



# EXPLORING The Texas Coast

## Lesson Plans for Grades K-8



Texas General Land Office  
George P. Bush, Commissioner

[texasadoptabeach.org](http://texasadoptabeach.org) • 1.877.TXCOAST





# FOREWORD



## The Texas General Land Office Adopt-A-Beach Program

### Overview

The Texas Adopt-A-Beach Program is an all-volunteer effort started by the Texas General Land Office in 1986 to rid the state's publicly owned beaches of trash and raise public awareness of the problems associated with marine debris.

According to The Ocean Conservancy, land-based sources contribute 70 percent of all trash found in the ocean and on our Texas beaches. The largest source is trash washed off streets into storm drains that empty directly into streams, rivers, and bays. Each time it rains, runoff from the street picks up litter and other pollutants, which eventually make their way down to the Texas coast. Other land-based sources are items that are left behind by beach goers. Commercial fishing vessels, recreational boats, cargo vessels, and offshore petroleum rigs are just some of the ocean-based sources of marine debris. The various plastic wastes from these sources are among the most pervasive and threatening forms of debris found in our oceans.

Also wreaking havoc on our Texas coast are the loop currents in the Gulf of Mexico. Any item dropped into the Gulf of Mexico will eventually make its way to our beaches. We often find trash items from neighboring states and Mexico, but we also see items that make their way to our coast from as far away as China.

Twice each year, volunteers check in at sites along the coast to pick up trash. A fall event is held in September, and a spring cleanup is held in April.

Years of data collection from beach cleanups played an integral part in the passage of MARPOL Annex V, an international treaty that prohibits the dumping of plastics anywhere in the world's oceans. The International Maritime Organization also designated the Gulf of Mexico and the Wider Caribbean as a "special area" where nothing except finely ground food scraps can be discarded.

While the program receives limited funding from the General Land Office, its success is due to support from the private sector. Generous contributions have helped carry our message, "Trashing Texas Beaches Isn't Cool," to thousands of Texans. Help make a difference by donating to the program today! Visit [texasadoptabeach.org](http://texasadoptabeach.org) for more details.

The Adopt-A-Beach Program has won national recognition, both as a beach cleanup effort and as a public awareness campaign, and has prompted the development of similar programs in 55 U.S. states and territories and more than 100 foreign countries.

*To get involved in one of our cleanups or to learn more about the program, please visit our website at [texasadoptabeach.org](http://texasadoptabeach.org) or call us toll free in Texas at 1.877.TXCOAST.*

*We'll see you at the beach!*

### About the Lesson Plans

Thank you for your interest in the Texas General Land Office Adopt-A-Beach Program Lesson Plans. The purpose of these lessons is to educate children (ages 5 to 14; grades K through 8) about coastal issues in a way that is fun and challenging.

There are six lessons, each with a specific message to help students broaden their knowledge of marine debris and coastal issues. Each lesson plan is featured in color for the instructor's use. The corresponding journal pages have been composed in black and white for easy printing and copying.

*The Texas General Land Office values your thoughts and feedback. Please provide information about any oversights, errors or omissions, as well as particular activities that students find interesting. Send comments to the Texas General Land Office Adopt-A-Beach Program at [beach@glo.texas.gov](mailto:beach@glo.texas.gov).*





## Grade Level Texas Essential Knowledge and Skills (TEKS) by Content Area:

### English Language Arts {2008}

Kinder: 1E; 3B; 4B; 5A; 5C; 12B; 13E;  
16A; B; C; 19A; 21A; B

Grade 1: 4B; C; 9B; 14B; 15A; 16A;  
B; 19A; 20A; B; C; 21A; 23A; B; 24A;  
C; 27B

Grade 2: 5B; 15A; B; 17A; B; C; D; E;  
19A; C; 21A; 22A; B; C; 24A; B; 25A;  
B; C; 28A; B

Grade 3: 4B; 15A; B; 19; 20A; B; C;  
22A; B; C; 23A; B; C; D; 28; 29A; B; 30

Grade 4: 13A; B; 16A; 17; 18A; 20A;  
B; C; 21A; B; C; 22A; B; C; D; 23A;  
24A; B; C; 25; 26; 27A; B; 28

### Science (Geology) {2009}

Kinder: 1A; B; 2A; B; C; D; E; 3A; B;  
4A; 6A; 8A; B; 9A; B; C; 10A; B

Grade 1: 1A; B; C; 2A; B; C; D; E; 3A;  
B; 4A; B; 6A; 7B; C; 9A; 10A

Grade 2: 1A; C; 2A; B; C; D; E; F; 3A;  
B; 4A; B; 7B; C; 9C

Grade 3: 1A; B; 2A; B; C; D; E; F; 3A;  
4A; B; 9A; B; C; 10A

Grade 4: 1A; B; 2A; B; C; D; E; F; 3A;  
4A; B; 7C; 10A

### Social Studies {2010}

Kinder: 3B; 4A; 5A; B; 6A; 14B; C;  
15A; B; 16A; B

Grade 1: 6A; B; C; 17A; B; C; 18A; B

Grade 2: 7B; C; 8A; B; C; 19A

Grade 3: 4A; D; 17B; E; 18A; C

Grade 4: 6B; 7B; 8C; 9A; B; C; 12B;  
21B; 22C; D; E

# Take a Good Look

## Overview

Students observe the living and non-living items they see at the beach and discuss the relationships of these items to Texas beaches.

## Objectives

- ✦ List items found at the beach.
- ✦ Discuss the relationships of these items to the ecosystem.

## Prerequisites

None

## Vocabulary

### organic

things that are or were once alive.

### inorganic

things that have never been alive.

### habitat

a place where an organism lives that includes its food, water, shelter and space.

## Setting

Outdoors (preferably at the beach)

## Materials

- ⇒ pencils
- ⇒ journals
- ⇒ clipboards
- ⇒ gloves, garbage bags (optional)

# Background

The Texas shoreline is a habitat that is home to many living things. This activity shows the interdependence between the living and non-living factors where the land and water meet. The unique combination of living and non-living elements creates a dynamic system that requires exploration and observation to understand the interactions that occur there. In order to understand the role humans play within this ecosystem, students begin by studying these interactions.



## Activities

1. Tell students they will be using their sense of sight to observe what they see at the beach (if the beach is not easily accessible, this activity can be adapted for another outdoor setting). Tell them they will be looking for both living and non-living objects.
2. Take students to the beach to do their observation. Remind them that some of the objects they observe may be very small, so they will have to pay close attention. Students can be given gloves and garbage bags to pick up any garbage they find. **NOTE:** *Caution students against picking up sharp objects and advise them to not pick up any living things. Have adult chaperones assist with this exercise.*
3. Take 10-15 minutes for pairs of students to observe. Examples of things they might find that are **living** include ants, bees, spiders, birds, grass, flowers and humans. Examples of **non-living** things include rocks, soil or dirt, buildings, garbage and playground equipment.
4. When students return, ask what they found outside. Discuss which items are living and which are non-living.
5. Ask students to draw one living and one non-living item in the blank spaces on the **Unit 1, Page 4 Journal Page**. This can be completed either during the observation or afterward. Ask students to label the items.
6. Ask students to complete the additional journal questions and then discuss answers as a class. **NOTE:** *For K-2, this can be a discussion only.*

## Discussion Questions

- ✿ What surprised you about what you saw?
- ✿ How do the living objects depend on Texas beaches (e.g., food, water, recreation)?
- ✿ What is the relationship of the non-living items to Texas beaches? Some are natural objects that belong and some are brought by human hands.
- ✿ What evidence did you find that humans spend time at the beach (e.g., footprints, garbage, garbage cans, lifeguard stands, cars)?
- ✿ Why are Texas beaches important to you?

## Wrap-up

- ✿ Back in the classroom, create a class list of the items found.
- ✿ Have students write and draw descriptions of their time at the beach.
- ✿ Discuss questions students have from their visit.
- ✿ Discuss how life would be different if we did not have beaches. Why are they so important to the people, plants and animals in the area?

*The Texas General Land Office values your thoughts and feedback. Please provide information about any oversights, errors or omissions as well as particular activities that students find interesting. Send comments to the Texas General Land Office Adopt-A-Beach Program at [beach@glo.texas.gov](mailto:beach@glo.texas.gov).*

*Adapted with permission from **Great Lakes in My World**, a lesson plan created by the Alliance for the Great Lakes.*

# Unit I | “Take a Good Look” Journal Pages

## PART ONE: OUTDOOR OBSERVATION

1. Draw a picture of a living item you found.

2. Draw a picture of a non-living item you found.

3. What makes Texas beaches special?

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# Unit I | “Take a Good Look” Journal Pages

## PART TWO: LIVING ITEMS

Answer the following questions about the living things you observed.

1. List some living things you found.

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Choose one living item to answer the following questions:

2. How do you know this item is living?

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3. What does this living thing need in order to survive?

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4. What other living things might depend on this living thing to survive?

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5. Draw the living creature you observed.

# Unit I | “Take a Good Look” Journal Pages

## PART THREE: NON-LIVING ITEMS

Answer the following questions about the non-living things you observed.

1. List some non-living things you found.

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Choose one non-living item to answer the following questions:

2. How do you know this item is not living?

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3. How might living things depend on this non-living thing for survival?

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4. Was this item once alive or part of something that was once alive, like a leaf or a shell? (*Remember special vocabulary—**Organic:** things that are or were once alive; **Inorganic:** things that have never been alive.*)

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5. Draw the non-living item you observed.

6. Why are Texas coastlines important to you and your community?

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