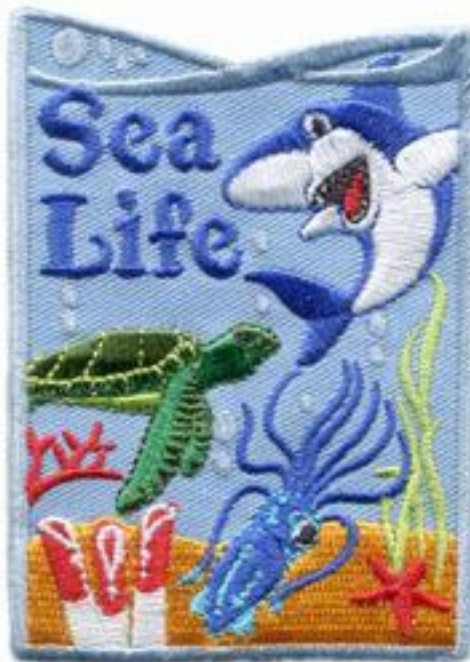


# SEA LIFE

## CHALLENGE KIT



This kit was created to assist you in completing the ***Sea Life Challenge Kit***.  
Included are facts, stories, crafts, games, recipes and information.



**E-Patches & Crests**  
A Division of 1497202 Alberta Ltd.

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1-877-335-8904

# SEA LIFE

## CHALLENGE KIT

This kit was created to assist you in completing the *Sea Life Challenge Kit*. Included are facts, stories, crafts, games, recipes and information that can be copied and distributed to the participants working on this kit.

After completing the kit, you can order the 3" crest/patch through [e-patchesandcrests.com](http://e-patchesandcrests.com). You may place your order in one of the following ways:

### **ORDER ONLINE AND PAY BY CREDIT CARD OR PAYPAL**

We accept secure online payments by Visa and MasterCard or PayPal. Browse the site and add items to your shopping cart. Confirm your order by selecting "Credit Card" or "PayPal" and you will be taken to a secure credit card or PayPal page which will process your payment.

### **PAY BY CHEQUE OR MONEY ORDER**

Make cheques payable to: e-patches & crests Mail your order to:

e-patches & crests  
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Sylvan Lake, Alberta  
T4S 1H8  
CANADA

### **PHONE OR EMAIL OR FAX**

Phone in, email or fax your order and we'll let you know the amount owing and you can provide your credit card information. We accept Visa and MasterCard or we can send you a PayPal invoice.

Toll Free: 1-877-335-8904  
Local: 403-864-4825  
Fax: 403-864-4830  
Email: [order@e-patchesandcrests.com](mailto:order@e-patchesandcrests.com)

If you have any questions please contact us.

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# SEA LIFE

## CHALLENGE KIT

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# Detailed Outline

**Page 5: PATCH REQUIREMENTS** is the section of the booklet that details what needs to be accomplished in order to earn each patch.

**Page 6-31: TEACHING PAGES** contain information that can be used to teach the subject being discussed. In this case the topics are:

- *Sunlight Zone*
- *Twilight Zone*
- *Midnight Zone*
- *Abyssal Zone*
- *Trench Zone*

**Page 32-42: CRAFT PAGES** detail ideas for crafts that pertain to the subject matter. Includes:

- *My Sea Canal*
- *Deep Sea Snow Globe*
- *Just Keep Swimming Picture*
- *Deep Sea Keychain*
- *Plate O'Fish*
- *Submarine Colouring Sheet*

**Page 43-46: RECIPE IDEAS** give suggestions about what kind of food would go well with the theme. Some recipes included are:

- *Turtle Droplets*
- *Jell-Ocean*
- *Tuna Tacos*
- *Cup-Sea Cakes*
- *Homestyle Fish and Chips*

**Page 47-64: GAMES** are pages filled with fun events for any Guiding group to do. The Sea Life games are:

- *Swimming in the Dark*
- *Fast Fish Races*
- *Marine Mini-Games*
- *Fishing Hole*
- *Sentence-by-Sentence Story*
- *Capture the Fish*

**Page 65-73: PUZZLE PAGES** test your mind's skill and endurance with:

- *Sea Life Word-Fit*
- *Ocean Search*
- *Fish Escape Maze*
- *Zone Scramble*

**Page 74-80: BIBLIOGRAPHY**

**Page 81: FEEDBACK FORM**

# Patch Requirements

## TO EARN THE PATCH:

All age levels need to complete 6 requirements from the list to earn the *Sea Life Patch*.

## SEA LIFE PATCH:

1. Discover all five layers of the ocean and the creatures that live in them.
  - Take a trip to a local aquarium, museum, or special event to learn more about the ocean's creatures.
  - Complete a Once Sentence Story. In small groups, write and act out a 5 minute play based on the story.
2. Discover a new ocean animal not included in this program and introduce it to your group.
3. Watch a movie or documentary about the ocean. Here's a list of movies to give you some ideas:
  - BBC Oceans
  - Planet Earth: Ocean Deep
  - Blue Planet
  - Finding Nemo
  - Shark Tale
  - Jaws
4. Play Marine Mini Games as a group.
5. Complete a game of Fishing Hole using all of the different creatures in this program.
6. Solve all of the puzzles included in the Puzzle Section.
7. Complete a Jell-Ocean (see Recipes). At least 3 of the fruit sea creatures must be animals featured in this program. Here are some ideas to help you design your fish:
  - Orange segment lion's mane jellyfish
  - Green sea turtles made with grapes.
  - Strawberry great white sharks
  - Apples are good to carve most shapes.
8. Make a Sea Canal with the group.
9. Choose and complete two recipes. Try a taste of the ocean.
10. Take a group trip to a local beach or pool. Play water-themed games and have Fast Fish Races.

# Teaching Overview

## **SUNLIGHT ZONE**

- *Plankton*
- *Great White Shark*
- *Green Sea Turtle*
- *Blue Whale*
- *Flying Fish*
- *Lion's Mane Jellyfish*

## **TWILIGHT ZONE**

- *Wolf Eels*
- *Firefly Squid*
- *Barrel-eyed Fish*
- *Blobfish*
- *Bluefin Tuna*

## **MIDNIGHT ZONE**

- *Colossal Squid*
- *Antarctic Toothfish*
- *Marine Hatchetfish*
- *Ping Pong Sponge Trees*
- *Viperfish*

## **ABYSSAL ZONE**

- *Black Swallower*
- *Anglerfish*
- *Grenadier*
- *Giant Tube Worm*

## **TRENCH ZONE**

## Teachings: Sunlight Zone

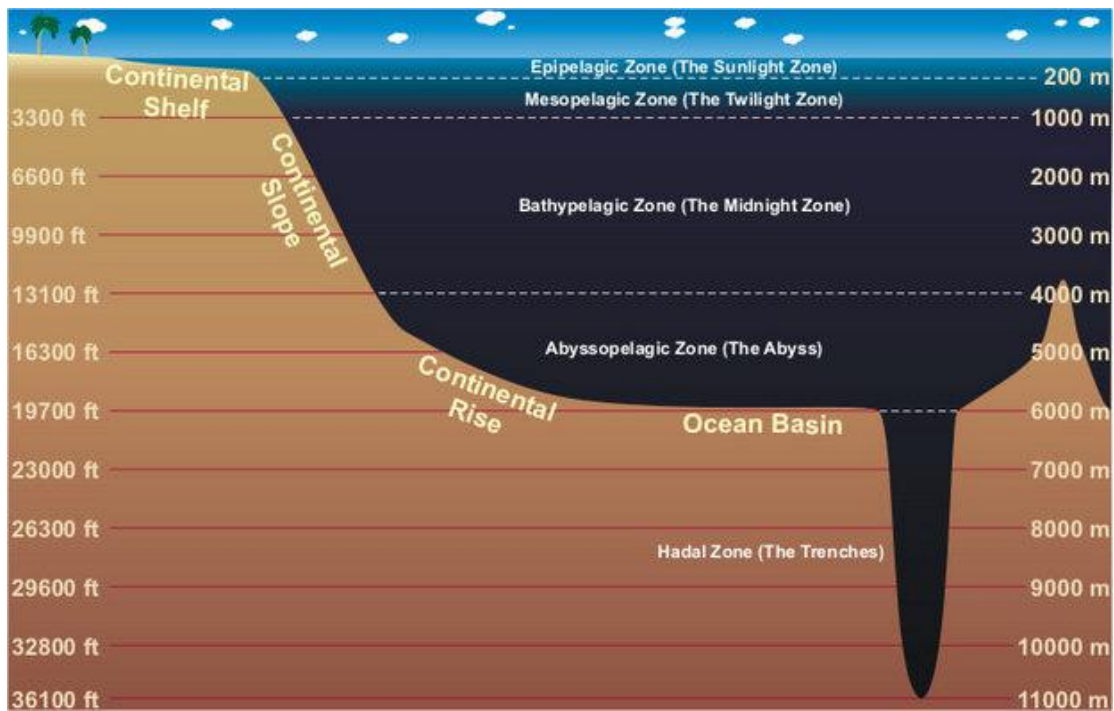
The Sunlight Zone, also known as the Epipelagic Zone, is the first layer of the ocean. This is the most active layer in the ocean because the living conditions are most ideal.

These bright waters are the only layer of the ocean with enough light to allow for photosynthesis, so this layer is the only one with plant life. Because of this, algae and plankton flourish. The rich plant life creates an ideal home for most of the ocean's creatures.

Many small fish live off of plankton. Animals that dine on plant life can gather plankton as they swim. Larger fish that require more nourishment hunt smaller fish, crustaceans, squid, and whales. Hunters in this layer have no lack of prey—nearly 90 percent of the ocean's creatures live in this layer.

This layer of the ocean also has the lowest water pressure. We don't realize it, but there is a natural atmospheric pressure of 1 kg/cm<sup>2</sup> (14.2 psi [pounds per square inch]) of pressure on our bodies at all times. Because water is heavier than air, this pressure increases very quickly the deeper you dive into the ocean.

The pressure doubles a mere ten meters (33ft.) beneath the ocean's surface. To give you an idea of how quickly this can add up, imagine an Olympic swimming pool. They're 100 meters long—the length of half the depth of the ocean's first layer. If you were to dive the 100 meters into the ocean, the pressure would be 10kg/cm<sup>2</sup> (142.2 psi). This is ten times the pressure we feel.



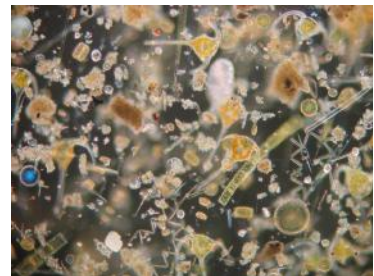
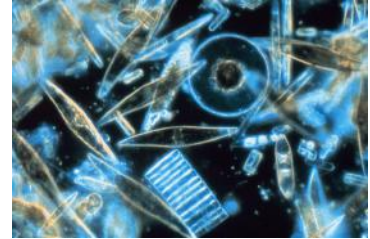
## Teachings: Sunlight Zone

### PLANKTON

Plankton is the most important life form in the ocean. It is also amongst the smallest. Any living organisms that are incapable of swimming against the current are considered plankton. They can be microscopic or simply very tiny, measuring less than the length of your baby finger. Plants, bacteria, and very small animals are only some of the thousands of individual species and organism that make up plankton populations.

Plankton got its name from the Greek adjective planktos, meaning “wanderer” or “drifter” because it flows with the current. There are three broad groups of plankton. Phytoplankton is plant life that reproduces through photosynthesis. Zooplankton is comprised of small animals, like crustaceans and larvae of larger animals. Bacterioplankton is bacteria and archaea (single-celled organisms).

In one way or another, all animal life in the ocean depends on plankton. Animals large and small feed on plankton. Coral reefs depend on plankton to get their nutrition. Small herbivores feed plankton. Those smaller fish become prey for larger, carnivorous fish. It is the first link in the ocean’s food chain.



#### QUICK FACT

#### OCEANOGRAPHY

Canada has the longest coastline, at 56,543 miles. The combined distance of the Earth’s coastlines is enough to wrap around the Equator twelve times. That’s a lot of sand! It is estimated that 90% of volcanic activity takes place under water. The largest range of active volcanoes is underwater, there are 1,133 in an area the size of the state of New York.