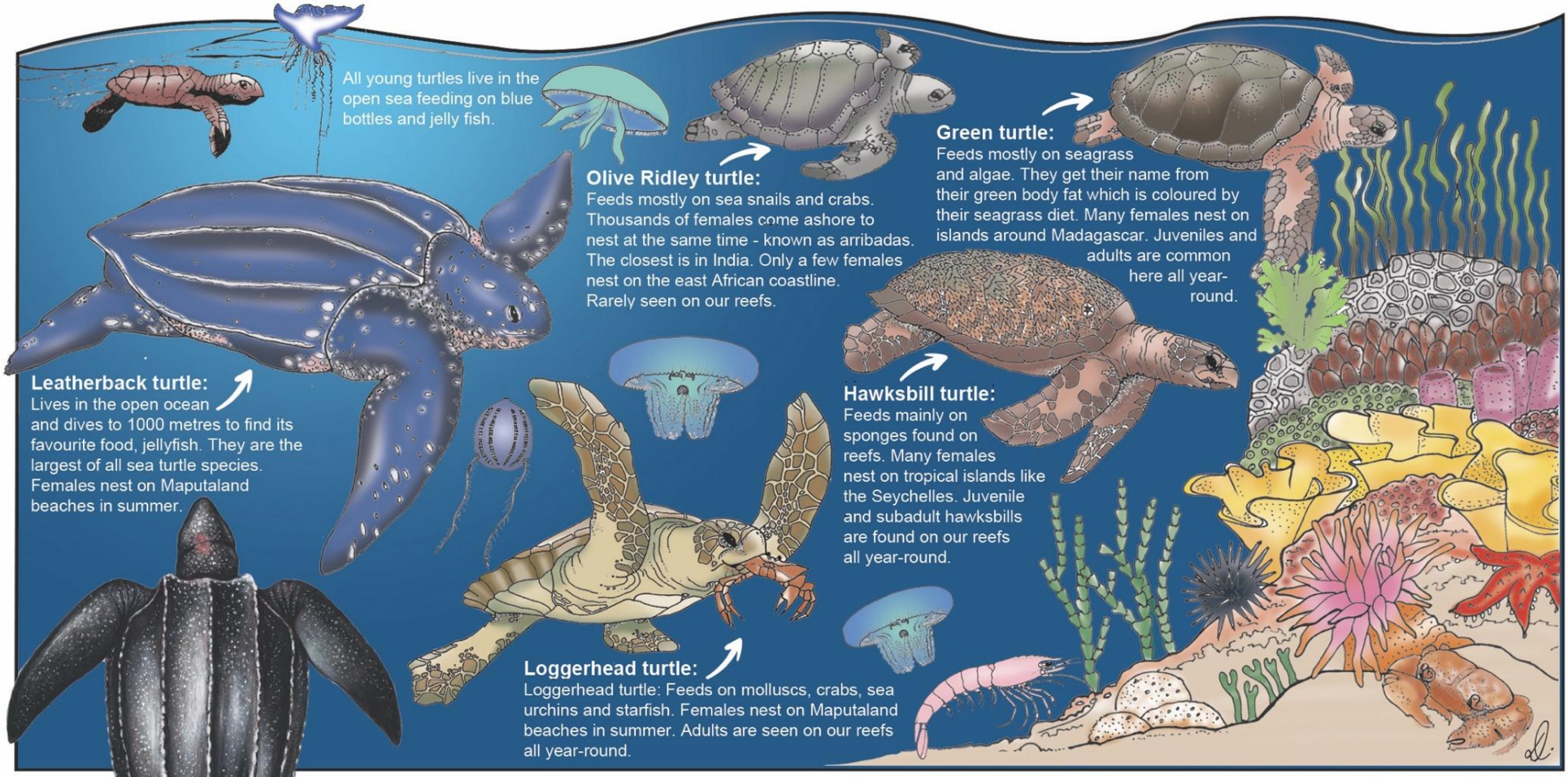
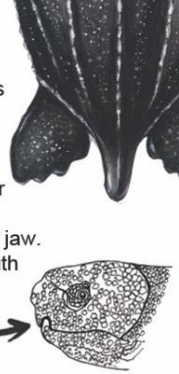


ADDITIONAL RESOURCES:

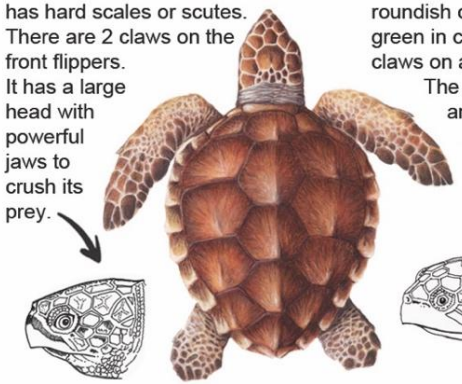
Five Species of Sea Turtle are Found Along the South African Coast



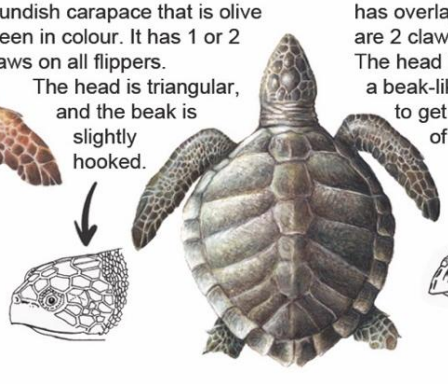
The **leatherback turtle** has a leathery carapace with no scales. There are 5 ridges down its back. The head is large with two fang-like cusps in the upper jaw and a sharp point on the lower jaw. Spines in the mouth and throat help swallow jellyfish.



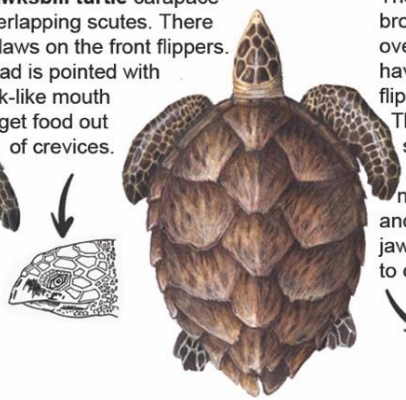
The **loggerhead turtle** carapace has hard scales or scutes. There are 2 claws on the front flippers. It has a large head with powerful jaws to crush its prey.



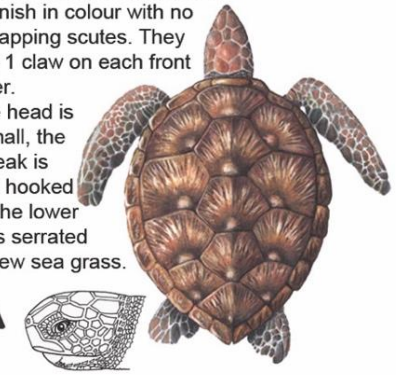
The **Olive Ridley turtle** has a roundish carapace that is olive green in colour. It has 1 or 2 claws on all flippers. The head is triangular, and the beak is slightly hooked.



The **hawksbill turtle** carapace has overlapping scutes. There are 2 claws on the front flippers. The head is pointed with a beak-like mouth to get food out of crevices.



The **green turtle** carapace is brownish in colour with no overlapping scutes. They have 1 claw on each front flipper. The head is small, the beak is not hooked and the lower jaw is serrated to chew sea grass.



ANNEXURE 1

Associated session plan breakdown for relevant reading and colouring in pages for “Harry the hammerhead” volume one – iSimangaliso community

Session Title	Harry the Hammerhead Shark Spreads the good news (volume 1) reading page numbers	Colouring in page numbers
Intro to oceans session (pre survey)		None
Harry the Hammerhead session	Read pages 1-32	None
What makes iSimangaliso special session	Read pages 1-5	1, 2 & 3
Coelacanth session	Read pages 6-7	4
Turtle hatchling session	**Read pages 8-11**	**5 & 6**
Coral Reefs session	Read pages 12-15	7 & 8
Marine food webs session	Read pages 16-23	9, 10, 1 & 12
Shark session	Read pages 24-27	13 & 14
Whale session	Read pages 28-29	15
Benefits of MPA's session (post survey)	Read pages 30-31	16

ANNEXURE 2

Session plan - Curriculum and Assessment Policy Statement alignment

WILDTRUST Session plan	Section	Grade	Subject	Strand	Topic	Content & Concepts
Turtle hatchling session	Intermediate phase	Grade 5	Natural Science & Technology	Live & living	Life cycles	Growth and development