

Science & Literacy Activity

ACTIVITY OVERVIEW

This activity, which is aligned to the Common Core State Standards (CCSS) for English Language Arts, introduces students to scientific knowledge and language related to animals that live in different kinds of habitats.

This activity has three components:

- BEFORE YOUR VISIT**, students will read a content-rich article about animals that live in different kinds of habitats in Cuba. This article will provide context for the visit, and also help them complete the post-visit writing task.
- AT THE MUSEUM**, students will read and engage with additional texts (including printed text, digital and physical/hands-on interactives, video, diagrams, models). This information will help them complete the post-visit writing task.
- BACK IN THE CLASSROOM**, students will draw on the first two components of the activity to complete a CCSS-aligned explanatory writing task describing the animals of Cuba that live in different habitats.

Materials in this packet include:

For Teachers

- Activity Overview (p. 1-2)
- Article (teacher version): "Caribbean Island Wildlife: Animals of Cuba" (p. 3-9)
- Sample Graphic Organizer (p.10)
- Answers to student worksheets (p. 11-13)
- Assessment rubric for student writing task (p. 14)

For Students

- Article (student version): "Caribbean Island Wildlife: Animals of Cuba" (p. 15-21)
- Student worksheets for ¡Cuba! exhibition visit (p. 22-24)
- Student writing task, writing sheets, and rubric (p. 25-29)

1. BEFORE YOUR VISIT

Students will read a content-rich article about animals that live in different kinds of habitats in Cuba. This article will provide context for the visit and help them complete the post-visit writing task.

Preparation

- Familiarize yourself with the student writing task, writing sheets, and rubric (p. 25-29).
- Familiarize yourself with the teacher version of the article (p. 3-9), and plan how to facilitate the students' reading of the article.

Instructions

- Explain the goal: to complete a writing task about animals that live in different kinds of habitats in Cuba. You may want to read through the writing task with students at this point.
- Tell students that they will need to read an article before visiting the Museum, and read additional texts during the visit.
- Distribute, read, and discuss the article, using the teacher notes to facilitate.

Common Core State Standards

RI.K.1: With prompting and support, ask and answer questions about key details in a text.

RI.K.2: With prompting and support, identify the main topic and retell key details of a text.

W.K.2: Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

New York State Science Core Curriculum

LE3.1c

Next Generation Science Standards

LS4.D: Biodiversity and Humans

- There are many different kinds of living things in any area, and they exist in different places on land and in water.

SEP 8: Obtaining, Evaluating, and Communicating Information

- Obtain information using various texts, text features, and other media that will be useful in answering a scientific question.
- Communicate information in written forms using drawings and writing that provide details about scientific ideas.

2. DURING YOUR VISIT

At the Museum, students will read and engage with additional texts (including printed text, digital and physical/hands-on interactives, video, diagrams, models). The information they'll gather from these multiple sources will help them complete the post-visit writing task.

Preparation

Review the educator's guide to see how themes in the exhibition connect to your curriculum and to get an advance look at what your students will encounter. (Guide is downloadable at amnh.org/cuba/educators)

- Familiarize yourself with the student worksheet (p. 22-24) and the map of the exhibition (p.3 of the educator's guide).

Instructions

- Explain the goal of the Museum visit: to read and engage with texts (including printed text, digital and physical/hands-on interactives, video, diagrams, models) and to gather information to help them complete the post-visit writing task.
- Distribute and review the worksheet and map. Clarify what information students should collect, and where.

Additional Suggestions for Facilitating the Museum Visit

- Have students explore the exhibition in pairs, with each student completing his or her own student worksheet.
- Encourage student pairs to ask you or their peers for help locating information. Tell students they may not share answers with other pairs, but may point each other to places where answers can be found.
- For those who may have trouble taking notes in the exhibition, teachers and chaperones may use the included worksheets to transcribe students' observations. Teachers and chaperones may also take photos for students to refer to back in the classroom.

3. BACK IN THE CLASSROOM

Students will use what they have learned from the pre-visit article and at the Museum to complete a CCSS-aligned explanatory writing task about how animals in Cuba depend on their habitats.

Preparation

- Plan how you will explain the student writing task and rubric (p. 25-29) to students.

Instructions

- Distribute the student writing task and rubric. Explain that they will use it while composing, and also to evaluate and revise what they have written.

Suggestions for Facilitating Writing Task

- Before they begin to write, have students use the writing task to frame a discussion around the information that they gathered at the Museum. They can work in pairs, small groups, or as a class, and can compare their findings.
- Referring to the writing prompt, have students underline or highlight all relevant passages and information from the article and from the notes taken at the Museum.
- Students should write their essays individually.

Supports for Diverse Learners

This resource has been designed to engage all learners with the principles of Universal Design for Learning in mind. It represents information in multiple ways and offers multiple ways for your students to engage with content as they read about, discuss, view, and write about scientific concepts. Different parts of the experience (e.g. reading texts, or locating information in the Museum) may challenge individual students. However, the arc of learning is designed to offer varied opportunities to learn. We suggest that all learners experience each activity, even if challenging. If any students have an Individualized Education Program (IEP), consult it for additional accommodations or modifications.

Alternate Version of Article

Another version of the same article with a lower lexile level is available for download at amnh.org/cuba/educators. You can use this same activity with that article.

ARTICLE: TEACHER VERSION

About this Article

Lexile: 530

Wordcount: 775

Text Complexity: The Lexile level for this text falls on the lower end of the 2-3 CCSS grade complexity band. This text is suitable as a read aloud for students in grades K-2. Grade 2 teachers should use their professional judgement and knowledge of students' independent reading levels regarding assigning this text for independent reading.

Note: You might opt to scribe notes on a whiteboard or smartboard as you read the text, inviting students to contribute. See the sample graphic organizer at the end of this article.

Key for Teacher Notes

- **Green text**
specific strategies
- Regular text
instructions for teachers
- *Italicized text*
teacher's instructions to students
- Underlined text
important domain-specific words

Caribbean Island Wildlife: Animals of Cuba

Pack your bags for a big trip! We are going to a country called Cuba. Cuba is made up of one large island and many smaller ones. There are many kinds of animals there. We will meet three of them. Each animal lives in a different habitat. A habitat is a place where a living thing lives and grows. We will visit habitats in a forest, wetlands, and a coral reef.



Lizards of the Forest

Let's go to the forest! To get there, we will travel to the mountains of Humboldt National Park. We'll see pine trees, grasslands, and rivers. Each habitat is a home for many animals. Some of these animals live only in Cuba.

Show students where Cuba is located on the map.

Think-Pair-Share: *What is a habitat? Work with your partner to find the sentence in the text that defines "habitat."*

Think Aloud: *We are going to learn about three different habitats in Cuba, and animals that live in them!*

Think-Pair-Share: *Which habitats will we learn about? Work with your partner to find the sentence in the text that tells us the three habitats we will learn about.*

Optional: If students have studied any of these habitats before, facilitate brief discussion about what they already know.

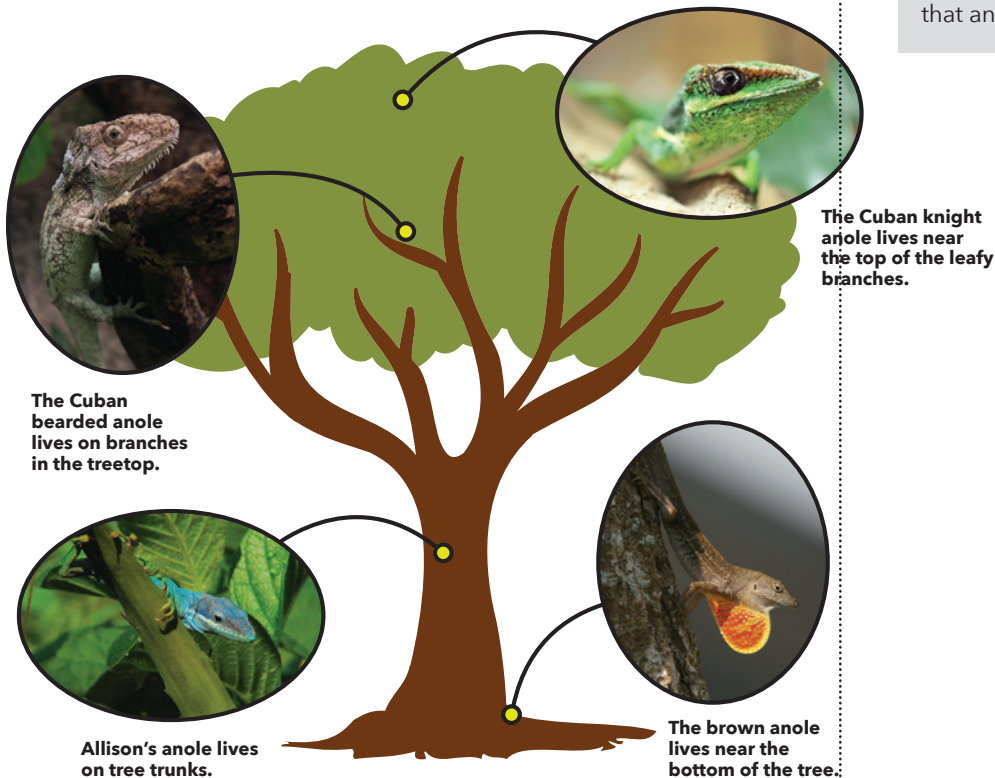


Visualize: Close your eyes and imagine that we are in the forest. Think about what you feel, see, and hear as you step through the forest. Invite students to share out.

Optional: Scribe notes on the features of the forest habitat. (See sample chart.) Let's read on to learn about anoles, animals that live in the forest of Cuba.

The forest is full of tall trees. It is very shady and damp. We are looking for **anoles**. These lizards live in and around trees. There are many kinds of anoles. Some only live high in the treetops. Others only live on the ground. Each of these areas is a different habitat. Let's meet a few of these lizards.

Think-Pair-Share: What are you learning about anoles from this picture? Students should notice that anoles live in different parts of the tree.



The **brown anole** lives near the bottom of the tree. This lizard has long legs for jumping and running. It can move fast! But if it spots a predator, it stops moving. Then it's camouflaged. It is hard to see because it blends in with the tree's brown trunk and branches.

Allison's anole lives on tree trunks. This lizard has sticky pads on its toes that help it climb up and down a tree. It is looking for insects to eat.

The **Cuban bearded anole** lives on small branches in the treetop. It moves slowly and it has short legs that can grab branches.

The **Cuban knight anole** lives near the top of the leafy branches. If another animal gets close, it has different ways to say, "Keep out!" It does push-ups. It sticks out a large pink flap under its throat. It even changes color! This is the largest anole. It eats insects, frogs, and spiders. It can eat birds too.

Sea Turtle of the Coral Reef



Think Aloud: *Wow! We just learned about four different types of anoles... and they all behave in different ways! Let's act like we are anoles so that we can understand more about how they move.*

Divide the class into four groups and assign each group an anole to "act like." First give groups time to decide on what to act out based on the text, and then give each group a turn to make the physical movements of their anole. (If space is a concern, you may want to select one student per group to do the acting out.)

Now let's go to the beach! We will visit some tiny islands called Gardens of the Queen. We dive into the warm, clear water. Under the water, we see a beautiful coral reef. Thousands of animals live around the reef. We see colorful fish, sea fans, sea sponges, and other ocean life.



Look for the **hawksbill sea turtle**. You can see why it's called a "hawksbill." This turtle's pointed head and jaws look like a bird's beak! The pointed jaws help it reach food in tiny spaces in the reef. Its favorite meal is sea sponges. Sea sponges are animals with soft bodies that live among the coral.



Visualize: Close your eyes and imagine that we are in the warm, clear water of the coral reef. Think about what you feel, see, and hear as you swim through the coral reef. Invite students to share out.

Optional: Scribe notes on the features of the coral reef habitat. *Let's read on to learn about the hawksbill sea turtle, an animal that lives in the coral reefs of Cuba.*

Hawksbill sea turtles didn't always live in the reef. They are born on sandy beaches. That's where females lay their eggs and then bury them. After the babies hatch, they head for the water. They float together in seaweed to stay safe. When they get bigger, they move around to different habitats: a rocky beach, a shallow bay, and a coral reef.

Crocodile of the Wetlands



Our last stop is the Zapata wetlands. This is a huge area of swampy land. The wetlands have different habitats. There are wet marshes. There are forests of mangrove trees that grow in shallow water. Lots of different animals live in these habitats. Many of them live only in Cuba. One is the **Cuban crocodile**. Only a few thousand of these crocodiles are found in the wild. And most of them are here in the Zapata wetlands.

Think-Pair-Share: *What have you learned about the hawksbill sea turtle (from the article and the pictures)? Tell your partner one thing that you learned. Invite students to share out.*

Optional: Scribe notes about the hawksbill sea turtle based on students' comments.

Think-Pair-Share: *How is this habitat, the wetlands, different from the other two (forest and coral reef) that we learned about? Use examples from the text and/or the pictures in your conversation. Invite students to share out.*

Optional: Scribe notes about the wetlands habitat based on students' comments.



You might spot this crocodile hunting. Sometimes it waits under water before it attacks. It can even jump out of the water to catch an animal in the air! It has long legs, so it can also run fast to chase animals on land.



This crocodile takes care of its young. In the water, it carries its tiny babies in its mouth or on top of its head.

Think-Pair-Share: *What have you learned about the crocodile (from the article and the pictures)? Tell your partner one thing that you learned.*
Invite students to share out.

Optional: Scribe notes about the crocodile based on students' comments.

Protecting Cuba's Animals

You've met three animals from three different habitats. There are many other habitats in Cuba too. And every one is home to many more animals. Each animal depends on its habitat for food and shelter. But people can do things that harm these animals and their habitats. They cut down trees. They wipe out plants to make room for farms, or new buildings and roads. If something happens to a habitat, the animals have nowhere else to go. But people in Cuba want to protect these places. They want to keep animals alive and healthy. And they want to continue to learn about the animals in Cuba!

Think-Pair-Share: What is the most interesting fact that you learned from this article? What would you like to learn more about?

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SAMPLE GRAPHIC ORGANIZER

Habitats in Cuba

Humboldt National Park: Forest

- many tall trees
- shady and damp

animals that
live here

anole

- lizard
- different anoles live in different parts of trees

some live in
branches in
the treetop

some live
near the
bottom of
the tree

Gardens of the Queen: Coral Reef

- many tiny islands
- water is warm and clear

animals that
live here

hawksbill turtle

- has pointed head and jaw that is similar to a bird's beak
- this helps it reach food in tiny spaces in the reef

Zapata Biosphere Reserve: Wetland

- huge areas of swampy land and marshes
- mangrove trees grow in shallow water

animals that
live here

Cuban crocodile

- sometimes sits waiting under water before attacking
- can jump out of the water to catch an animal in the air

STUDENT WORKSHEET

Name: _____

ANSWER KEY**1. Forest: Humboldt National Park**

Draw two animals you see and the place where they live. **Label** as many things around them as you can.

Note to Educators: To be able to include information about the animal's habitat, students may want to choose the live animals in glass cases, which contain plants and, in some cases, other animals. They can also look at the post showing the areas of the tree (to the right of the case on the far left) to get more information about where these animals live in the forest.

Sample animals: Cuban knight anole, bearded anole, Smallwood anole, Allison's anole, Cuban tree frog

STUDENT WORKSHEET

Name: _____

ANSWER KEY**2. Coral Reef: Gardens of the Queen**

Draw two animals you see and the place where they live. **Label** as many things around them as you can.

Sample animals: spotted eagle ray, tiger shark, hawksbill turtle, goliath grouper

STUDENT WORKSHEET

Name: _____

ANSWER KEY**3. Wetland: Zapata Biosphere Reserve**

Draw two animals you see and the place where they live. **Label** as many things around them as you can.

Sample animals: Cuban gar, roseate spoonbill, Cuban parakeet, Cuban crocodile

ESSAY SCORING RUBRIC: TEACHER VERSION

	Exceeds	Meets	Approaches	Needs Additional Support
	4	3	2	1
Research: "Caribbean Island Wildlife: Animals of Cuba" Article	Accurately presents information relevant to all parts of the prompt with paraphrased details from the article	Presents information from the article relevant to the prompt with sufficient detail and accuracy	Presents information from the article mostly relevant to the purpose of the prompt with some lapses in accuracy or completeness	Attempts to present information in response to the prompt, but lacks connections to the article or relevance to the purpose of the prompt
Research: ¡Cuba! Museum Exhibition	Accurately presents information relevant to all parts of the prompt with paraphrased details from the exhibition	Presents information from the exhibition relevant to the prompt with sufficient detail and accuracy	Presents information from the exhibition mostly relevant to the purpose of the prompt with some lapses in accuracy or completeness	Attempts to present information in response to the prompt, but lacks connections to the exhibition content or relevance to the purpose of the prompt
Science Explanations	Integrates relevant and accurate science content with thorough explanations that demonstrate in-depth understanding of animals in Cuba and the environments they live in	Presents science content relevant to the prompt with sufficient accuracy and explanations that demonstrate understanding of animals in Cuba and the environments they live in	Presents science content mostly relevant to the prompt; shows uneven understanding of animals in Cuba and the environments they live in	Attempts to include examples of animals in Cuba and the environments they live in, but understanding of the topic is weak; content is irrelevant, inappropriate, or inaccurate
	Uses detailed labeled illustrations to effectively communicate relevant information about animals of Cuba and their environments; each illustration includes labels that reinforce information they wrote about	Includes two labeled illustrations to communicate relevant information about the animals of Cuba and their environment; drawings are labeled	Includes unlabeled illustrations of animals in their habitats OR only one properly labeled illustration OR illustrations of animals without including their habitats	No illustrations
Development	Maintains a strongly developed focus on the writing prompt for the entire essay	Maintains focus on the writing prompt for the majority of the essay	Addresses the prompt but is off-task some of the time	Does not address the prompt for most or all of the essay
	The description of each animal includes its name and where it lives; accurate and detailed information about the animal and its environment	The description of each animal includes its name and where it lives; sufficient information about the animal and its environment	The description of each animal may not include its name and its environment; insufficient information about the animal and its environment	Does not name any animals or environments

ARTICLE

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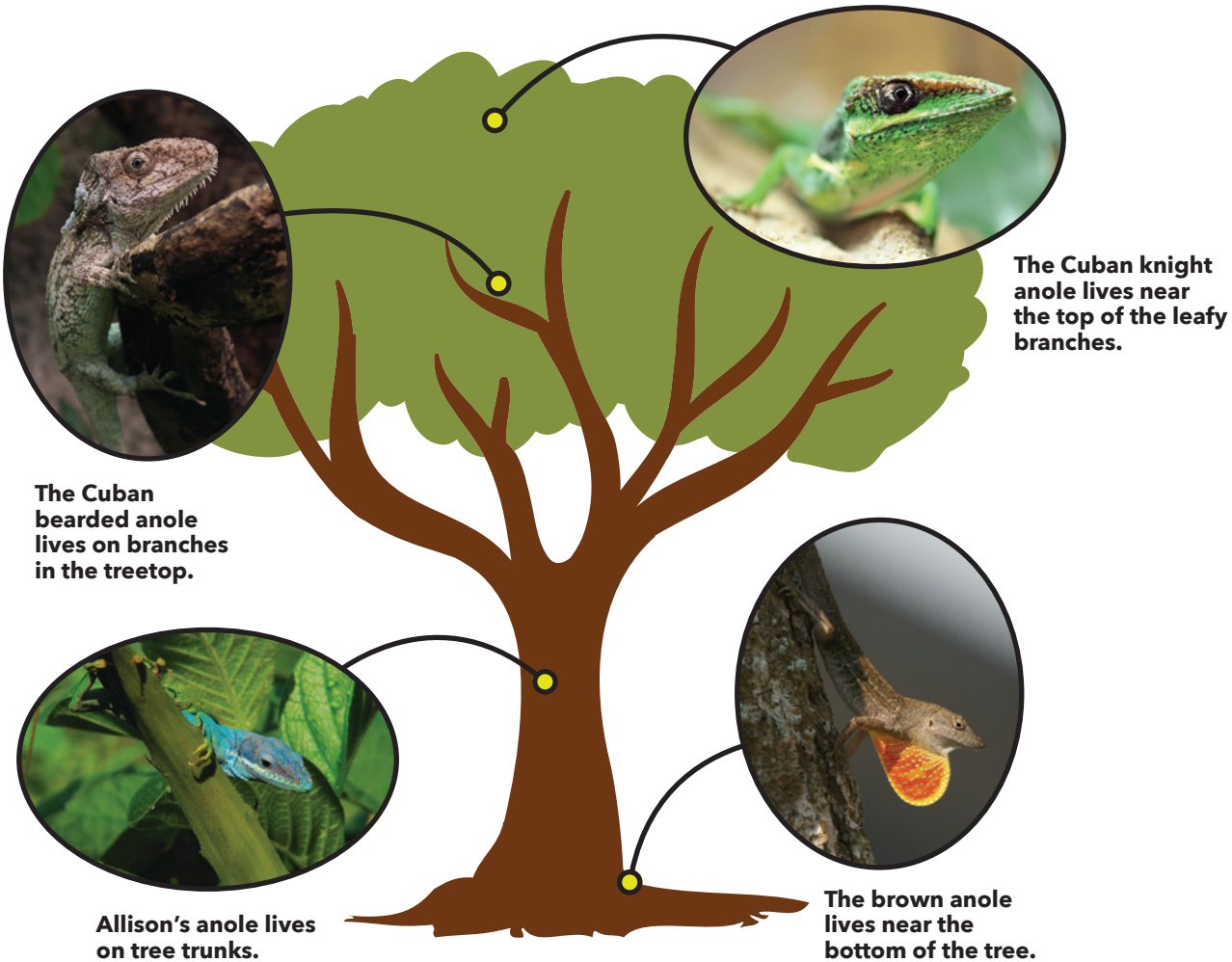


Lizards of the Forest

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Sea Turtle of the Coral Reef



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You might spot this crocodile hunting. Sometimes it waits under water before it attacks. It can even jump out of the water to catch an animal in the air! It has long legs, so it can also run fast to chase animals on land.



This crocodile takes care of its young. In the water, it carries its tiny babies in its mouth or on top of its head.

Protecting Cuba's Animals

You've met three animals from three different habitats. There are many other habitats in Cuba too. And every one is home to many more animals. Each animal depends on its habitat for food and shelter. But people can do things that harm these animals and their habitats. They cut down trees. They wipe out plants to make room for farms, or new buildings and roads. If something happens to a habitat, the animals have nowhere else to go. But people in Cuba want to protect these places. They want to keep animals alive and healthy. And they want to continue to learn about the animals in Cuba!

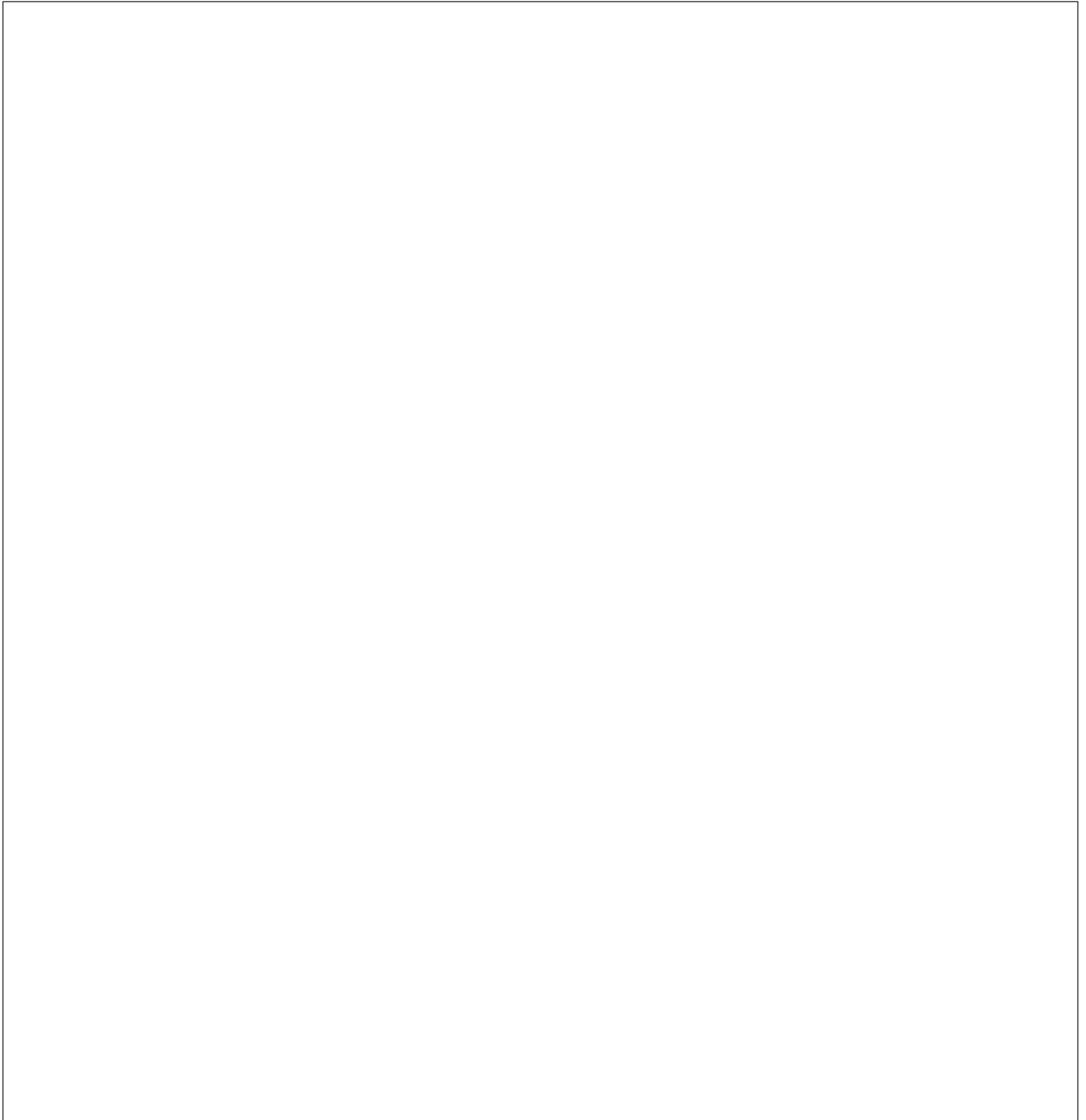
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STUDENT WORKSHEET

Name: _____

1. Forest: Humboldt National Park

Draw two animals you see and the place where they live. **Label** as many things around them as you can.

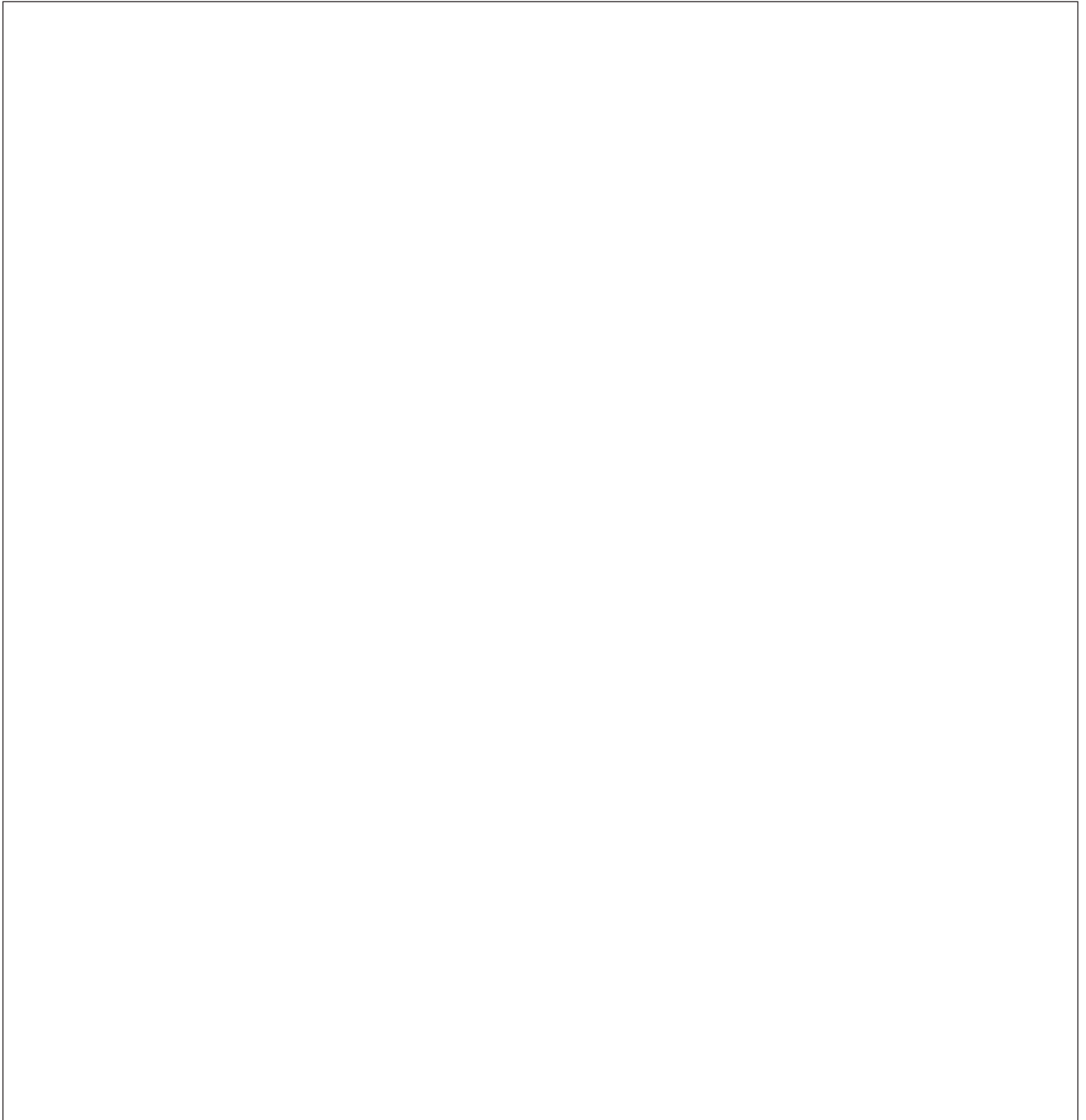


STUDENT WORKSHEET

Name: _____

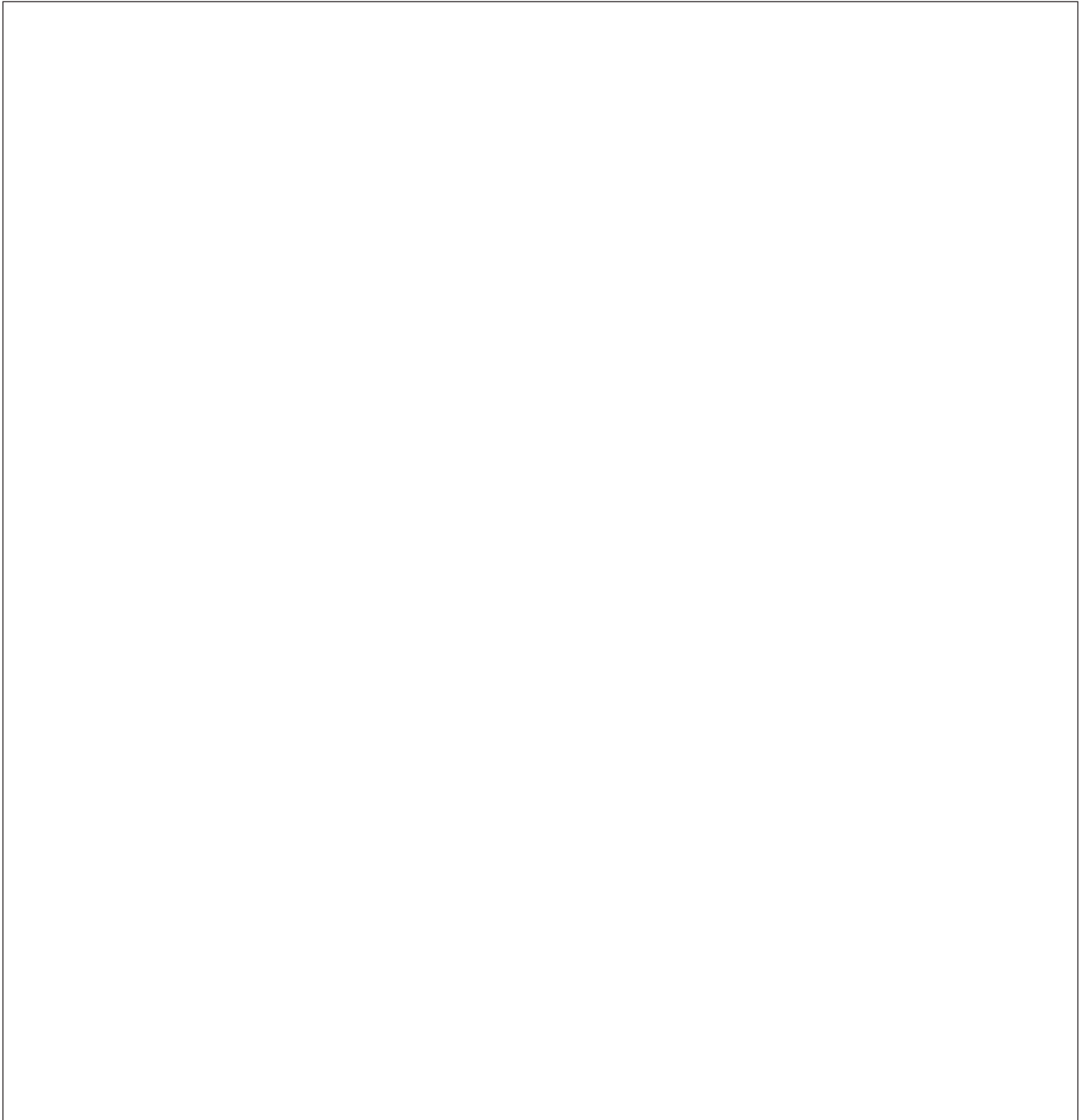
2. Coral Reef: Gardens of the Queen

Draw two animals you see and the place where they live. **Label** as many things around them as you can.



3. Wetland: Zapata Biosphere Reserve

Draw two animals you see and the place where they live. **Label** as many things around them as you can.



STUDENT WRITING TASK

Name: _____

You have learned about different animals by reading the “Caribbean Island Wildlife: Animals of Cuba” article and visiting the ¡Cuba! exhibition. Now you will make a book to teach your friends all about some of these animals and the places in Cuba where they live. Your book will include two different animals that live in two different places.

On the cover of your book, write the title of your book and your name.

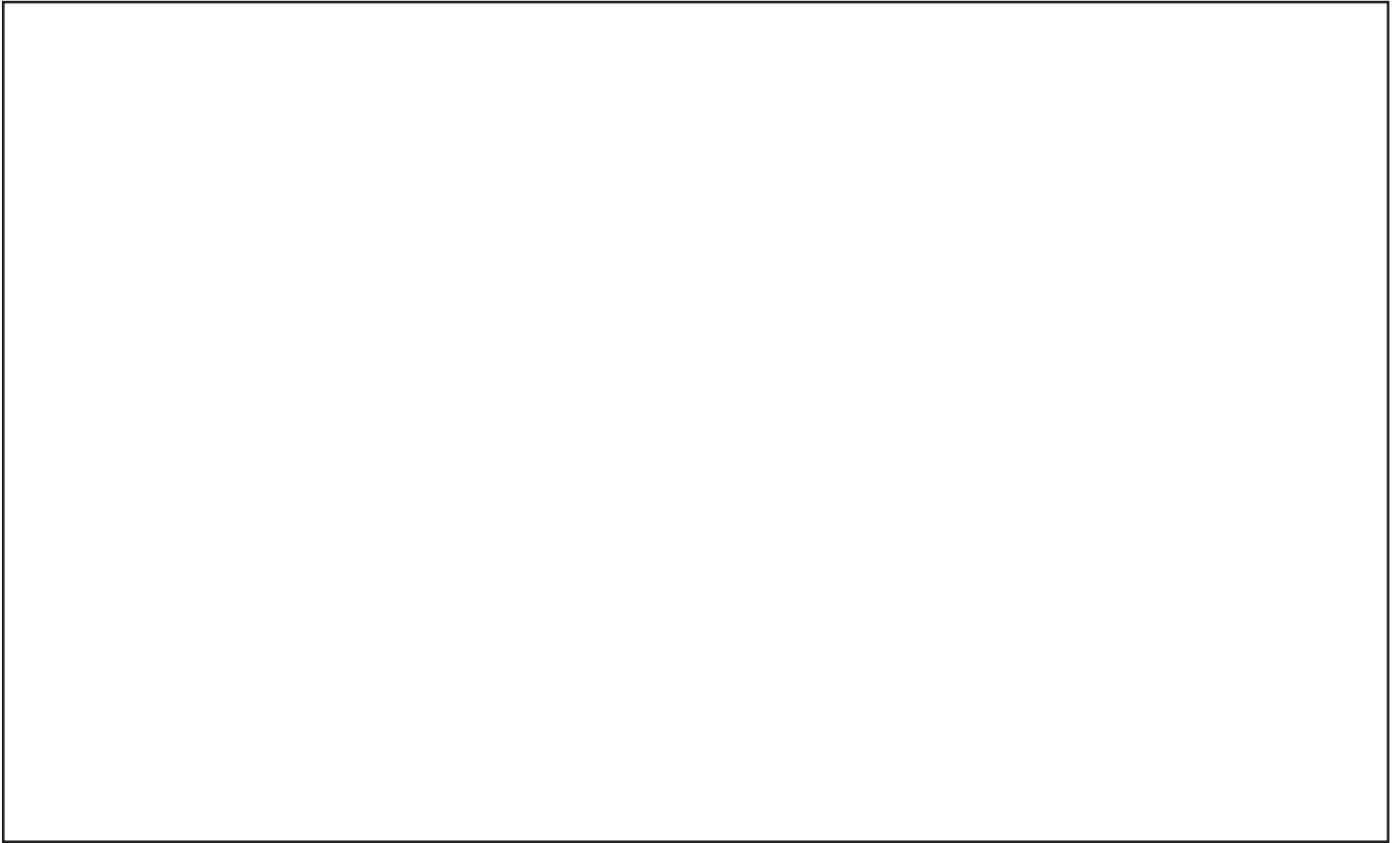
On page 1 of your book, write about the first animal and describe where it lives. Draw a picture of the animal in the place in Cuba where it lives. Label the animal and the scene around it.

On page 2 of your book, write about the second animal you chose and describe where it lives. Draw a picture of the animal in the place in Cuba where it lives. Label the animal and the scene around it.

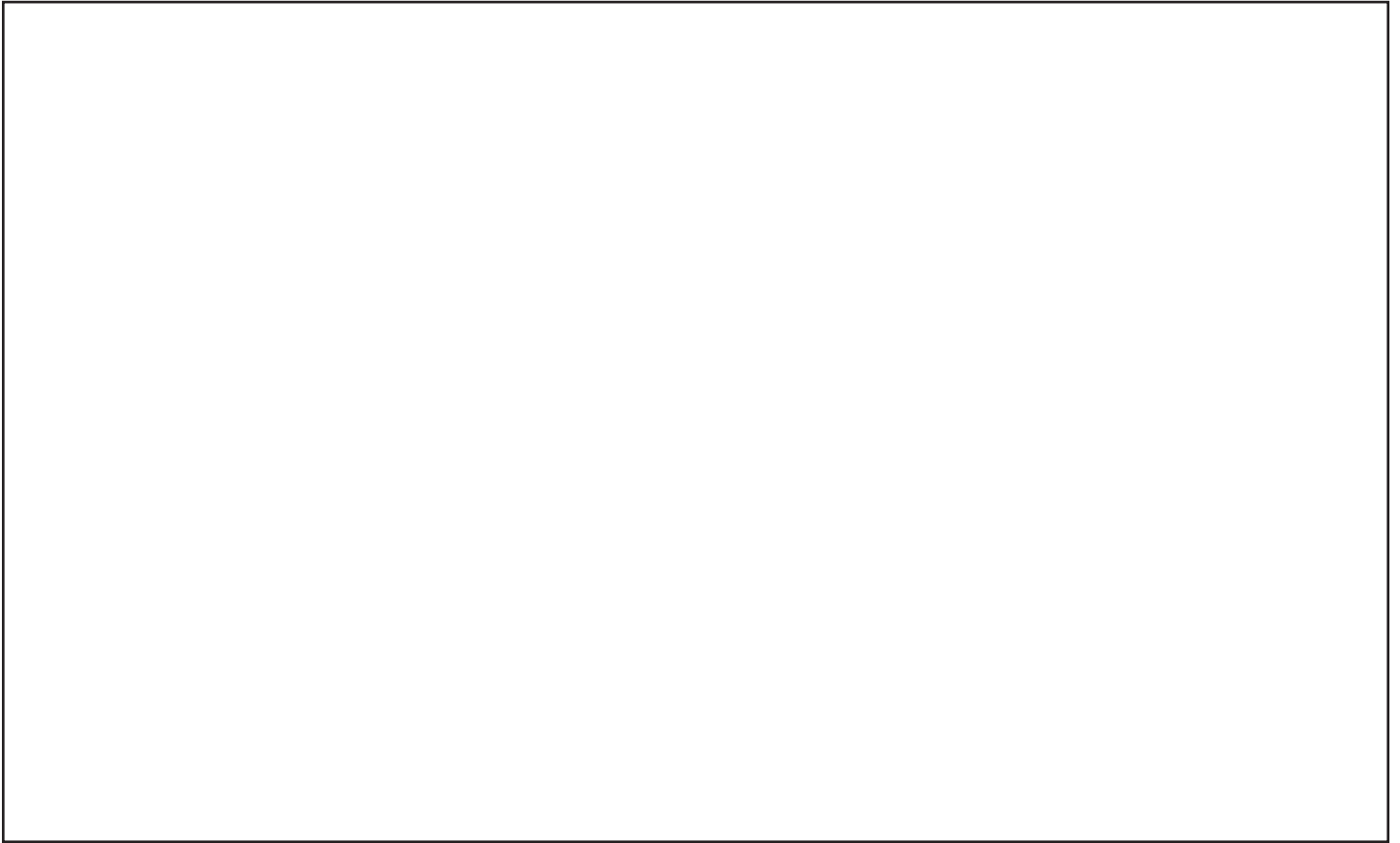
Title of My Book

My Name

Place name: _____ Animal: _____



Place name: _____ Animal: _____



Four sets of handwriting lines, each consisting of a solid top line, a dashed middle line, and a solid bottom line.

ESSAY SCORING RUBRIC: STUDENT VERSION

	Exceeds	Meets	Approaches	Needs Additional Support
	4	3	2	1
Research: "Caribbean Island Wildlife: Animals of Cuba" Article	I used what I learned in the article to write a detailed book in my own words	I used what I learned in the article to write my book	I used what I learned in the article to write my book but I am not sure if everything I wrote is correct	I did not use any information from the article to write my book
Research: ¡Cuba! Museum Exhibition	I used what I learned in the exhibition to write a detailed book in my own words	I used what I learned in the exhibition to write my book	I used what I learned in the exhibition to write my book but I am not sure if everything I wrote is correct	I did not use any information from the exhibition to write my book
Science Explanations	All of the information I wrote about animals in Cuba and where they live is correct	Most of the information I wrote about animals in Cuba and where they live is correct	Some of the information I wrote about animals in Cuba and where they live is correct	None of the information I wrote about animals in Cuba and where they live is correct
	I drew pictures of two animals and where they live, and labeled them to add important information	I drew pictures of two animals and where they live and included some labels	I drew a picture of one animal where it lives OR I didn't include any labels OR I drew a picture of two animals but not where they live	I did not include any illustrations
Development	My whole book is about animals of Cuba and where they live	Most of my book is about animals of Cuba and where they live	Some of my book is about animals of Cuba and where they live	None of my book is about animals of Cuba and where they live
	I named more than two animals in Cuba and described where they live	I named two animals in Cuba and described where they live	I named one animal in Cuba and described where it lives OR I named two animals in Cuba but didn't describe where they live	I didn't name any animals in Cuba or describe where they live