

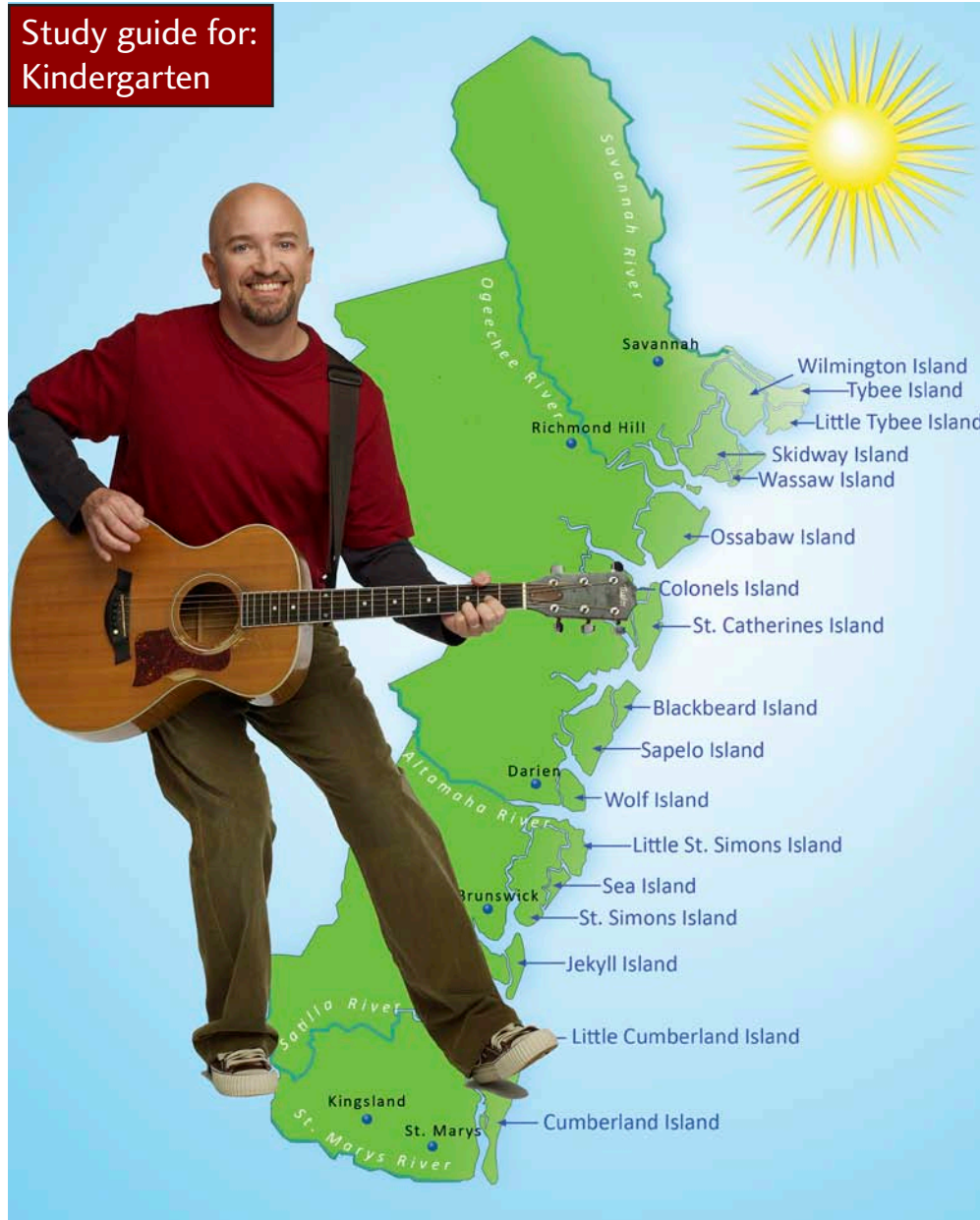


MARSH MADNESS

Roger Day

Nashville-based musician Roger Day (Parent's choice award winner) will perform his latest show, Marsh Madness, co-commissioned by the Georgia Sea Grant and the Savannah Music Festival. Songs such as Fiddler Groove, Jesse the Turtle Girl, Alligator in My Refrigerator and Mosquito Burrito will be featured in this 50-minute educational performance.

Study guide for:
Kindergarten



Welcome from the SMF Education Director:

We are thrilled you can join us for the performance of Roger Day's Marsh Madness presented by the Savannah Music Festival. Our education music series features grade-appropriate performances by renowned musicians and educators. A variety of musical genres complement school curriculum and demonstrate the dynamic relationship between the performing arts and history, literature, and world cultures.

In this document, you will find educational activities designed to enhance learning before and after the performance. This study guide meets Georgia's Performance Standards (GPS) and has been carefully crafted by Georgia Sea Grant and UGA Marine Extension Service, and Jennifer Cole, instructional coach at Winterville Elementary School.

Below you will find the links to activities and content. If you wish to access a complete list of GA Performance Standards for all grades and subjects, visit:
<http://www.georgiastandards.org>

Thank you for attending the 2012 Savannah Music Festival. We hope this experience will improve your student's creativity, teamwork and self-expression!

Sincerely,

Ricardo Ochoa
Director of Education

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Overview

Nashville-based musician Roger Day will perform his latest show, *Marsh Madness*, co-commissioned by the Georgia Sea Grant Foundation and the Savannah Music Festival. Songs such as “Fiddler Groove”, “Jesse the Turtle Girl” and “Mosquito Burrito” will feature plants and animals that live in and around the barrier islands of Georgia. The song cycle deals with the importance of habitat and watershed health, the abundance of creatures that depend on the state’s water resources and how individuals can help protect the coastal eco-system. The material in the songs addresses state science teaching standards for grades three through five.

History of *Marsh Madness*

In 2009, Georgia Sea Grant and the Savannah Music Festival commissioned award-winning children's musician Roger Day to create a series of songs about the Georgia Coast. Roger went with UGA Marine Extension (MAREX) educator John "Crawfish" Crawford out to Sapelo Island, staying at UGA's Marine Institute in order to experience first-hand the marshes, mosquitos, critters and beaches of Georgia's coast. Georgia Sea Grant also commissioned a group of elementary science teachers to help Roger incorporate concepts into his songs that meet state science standards and to develop 3rd-5th grade curricula that would accompany the performance.

The resulting *Marsh Madness* song catalog was then performed during the 2010 Savannah Music Festival at 10 elementary schools and the Trustees Theatre for a total of 5,000 children. Afterwards, Roger took the *Marsh Madness* show on the road, performing at schools from North Carolina to Ohio.

Georgia Coast

The coast of Georgia is rich in history, beauty, mystery and natural wonders. Although Georgia is the largest state east of the Mississippi, it is only the 18th state in shoreline length (out of 21 states). Georgia’s coast is abundant in fresh and saline wetlands, rivers and tidal bays.

Georgia’s coast contains a series of eight barrier island complexes containing 13 barrier islands. Like all barrier islands, these protect our coastline from storm surges and tidal action. Unlike other barrier island complexes in the U.S., however, Georgia’s are largely undeveloped. At the end of the 19th Century, a number of wealthy northern industrial families, among them the Carnegies, Vanderbilts and Rockefellers, purchased Georgia’s “Golden Isles” as private hunting retreats. Jekyll, Cumberland, Ossabaw, Sea, Sapelo, St. Catherines and Wassaw Islands were all privately owned until the middle of the 20th Century. Having so much land in private hands for such a long period of time kept it from being developed, which in turn left much of Georgia’s coastal salt marshes relatively undisturbed.

Georgia's coastal zone experiences the second highest tidal range on the U.S eastern seaboard. Twice a day, the tides rise and fall from six to eight feet, submerging and then exposing Georgia's 378,000 acres of salt marsh. Aside from Louisiana, Georgia's salt marsh estuaries are the largest in continental U.S. With the marshes ranging from 4 to 8 miles wide, the 100 miles of Georgia's coast contain approximately one-half million acres of marshland. This is about one-third of all the salt marshes on the eastern coast of the United States. These precious lands nourish one of the most biologically productive ecosystems on earth.

The forest community on the southern barrier islands is maritime live oak predominant. Live oaks, southern magnolias, and cabbage palms shade understory species such as the red bay, yaupon and American holly, sparkleberry, wax myrtle, saw palmetto, vines, Spanish moss, and many kinds of ferns and woods flowers. Other hardwoods that form the canopy of island forests are water oak, laurel oak, tulip, sweetgum, red maple, pignut hickory, tupelo, and the introduced sycamore, but these are not as abundant as in the mainland coastal plains forests.

Today state and federal governments own and manage most of Georgia's barrier islands as parks, sanctuaries or wildlife preserves. Because they have experienced relatively little degradation, Georgia's salt marshes are an ideal laboratory for ecosystem study. Two internationally recognized marine research centers, The University of Georgia's Marine Institute on Sapelo Island and the Skidaway Institute of Oceanography on Skidaway Island, are located on Georgia's coast.

Georgia's coastal zone is rapidly growing in population, development and industry. Between 2000 and 2030, state projections anticipate a coastal population rise of 50 percent. However, even with this potential coastal growth, less than one third of Georgians live within 50 miles of the coast, an unusual characteristic for a coastal state. The bulk of the state's population lives in the Piedmont region and is far removed from coastal issues.

GEORGIA'S COAST AND BARRIER ISLANDS



About the Artist



Since graduating in 1985 from Washington & Lee University in Virginia, **Roger Day** has made a career as a singer/songwriter, originally on the college coffeehouse circuit. Born and raised in Birmingham, Alabama, he wrote his first children's song one Christmas for his family. The enthusiasm from his nieces and nephews encouraged him to continue writing and soon he had enough songs for an entire show. Before his coffeehouse performances, he began to meet with student volunteer groups to put on community service shows at a local Head Start program. For these shows, Roger was recognized by the National Association of Campus Activities with its highest public service award, The Harry Chapin Award for Contributions to Humanity.

In 1998, Roger released his first children's CD, *Rock 'N' Roll Rodeo*, followed by *Ready to Fly* in 2001. In 2007, *Dream Big!* was released. Radio Disney played the title song and another song, "I like Yaks," went to number 1 on Sirius/XM's *Kids Place to Live*. Roger's fourth release *Why Does Gray Matter?* features "the brain" as a theme for every song. Roger has won two Parents' Choice® Recommended Awards and two Parents' Choice® Gold Awards. Roger also has a family concert DVD, *Roger Day Live!* for which he won The Film Advisory Board Award for Outstanding Family Video.

Roger currently lives in Franklin, Tennessee, with his wife Jodie and their three children. An Eagle Scout, Roger spends his free time as a volunteer leader for Boy Scout Troop 137.

Internet Resources

Roger Day

<http://www.rogerday.com/about.php>

National Oceanic & Atmospheric Administration, Sea Grant

<http://www.seagrants.noaa.gov/>

Georgia Department of Natural Resources, Coastal Resources Division

<http://coastalgadnr.org/>

The University of Georgia's Marine Education Center and Aquarium

<http://www.marex.uga.edu/aquarium/>

The University of Georgia, The Marine Extension Service

<http://www.marex.uga.edu/>

Coastal Georgia Adopt-A-Wetland Program

<http://www.marex.uga.edu/shellfish/wetland.html>

Know the Connection, Coastal Georgia

<http://knowtheconnection.com/>

SAVANNAH MUSIC FESTIVAL CONCERT ETIQUETTE

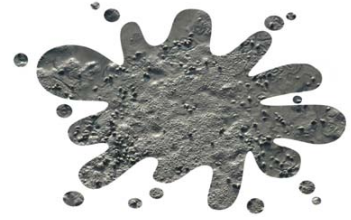
A live music performance can be very exciting. All of the people involved in the production, both cast and crew, work very hard to be sure they give a great performance. It is the job of the audience members to help the performers give their best performance possible. The audience can do this by practicing the rules of concert etiquette.

- Follow the directions of your teachers and the M.C. prior to the performance.
- If you are visiting the Trustees theater, arrive at the theater early. Doors open at 10:00 AM. Performance begins sharply at 11:00 AM.
- Visit the restroom before the performance begins.
- If you have a cell phone please turn it off. If it must be on, put it on vibrate.
- Pay attention to announcements that are made prior to, and after, the show.
- Don't speak during the performance...whispering is still speaking, so only in an emergency or if the performer ask you to participate.
- Do not take pictures during the performance. It can be very distracting to the performers and can cause a mishap.
- Remain in your seat for the entire performance. It is rude to get up in the middle of a quiet moment...rude to the performers and your fellow audience members.
- Do not eat or drink in the theater. If you must have a cough drop, or something of that nature, do not make noise with the wrapper.
- Do not put your feet up on the seats or balcony and do not kick the seat in front of you.
- Don't put or throw anything on the stage.
- Do laugh when the performance is funny.
- Do applaud when it is appropriate during the performance.
- Do applaud when the performance is over...this tells the performers and crew that you appreciate their work.
- Stand and applaud if you really thought the show was great.
- Stay seated until your school is called after the performance.

I Love to Study Mud!

from *Marsh Madness*

by Roger Day



When I graduate from college, and my brain is really big
I'm gonna be a scientist—that's my perfect gig
First, I'll catch the ferryboat, and I'll sail to Sapelo
There's something there I really love, don't you know

And I'll learn so much about it, I'm gonna get a Ph.D!

I LOVE TO STUDY MUD - MARSH MUD

I LOVE TO STUDY MUD - MARSH MUD

When I step onto the island, I'm gonna take a great big whiff
Woo... wait a minute... man... that smells so bad, somebody get me a
handkerchief
See the marsh mud's like a chocolate soup that you can smell for miles around
It's the perfect place to wear these boots and stomp around

I can't wait to learn the things the marsh mud teaches me

I LOVE TO STUDY MUD - MARSH MUD

I LOVE TO STUDY MUD - MARSH MUD

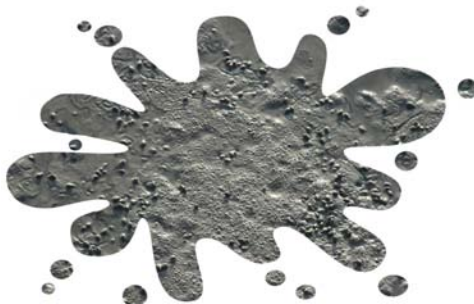
Not only are we gonna smell mud. We're gonna spell mud too!

M-U-D!

M-U-D!

M-U-D!

M-U-D!



Vocabulary

Adaptation- an alteration or adjustment, often hereditary, by which a species or individual improves its condition as it relates to its environment

Barrier island- long, narrow island lying parallel to the mainland and separated from it by bay, lagoon, or marsh, usually occurring in chains

Canopy- the uppermost branchy layer of a forest

Coast- the area where the land meets a large body of water

Community- populations of all species that occupy a particular habitat and interact within that habitat

Consumer- an organism, usually an animal, that feeds on plants or other animals

Decomposer- an organism, usually a bacterium or fungus, that breaks down the cells of dead plants and animals into simpler substances.

Ecosystem- all of the organisms of a community and their environment that form an interacting system

Estuary- partially enclosed coastal body of water with one or more rivers or streams flowing into it and with a free connection to the open sea

Habitat- the area or environment in which an organism lives

Hammock- areas of higher elevation in the salt marsh that support shrubs and trees

Island- land surrounded by water on all sides

Maritime Forest - the forests by the sea that are characterized by live oaks, palms, and palmettos

Ocean- the body of salt water that covers more the 70% of the earth's surface

Producer- organisms that make their own food through a process called photosynthesis

Salt Marsh- an area of coastal wetland periodically flooded with salt water and dominated by grasses and grass-like plants

Sandbar- submerged or exposed line of sand accumulated by wave action

Sand Dunes- a hill of sand piled up by the wind

Understory- the plants of a forest that grow low to the ground



Turkey Vulture

Featured Marsh Animals

Alligator- a large reptile with sharp teeth and powerful jaws that live in swampy areas

Ghost crab- also called *sand crabs*, they dominate sandy shores and dig deep burrows

Fiddler crabs- burrowing crabs in coastal regions; the males have one of their pincer-like claws very much enlarged; during high tide, they plug their burrows and stay in them until low tide

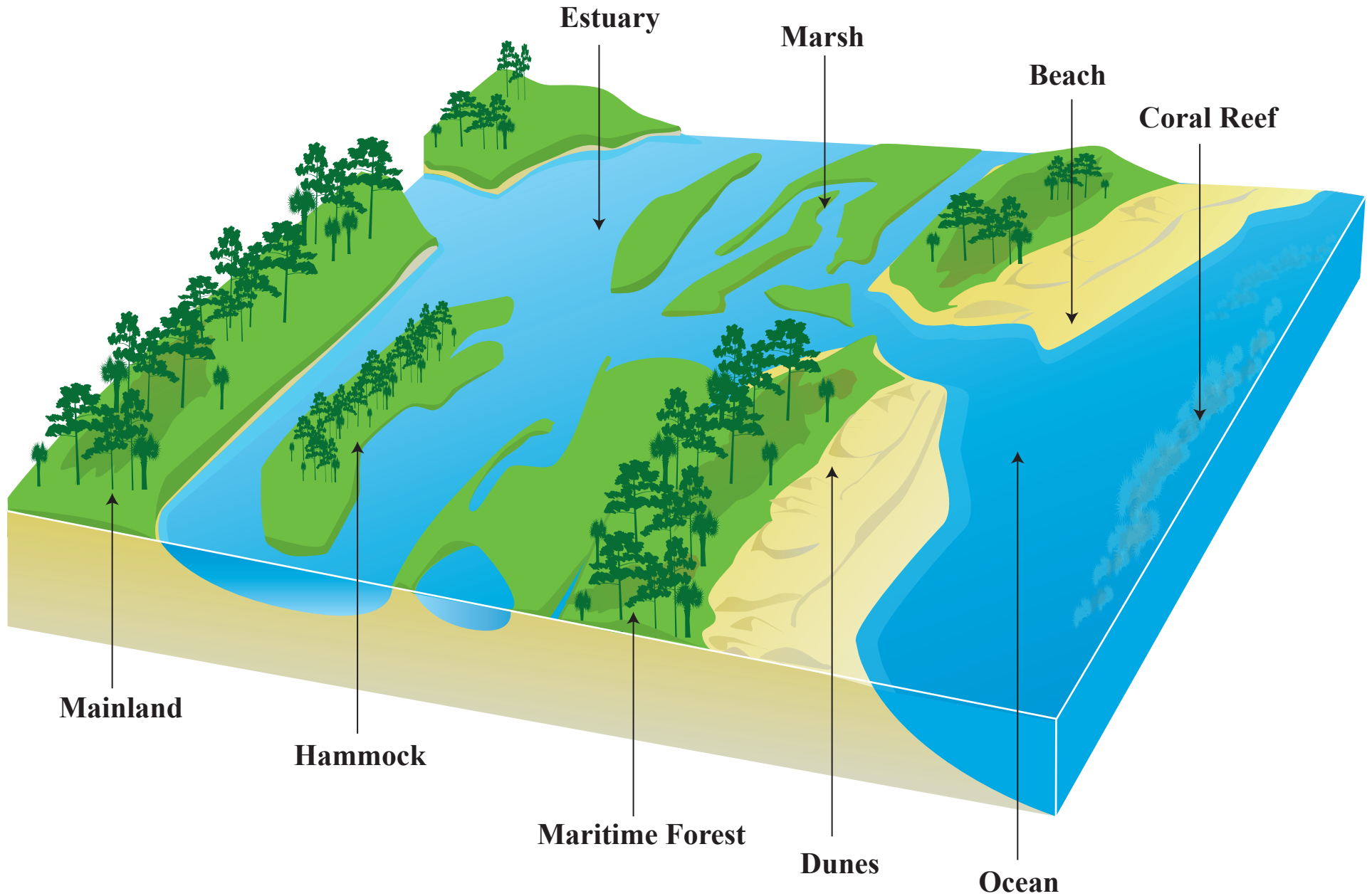
Mosquitoes- two-winged insects in which the female of most species is distinguished by a long proboscis for sucking blood

Periwinkle snail- known as a shore snail, they are tiny and found among rocks, on wood pilings between high and low tides, underneath docks, and in mud pools

Sea turtle- large turtles with limbs modified into flippers for swimming in the ocean

Turkey vulture- a carrion feeder, eating almost any type of dead animal but when frightened it responds by swiftly regurgitating its last meal in the direction of whomever or whatever frightened it

Georgia's Coastal Features



ACTIVITY #1
Kindergarten
Marsh Madness
Learning about Coastal Animals

Georgia Performance Standards:

- SKL1. Students will sort living organisms and non-living materials into groups by observable physical attributes.
- b. Group animals according to their observable features such as appearance, size, motion, where it lives, etc. (Example: A green frog has four legs and hops. A rabbit also hops.)

Objective: The students will use language and critical thinking to generate observations and questions about coastal animals.

Materials: Coastal animal pictures, attached in this study guide; markers, crayons, or color pencils; blank paper (one per student)

Teacher's Instructions:

1. Ask students if they have ever visited the marsh or a beach and what animals they saw or that they think might live there.
2. Hold up one of the coastal animal pictures and describe the animal using the provided Answer Key.
3. Ask the students to describe the picture.
Example: What do we know about this shark?
Possible student answers: fins, swims, lives in the water, eats fish, has sharp teeth.
4. Ask the students to describe what they would like to learn about the shark.
Example: What don't we know about this shark?
Possible student answers: How does it have babies? What are gills? What does it feel like?
5. Repeat with other species in the coastal animal pictures.

Assessment: Have students to draw a picture of an animal discussed in class and make up a story about it.

ACTIVITY #2
Kindergarten
Marsh Madness
Worksheet: Sorting Coastal Animals

Georgia Performance Standards:

SKL1. Students will sort living organisms and non-living materials into groups by observable physical attributes.

- b. Group animals according to their observable features such as appearance, size, motion, where it lives, etc. (Example: A green frog has four legs and hops. A rabbit also hops.)

Objective: The students will use observation and critical thinking to sort coastal animals by category and characteristics, as well as identify unique body parts and appropriate habitat.

Materials: Three sets of coastal animal cards, three sorting worksheets and answer keys, and a Sand Tiger Shark and Blue Crab image, attached in this study guide; markers, crayons, or color pencils; blank paper (one per student)

Teacher's Instructions:

1. Print and cut out the coastal animal cards, creating a stack for each sorting activity (Plant/Animal; Land/Water/Air; Fur/Feathers/Hard Shell).
2. Ask students if they have ever visited the marsh or a beach and what animals they saw or that they think might live there.
3. Use the three sets of coastal animal cards as a center activity, asking the students to sort the cards according to the category:

Is it a Plant or an Animal?

Does it live in the Land, Water or Air?

Does it have Fur, Feathers, or a Hard Shell?

4. Create a fourth center activity where students draw a story of a Sand Tiger Shark and a Blue Crab, including details like fins, gills, eyes, teeth, claws, shell, legs, sand and ocean. Depending on their skill level, they also can label these features. Ask the students to write the name of their crab and shark. Description of these animals:

The **Blue Crab** is a member of the Decapod order with five pairs of legs. It gets its name from its bright coloring along its frontal area. The first pair of legs is a set of powerful claws, and the last pair is flattened into a paddle-like shape for swimming.

The **Sand Tiger Shark** averages 7 feet in length and has three rows of long pointed teeth. One of the most ferocious looking creatures in Georgia waters, sand tiger sharks prefer small fish they can swallow whole. While still in the uterus, hatchlings develop teeth and begin devouring unhatched eggs, as well as other hatchlings, until only one is left. After a yearlong pregnancy, the mother shark gives birth to a 2- to 3-foot practiced predator.

Assessment: Allow some students to show and describe their drawing to the class, pointing out different physical characteristics of their shark and crab.

Activity #1 Answer Key
Kindergarten
Marsh Madness
Learning about Coastal Animals

Alligator – The *American Alligator* was nearly hunted to extinction by the early 1970's. However, thanks to protective legislation and applied conservation, this animal is once again a common sight in southern wetlands, rivers, and swamps.

Crab – The *Blue Crab* is a member of the Decapod order with five pairs of legs. It gets its name from its bright coloring along its frontal area. The first pair is a set of powerful claws, and the last is flattened into a paddle-like shape for swimming.

Dolphin – *Bottlenose Dolphins* are 6-12 feet long and weigh as much as 1,450 pounds, consuming 15-30 pounds of fish, squid and crustaceans a day. This intelligent creature has its own language—echolocation. It emits a series of high-pitched clicks and senses the waves as they bounce off objects, such as dinner.

Frog – The *Green Tree Frog* has smooth, bright green-to-olive skin and is 1 3/4 to 2 1/2 inches long. This creature can leap distances of up to 10 feet using legs that are 1 1/2 times the length of its head and body. The nocturnal chorus of male frogs serenading the females is said to resemble the sound of a cowbell!

Octopus – The *Octopus* is one of coastal Georgia's shyest underwater creatures, this cephalopod has 8 legs and the ability to change colors. Whether in response to an attack or to camouflage itself from an enemy, the octopus shifts its coloring to suit its mood.

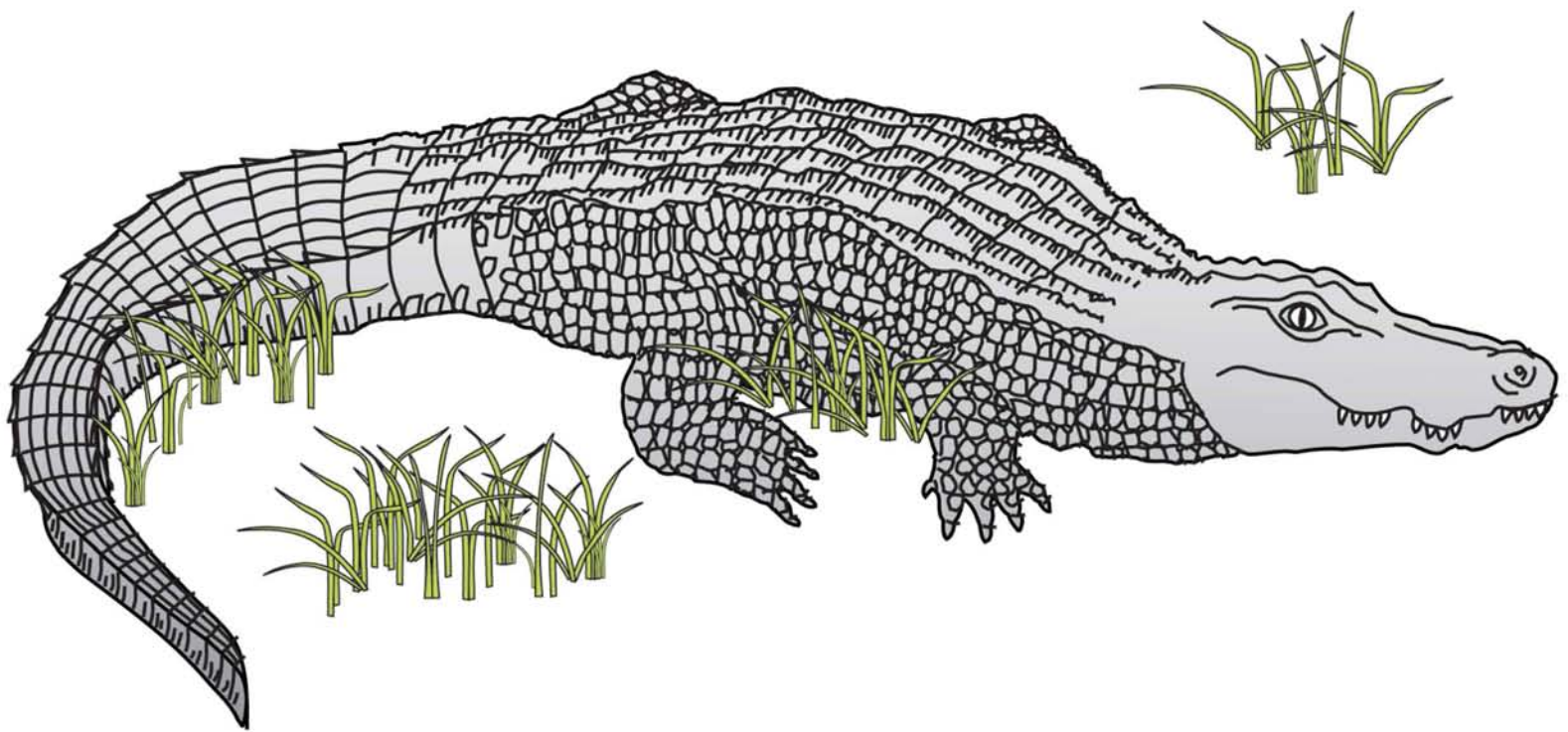
Shark – The *Sand Tiger Shark* averages 7 feet in length and has three rows of long pointed teeth. One of the most ferocious looking creatures in Georgia waters, sand tiger sharks prefer small fish they can swallow whole. While still in the uterus, hatchlings develop teeth and begin devouring unhatched eggs, as well as other hatchlings, until only one is left. After a yearlong pregnancy, the mother shark gives birth to a 2- to 3-foot practiced predator.

Snail – *Periwinkle Snails* are marine gastropod mollusks that are characterized by their conical, spiraling shells. At low tide, they can be found at the base of one of their favorite foods—the smooth cordgrass, *Spartina alterniflora*, which is the predominant plant in Georgia marshes. During high tide, they crawl up the stalks of grass or can hold their breath for 1-2 hours.

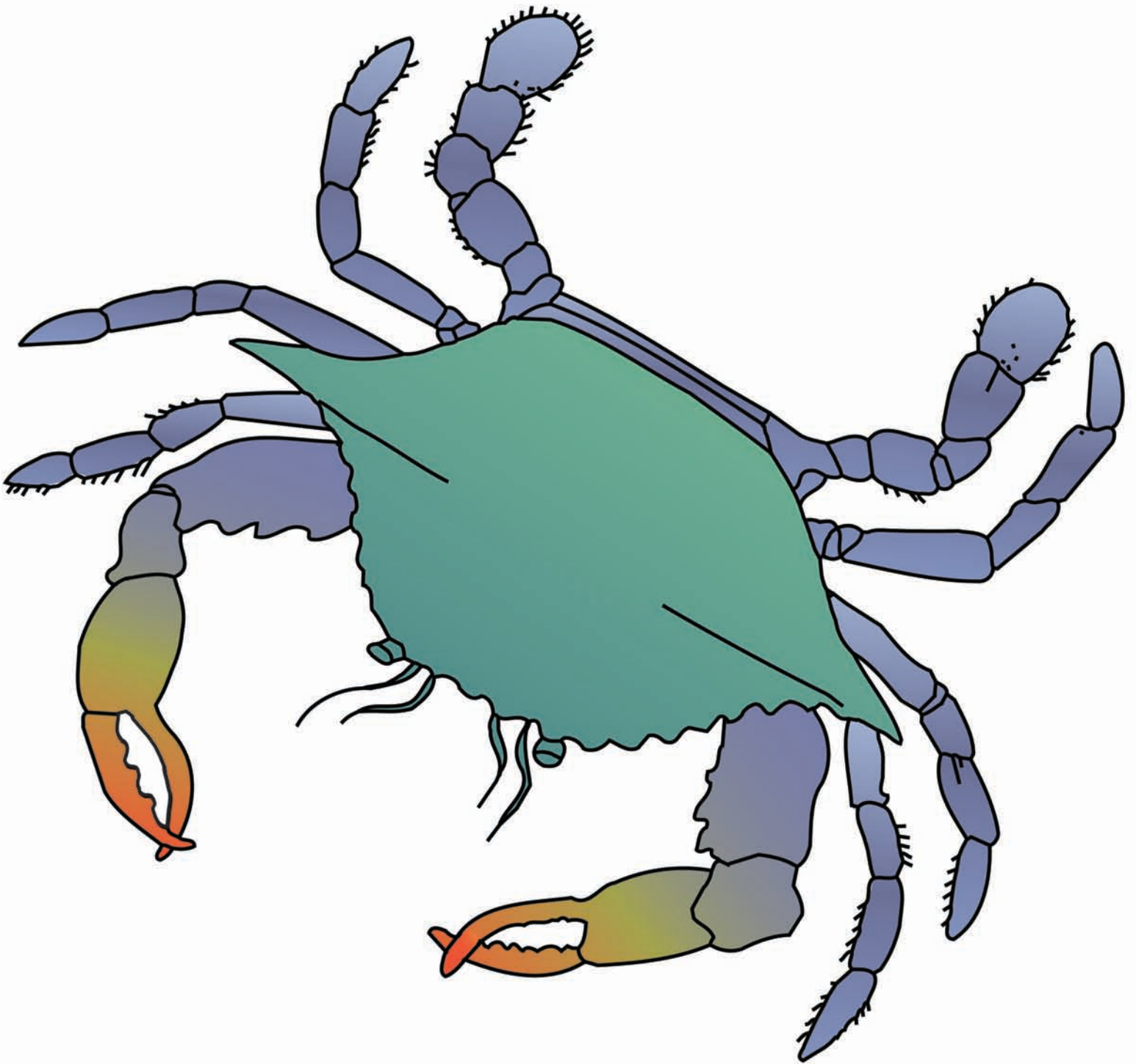
Snake – The *Eastern Diamondback Rattlesnake* is the largest and deadliest of the world's thirty-two species of rattlesnakes. Found in coastal Georgia's palmetto flatwoods and pinelands, the snake has a natural diamond-shape pattern of browns to black that provides full-time camouflage. Like other pit vipers, the eastern diamondback gives birth to live young. When born, the young average 14 inches. With fully functional fangs and venom, they're ready to kill and eat an adult mouse.

Turtle – The *Diamondback Terrapin Turtle* lives in a brackish mixture of fresh and salt water that is plentiful in Georgia's marshes and estuaries. There, it nests on small marshy islands and eats mostly snails. It gets its name from the intricate pattern on its shell. Once used in turtle soup, it was almost hunted to extinction.

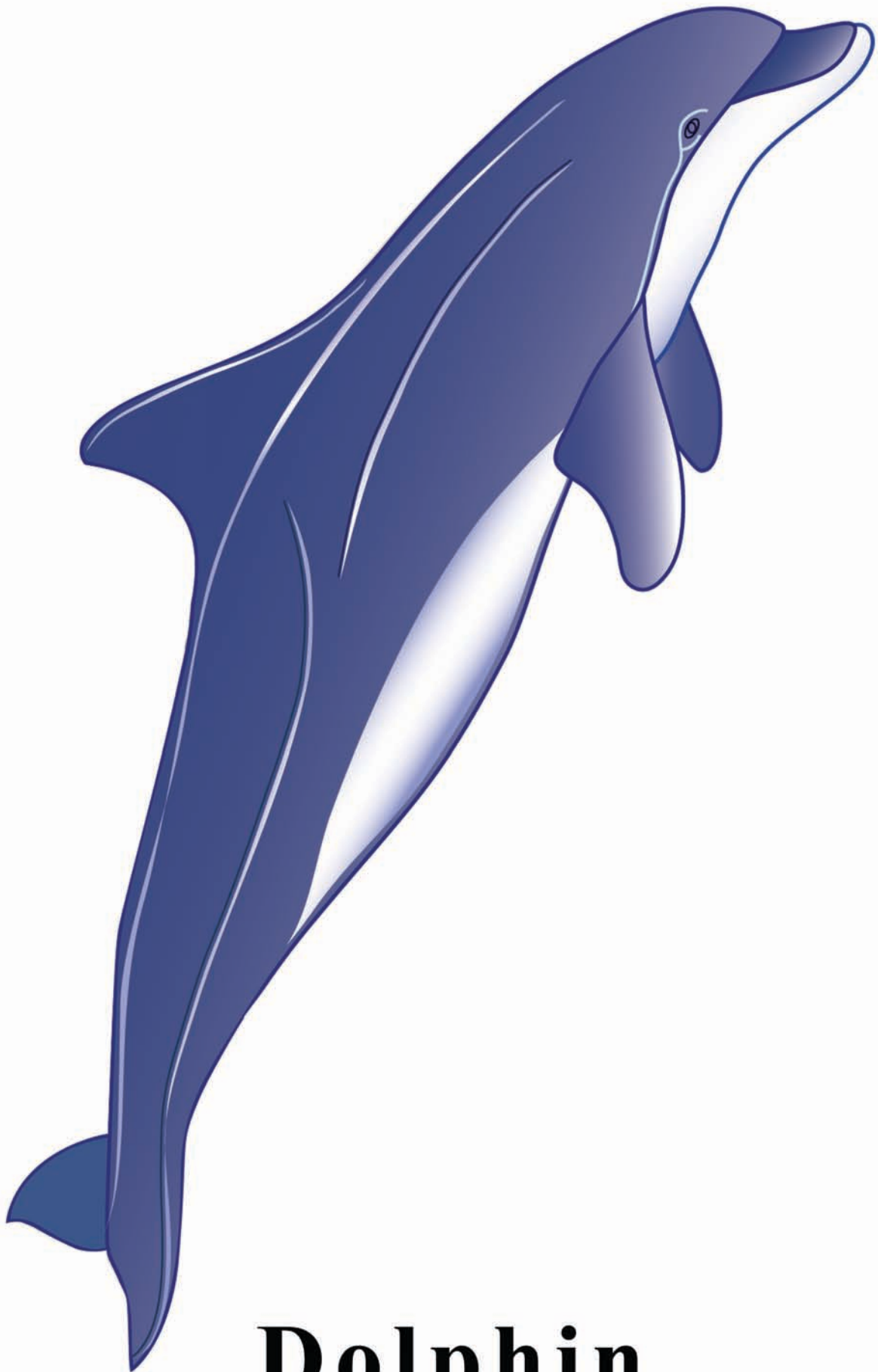
Whale – The *Right Whale* is Georgia's official "State Marine Mammal." Adults of this species reach 50 feet in length and weigh about 60 tons. Today it is close to extinction. Like other baleen whales, the right whale filters plankton through comb-like teeth.



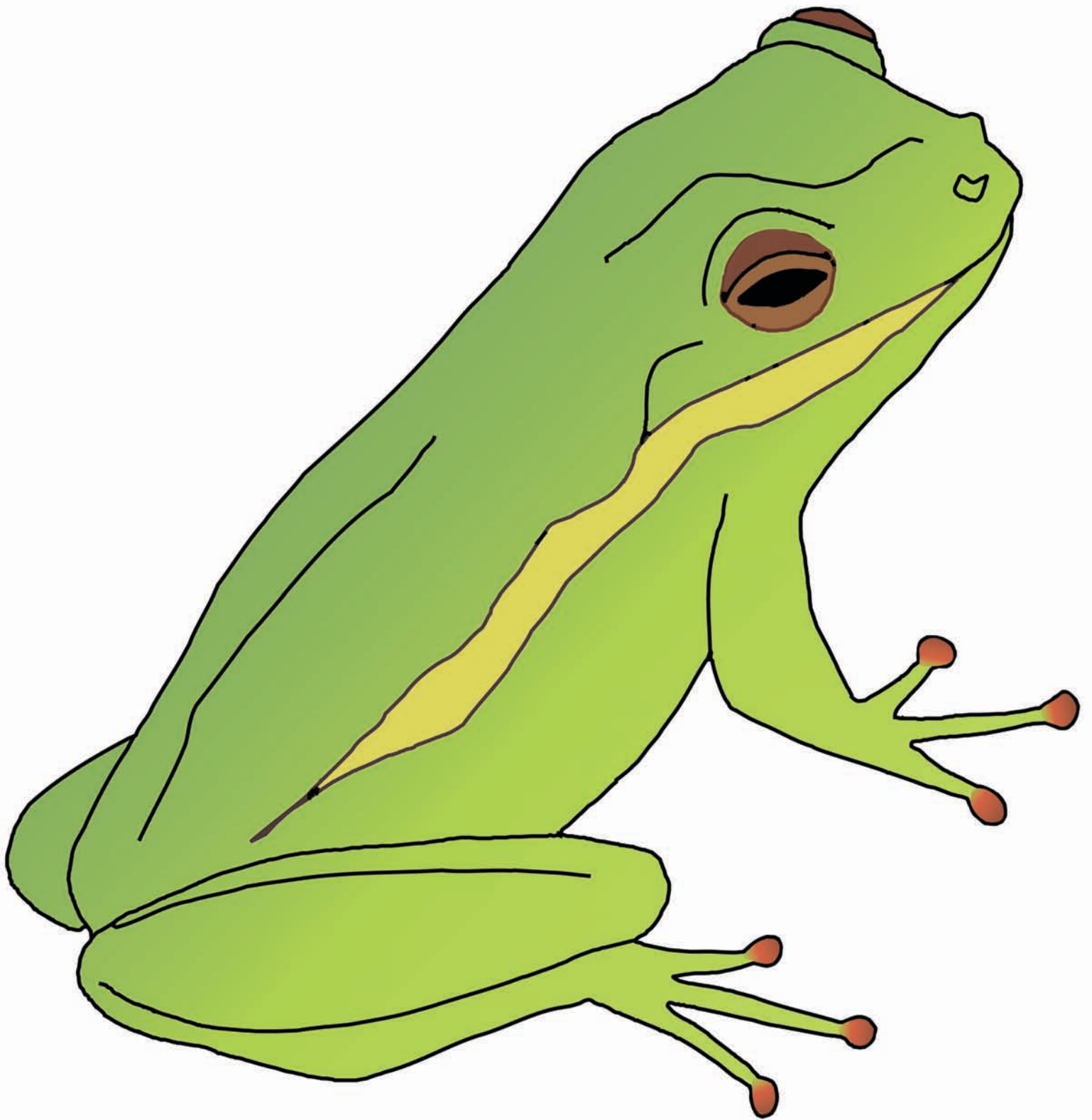
Alligator



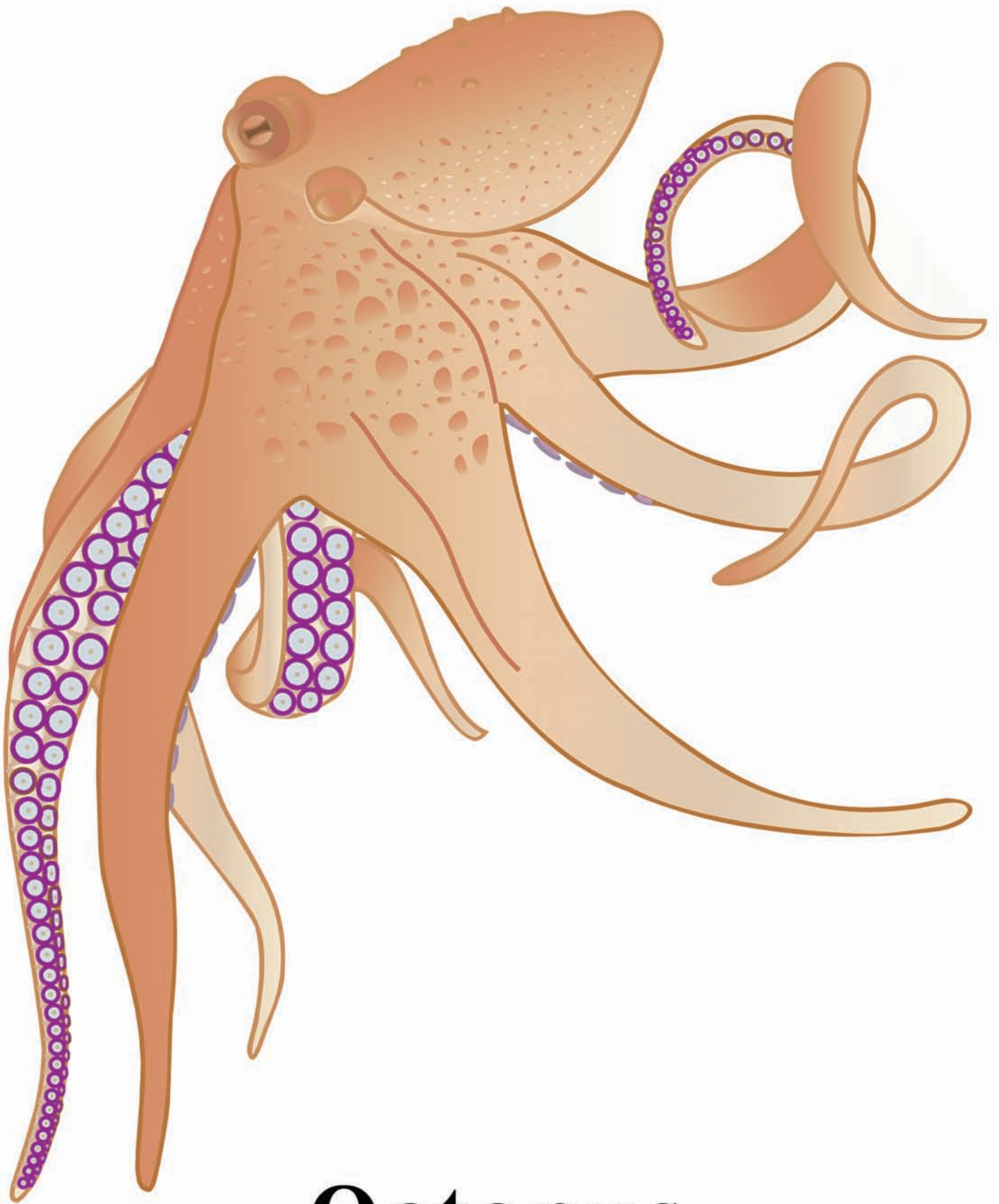
Crab



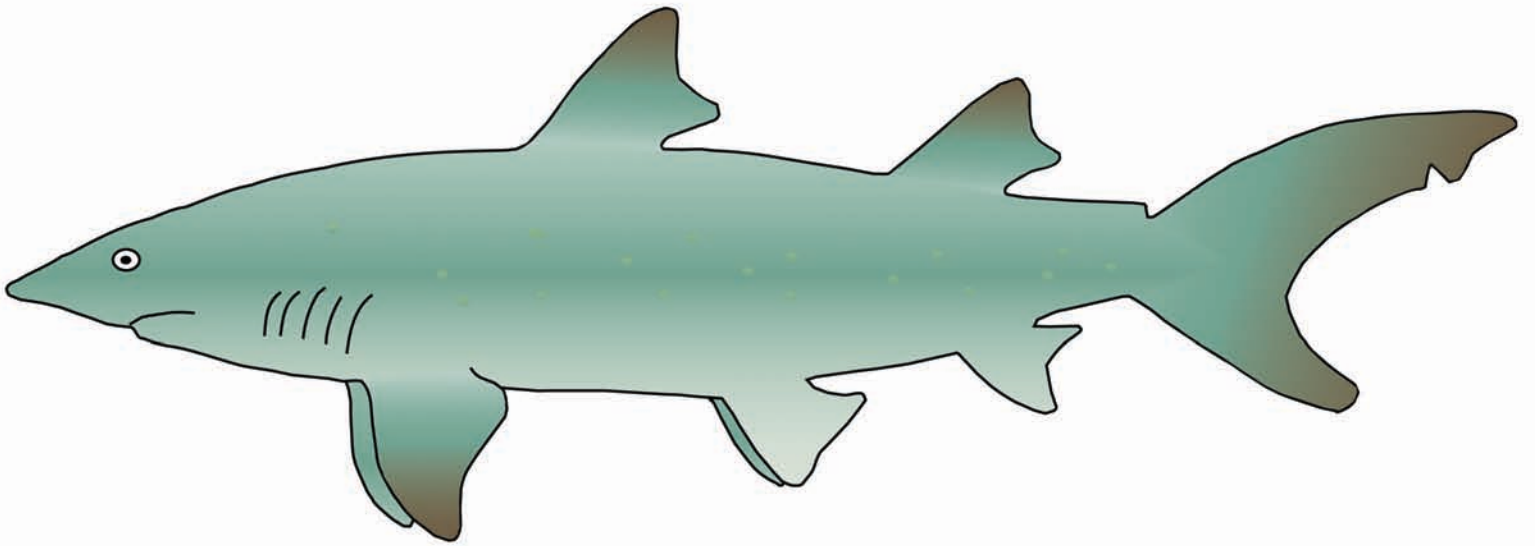
Dolphin



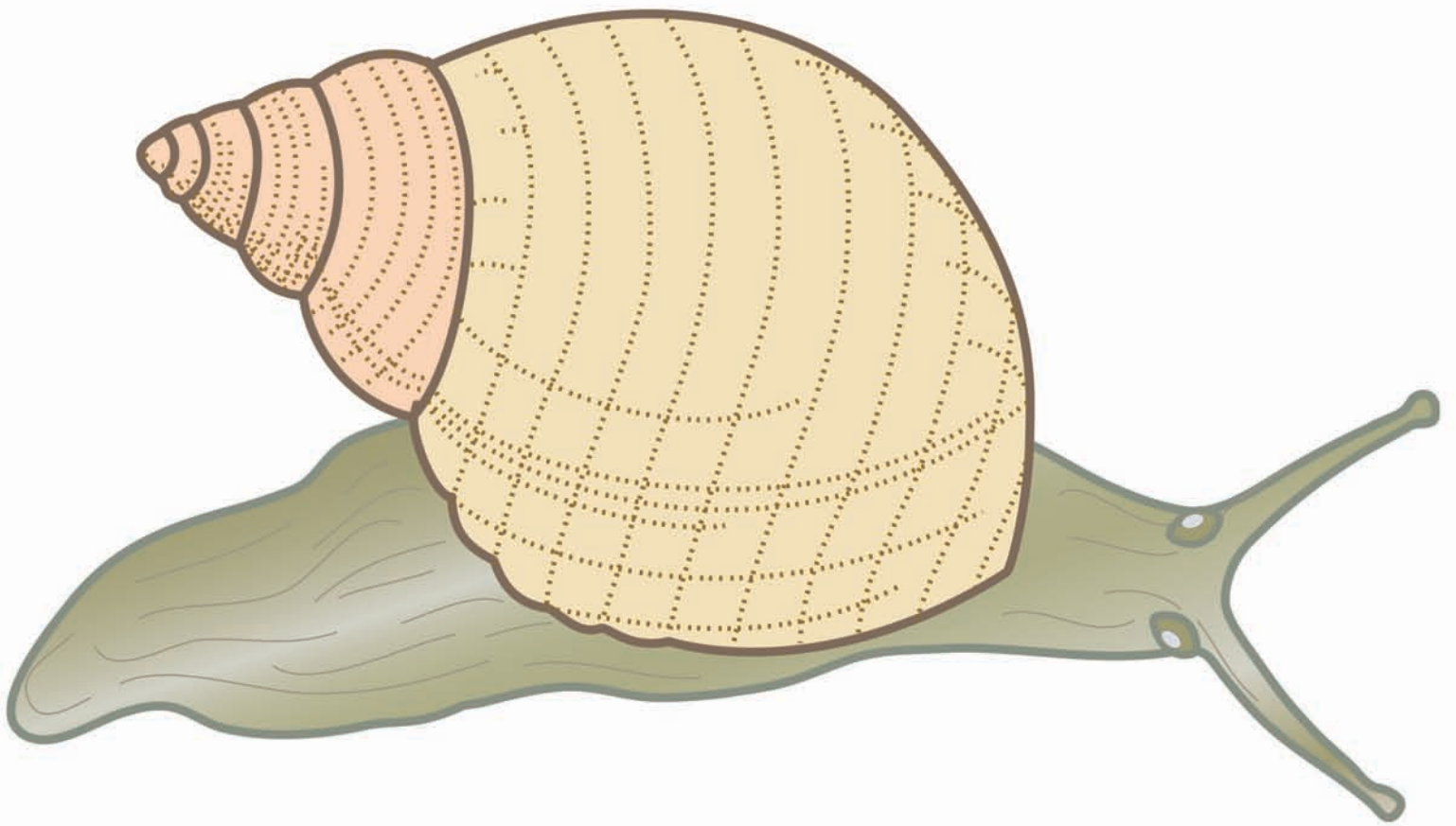
Frog



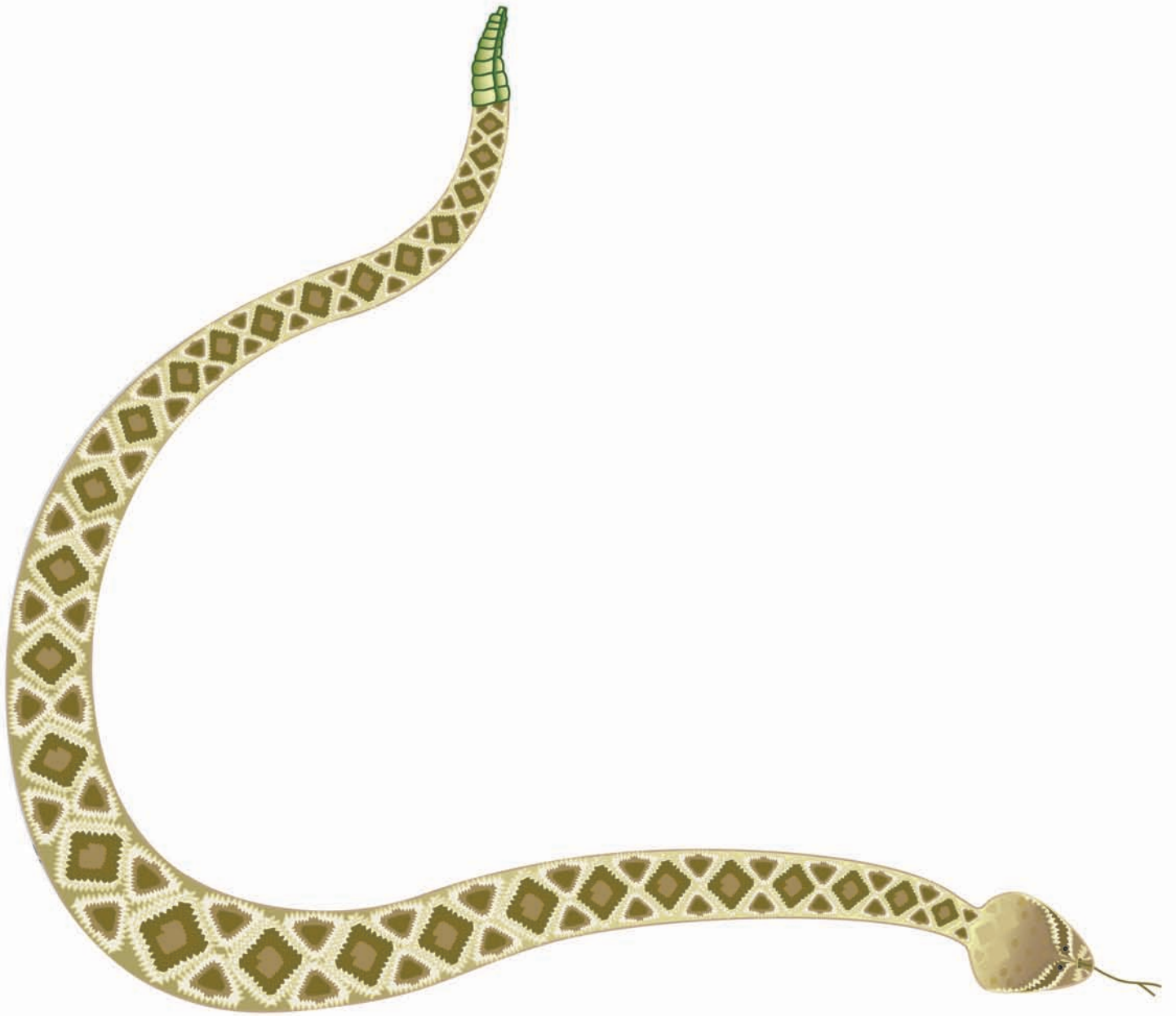
Octopus



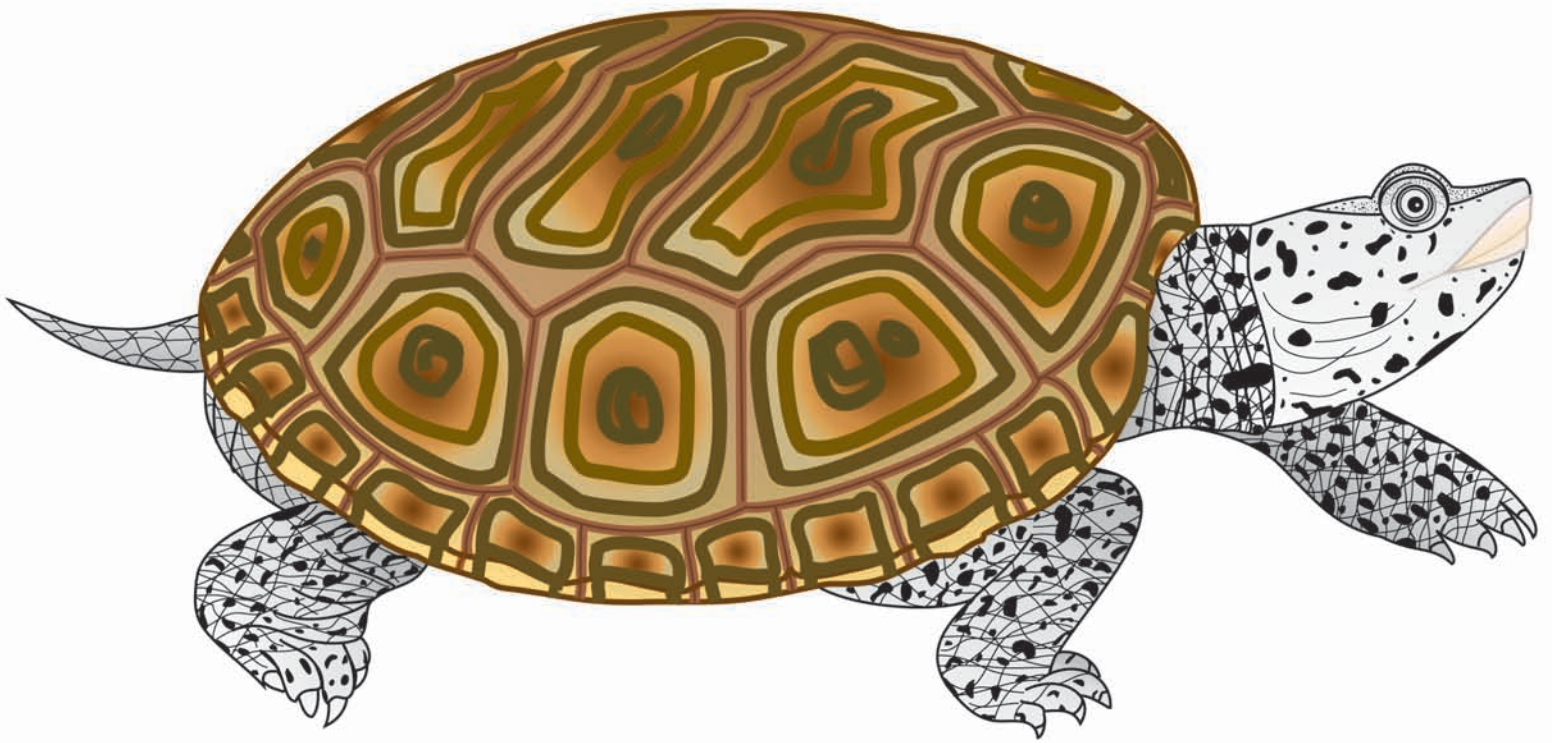
Shark



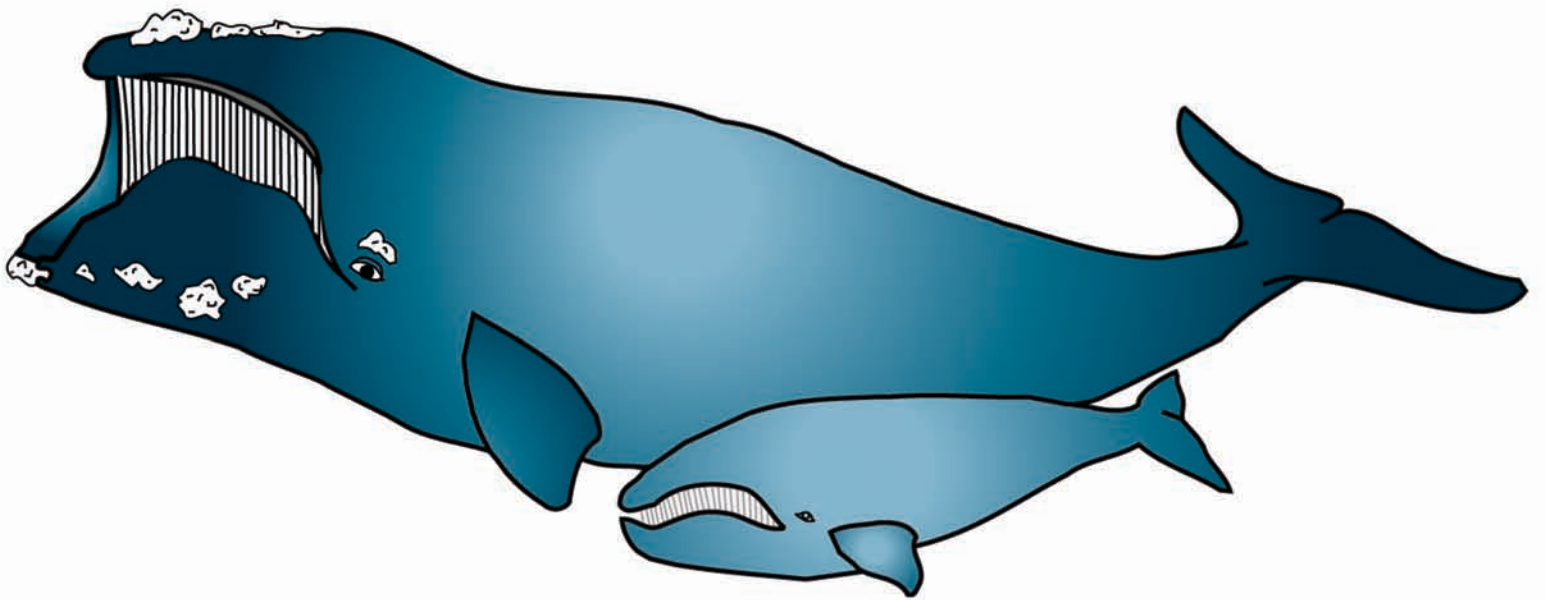
Snail



Snake



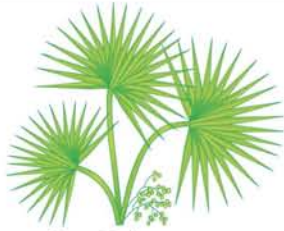
Turtle



Whale

Activity #2 Answer Key
Kindergarten
Marsh Madness
Worksheet: Sorting Coastal Animals

PLANTS



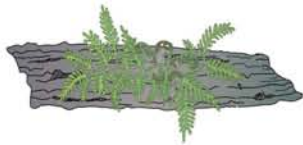
Saw Palmetto



Yaupon Holly



Live Oak Tree

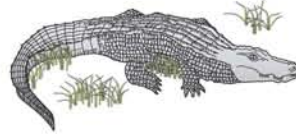


Resurrection Fern



Spartina

ANIMALS



American Alligator



Bottlenose Dolphin



Free-Tailed Bat



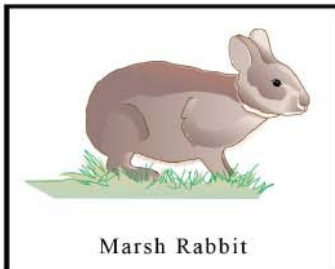
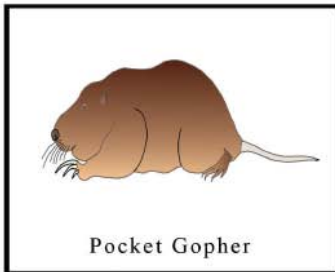
Green Tree Frog



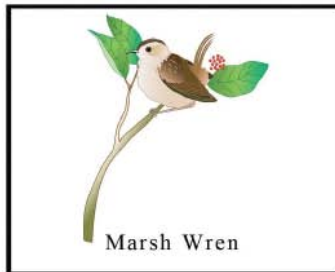
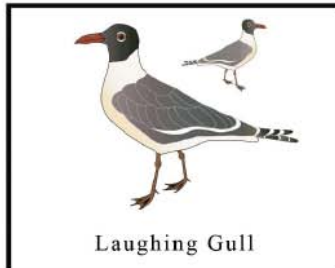
Marsh Rabbit

Activity #2 Answer Key
Kindergarten
Marsh Madness
Worksheet: Sorting Coastal Animals

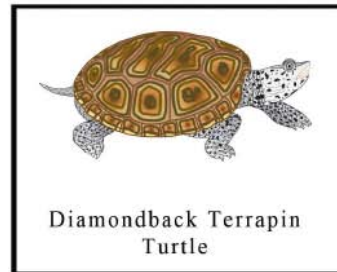
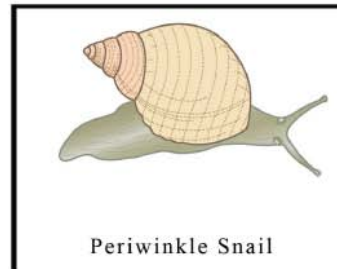
FUR



FEATHERS

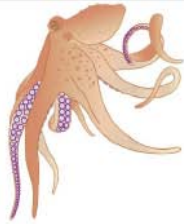


HARD SHELL



Activity #2 Answer Key
Kindergarten
Marsh Madness
Worksheet: Sorting Coastal Animals

WATER



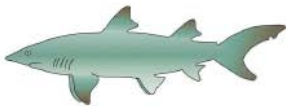
Octopus



Leatherback Sea Turtle



Right Whale



Sand Tiger Shark



Seahorse

LAND



Armadillo



Cow Killer



Marsh Rice Rat



Island Glass Lizard



East Indigo Snake

AIR



Free-Tailed Bat



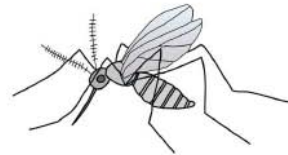
Laughing Gull



Marsh Owl



Marsh Wren



Sand Gnat



Plants

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Animals

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Feathers

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Hard Shell

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Water

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Land

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Air

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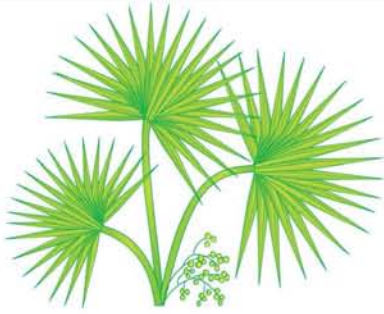
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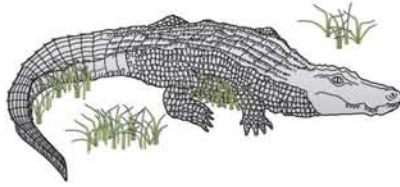
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Plants and Animals Sorting Activity



Saw Palmetto



American Alligator



Yaupon Holly



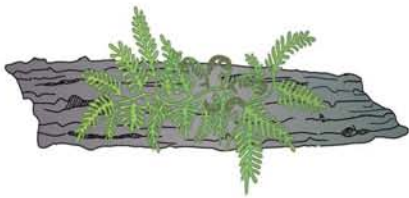
Bottlenose Dolphin



Live Oak Tree



Free-Tailed Bat



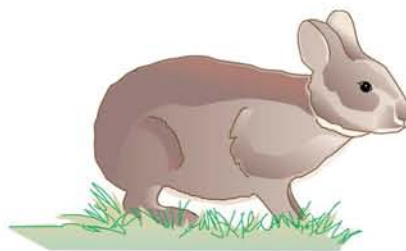
Resurrection Fern



Green Tree Frog



Spartina



Marsh Rabbit

Fur, Feathers, and Hard Shell Sorting Activity



Pocket Gopher



Frizzle Chicken



Ghost Crab



Marsh Rice Rat



Laughing Gull



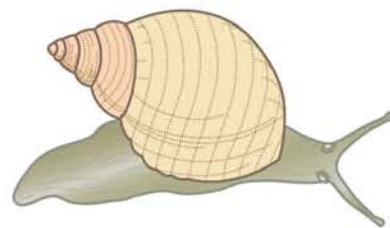
Fiddler Crab



Marsh Rabbit



Marsh Owl



Periwinkle Snail



River Otter



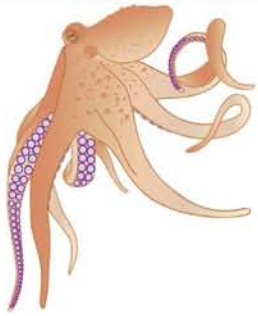
Marsh Wren



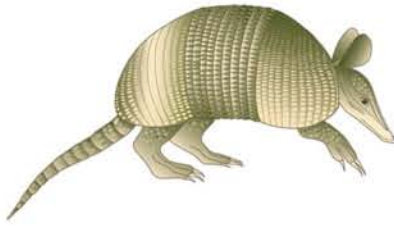
Diamondback Terrapin
Turtle



Water, Land, and Air Sorting Activity



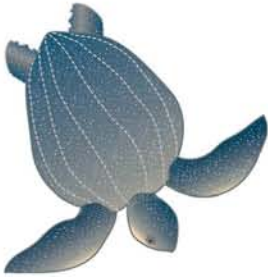
Octopus



Armadillo



Free-Tailed Bat



Leatherback Sea Turtle



Cow Killer



Laughing Gull



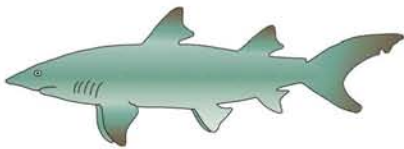
Right Whale



Marsh Rice Rat



Marsh Owl



Sand Tiger Shark



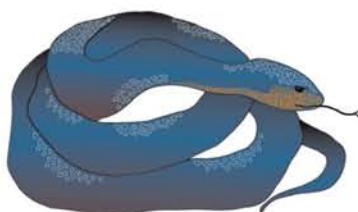
Island Glass Lizard



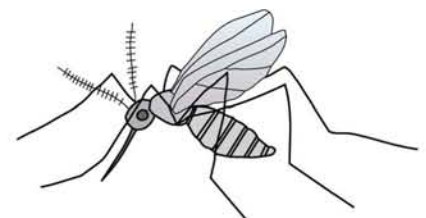
Marsh Wren



Seahorse



East Indigo Snake



Sand Gnat

Study Guide Feedback Form

The following questions are intended for teachers and group leaders who make use of the Savannah Music Festival and Georgia Sea Grant study guide.

1. In what grade are your students?
2. Which show did you see? When?
3. Was this your first time at an SMF educational performance?
4. Was this the first time you used an SMF Study Guide?
5. Did you download/use the guide before or after your field trip?
6. Did you reproduce the grade-appropriate activity sheet for your class?
7. Do you think the study guide and activity helped your students better understand the material?
8. Do you think the study guide and activity helped you meet state science teaching standards?
9. Additional information and/or comments:



Fax this form to us at (912) 236-1989.
Your feedback will be greatly appreciated.
Thank you for visiting the Savannah Music Festival.
200 E. St Julian Street. Suite 601
Savannah, GA 31401

