



# Survival at Sea

## Teacher Resource Guide

Grades K-2



### Welcome to SEA LIFE® Aquarium at LEGOLAND® California Resort!

#### Arrival and Entry

Please arrive 30 minutes before your program. Teachers and chaperones must be present during the staff-facilitated 45-minute program.

#### Safety

To have the best adventure possible, please abide by all safety precautions posted and given by our staff.

#### Additional Information

For information on SEA LIFE® Aquarium and our education programs, visit [www.visitsealife.com](http://www.visitsealife.com)

#### Directions

From Interstate 5

**Buses:** Exit Palomar Airport Road East.

Turn LEFT onto The Crossings Drive, and LEFT into the LEGOLAND® parking lot.

**Cars:** Exit Cannon Road East and turn RIGHT on LEGOLAND Drive.



### Contents

Introduction .....	1
Background Information.....	2
Habitat Scavenger Hunt.....	3
Science Standards.....	4

### Educational Objectives

- Understand habitats and how creatures inhabit diverse environments
- Learn characteristics of the desert, kelp forest, coral reef and open ocean
- Discover the flora and fauna (plants and animals) in different habitat/ecosystems
- Discover opportunities to make your voice heard in the quest to protect California coastal areas

#### FUN FACT

About 70 percent of the Earth's surface is water-covered, and the oceans hold about 96.5 percent of all Earth's water!



# Background Information

## From Land to Sea

Earth is covered with many types of special “communities,” habitats of plants and animals living together. California is a very biologically diverse state, not just on land, but also in water!

### Desert

The extreme hot and dry California desert makes it very difficult for living species to survive. Plants and animals have to evolve to be able to survive in the extreme temperatures of the desert. Journey from the land to the sea at SEA LIFE® Aquarium.



### Kelp Forest

Beyond the coastline, the Pacific Ocean opens up into a huge world that scientists are still exploring. Many diverse animals live in the different levels of the kelp forest. Kelp offers a sheltered place for animals to hide. Observe which animals of SEA LIFE Aquarium have kelp in their exhibits and how they use this special habitat.



### Coral Reef

Coral reefs are found in warm, shallow waters. Reefs are formed from colonies of small-interconnected groups called polyps. Coral reefs have been called “rainforests of the sea” because they provide a home for many different marine animals and contain more than 25% of all marine life. Observe the animals living in the live coral at SEA LIFE Aquarium.

### Open Ocean

The ever changing ocean varies from the shallow coral reefs to the deep sea. Ocean animals have to find places to feed, have babies, and escape from very large predators. Animals have special adaptations, such as camouflage, to keep them safe in the vast ocean. See how many hidden animals you can find in the Lost City of Atlantis.



## Hands-On Activities

### Life in Different Habitats

- See how plants and animals survive in the harsh desert
- Explore the kelp forest and find the animals that take refuge there
- Observe animals using live coral as refuge
- Learn about survival adaptations in Open Ocean animals



# Habitat Scavenger Hunt

Check out the “homes” that SEA LIFE® Aquarium has created for our animals

## Gold Rush River

All animals must find ways to hide from predators. How are the animals adapted to live in this area?

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## San Francisco Harbor

Visit the Harbor display and observe the kelp forest. What two animals in this area have the best camouflage? Note their names and how they blend into their environment.

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## Southern California Touch Pool

These animals have to deal with high and low tides as well as crashing waves and long amounts of time in the sun. Write down three types of sea stars that can be found in California. Which has the roughest texture?

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## Lost City of Atlantis

Ocean animals have adapted to survive in a habitat with large predators. Pick one of the colorful fish to observe. Does it hide in the coral or swim with the sharks overhead? How do small fish hide from predators?

## Ray Lagoon

Rays are light colored on the bottom and dark on the top, helping to camouflage in the water column. They also can bury in the sand to hide from predators. Pick a stingray and draw how your animal hides from predators.



# Links to Science Standards

## Next Generation Science Standards

### KINDERGARTEN

#### Life Sciences

K-LS1-1 Use observations to describe patterns of animals (including humans) need to survive.

#### Earth Sciences:

K-ESS-2-2 Construct an argument supported by evidence for how animals can change the environment to meet their needs.

K-ESS3-1 Use a model to represent the relationship between the needs of different animals and the places they live.

### GRADE ONE

#### Life Sciences

1-LS3-1 Make observations to construct an evidence-based account that young animals are alike, but not exactly like, their parents.

### GRADE TWO

#### Life Sciences:

2-LS4-1 Make observations of animals to compare the diversity of life in different habitats.

## California State Science Standards

### KINDERGARTEN

#### Life Sciences

2.a. Students...observe and describe similarities and differences in appearance and behavior of plants and animals (e.g....fish).

#### Earth Sciences: Students know...

3.a. characteristics of oceans and deserts...

### GRADE ONE

#### Life Sciences: Students know...

2.a. Different...animals inhabit different kinds of environments and have external features that help them thrive....

2.b. Animals need water, animals need food.

2.c. Animals eat plants or other animals for food and may also use plants or other animals for shelter and nesting.

#### Investigation and Experimentation

4.a. Draw pictures that portray some features of the thing being described

4.b. Record observations and data with pictures, numbers, or written statements.

#### Investigation and Experimentation

4.a. Observe common objects by using the five senses.

4.b. Describe the properties of common objects.

4.e. Communicate observations orally and through drawings.

### GRADE TWO

#### Life Sciences: Students know...

2.c. Many characteristics of an organism are inherited from parents.

Some...are...influenced by environment.

2.d. There is variation among individuals of one kind within a population.

#### Investigation and Experimentation

4.c. Compare and sort common objects to two or more physical attributes (color, shape, texture, size, weight).