

TRAVELING TURTLES



BENCHMARKS AND TASKS

SC.F.1.1.4 The student understands that structures of living things are adapted to their functions in specific environments.

SC.G.1.1.4 The student knows that animals and plants can be associated with their environment by an examination of their structural characteristics.

- The student identifies structural characteristics that enable plants and animals to survive in different kinds of places.
- The student knows that some organisms have adaptations that enable them to move from one medium to another (e.g., dragonflies begin life in water, move to land, and fly in the air).

KEY QUESTION

Why do turtles have different types of legs and feet adaptations, depending upon where they live?

BACKGROUND INFORMATION

Turtles are reptiles with shells that provide protection for them. They are found in a variety of habitats. Turtles that live only on land are called tortoises. Tortoises live in deserts, grasslands, scrub habitats, and tropical islands. Their legs resemble tree stumps. They only go to water to drink or to bathe.

The marine environment houses seven species of sea turtles. They swim using nonretractable flippers. The female sea turtle comes out of the water to lay eggs. Aquatic turtles that swim in water and walk on land have legs with webbed feet for swimming and walking.

MATERIALS

Teacher

pictures of land and sea turtles
hole punch
stapler
pictures of various plants in specific habitats
scissors
Tortoises & Turtles (Dominie Press)
Sea Turtles (Dominie Press)

Per student

2 paper plates
crayons
2 *Turtle Construction* sheets*
4 brass brad fasteners

* *Some content and graphics are adapted with permission from Sea World of Florida.*

Ranger Rick books (Newbridge):

Life in the Rain Forest

Life on the African Savannah

Life in the Polar Regions
Life in the Desert
Life in a Coral Reef

Habitats of the World by Dominie Press

Deserts
Forests
Freshwater Habitats
Grasslands
Mountains
Polar Regions
Tropical Rainforests

Per class

variety of shoes

TEACHING TIPS

Cut and hole-punch all of the materials and place in individual baggies. This will make the activity run more smoothly and allow you to concentrate on the science instead of an elaborate craft activity.

ENGAGE

1. Have students bring in footwear, such as dress shoes, tennis shoes, boots, sandals, swim fins, water socks, flip flops, ballet shoes, baseball cleats, etc. Place the shoes on display in the room. As the students observe and classify the variety of footwear, discuss reasons why we need different types of footwear.
2. Ask:
Which type of footwear would be best for walking on the beach?
Which type would you choose when walking in water?
Which type would you choose when walking in snow?
Why would the dress shoes not be the best choice for walking in the snow?
Why do we need different types of footwear for different activities?
Why do we need different types of footwear for different climates?
3. Show students pictures of turtles.
Ask:
In what type of habitat are the turtles? (water, land)
Do all the turtles' legs and feet look alike?
4. Through discussion, help the students to note the differences in the turtles' legs.
 - Turtles that live only on land have short, thick legs on which to walk.
 - Turtles that live on land and in the water have webbed feet. The webbed feet help them to swim in the water and walk on land. Can you think of other animals that live on land and in the water? (e.g., ducks or other water fowl, river otters, beavers)
 - Turtles have different types of feet, depending on where they live, just like humans wear different shoes for walking in different habitats.

EXPLORE Part 1

1. Distribute materials to each student. Place the paper plates face down. Ask students to decorate one plate to look like the top of the turtle's shell and the other to look like the bottom of the shell.
2. While students are designing the plate, move around the room and punch holes for the legs in each plate. The holes should be equal distances apart. Put both plates together with the insides facing each other before punching holes.
3. If you are having the students cut out the turtle parts, have them cut out the head and tail first. As they are cutting out the legs, help them staple the head and the tail onto the top shell.
4. Show students how to use the brads to attach the legs in the proper holes. (Pre-punch holes in the legs.) Make sure that students attach all three sets of legs in-between the paper plates.

EXPLAIN

Discuss:

How do the flippers on the sea turtle help it to swim?

How would a sea turtle be affected if it had short stumpy legs instead of flippers?

What do you think would happen to a land tortoise if we gave it flippers instead of legs?

How do tortoises' short, stumpy legs help them on land?

How do the webbed feet of a land and water turtle help it in the water and on land?

Discuss:

- Sea turtles live in the ocean and swim with flippers. (Have students transform their turtles into sea turtles.)
- Tortoises have legs to walk on land. (Have students transform their sea turtles into tortoises.)
- Some turtles can live on both land and water. (Have students transform their tortoises so that they can do both.)

EXPLORE Part 2

Give students pictures of various plants in different habitats.

Tell the students to study the plant and try to identify the characteristics that enable that plant to live in a specific environment.

Read and discuss any of the Ranger Rick books by Newbridge and/or Dominic Press books.

EXPLAIN

Ask:

What are things you would expect to find, or not find, in plants living in the desert?

Do plants that live in the water look different than plants that are found on land?

Would a desert plant adapt well to a wetlands environment? Would a bog plant adapt well to the desert? Why?

EXTEND/APPLY

1. Create a bulletin board with different habitats – sea, pond, woodlands, grasslands, wetlands, and desert. Have the students match the turtles' legs to the habitat in which they live.

2. Ask:

What are some plants that we have in Florida that would not do well in the desert or in a very cold environment? Explain.

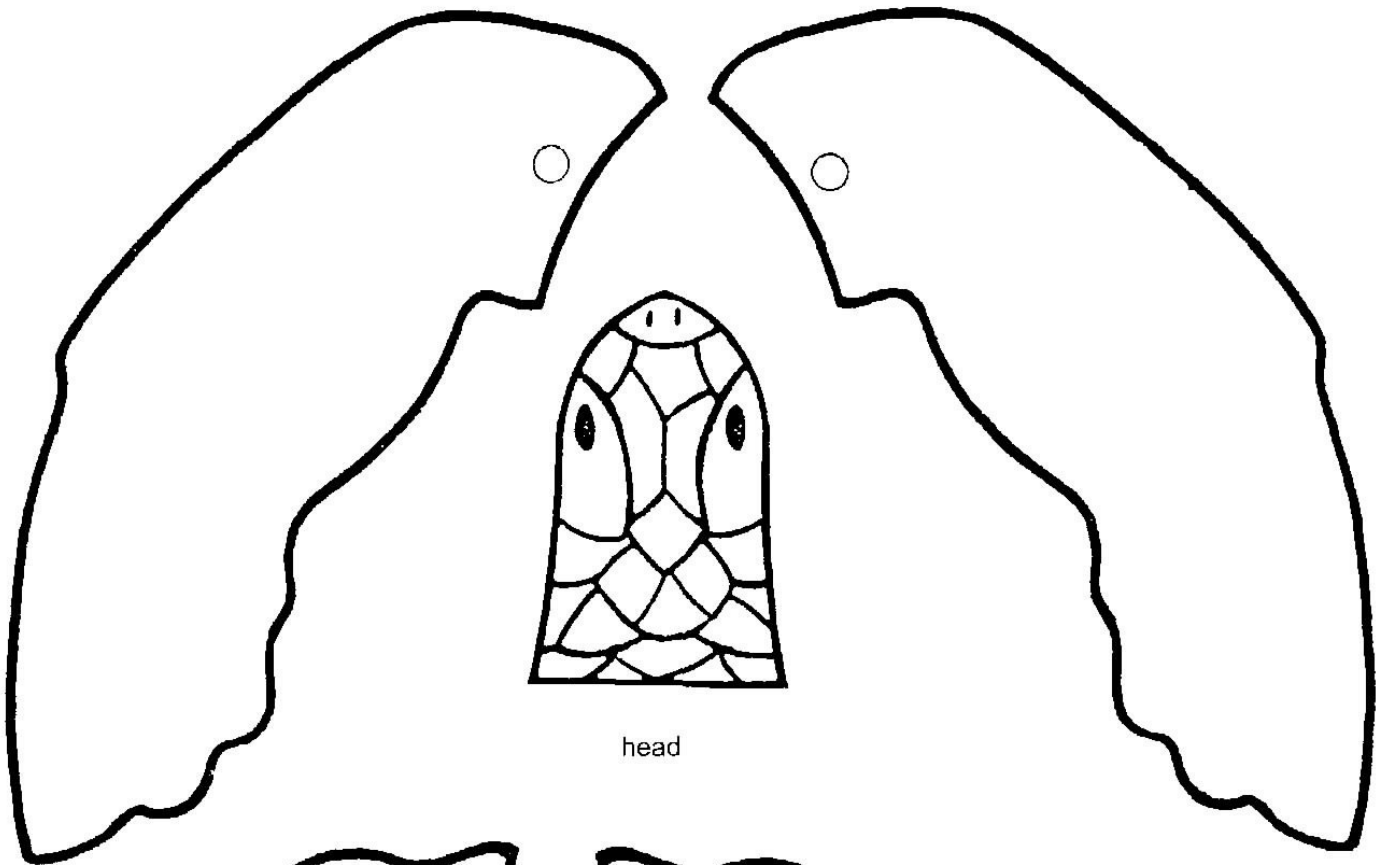
What are some animals that we have in Florida that would not do well in the desert or in a very cold environment? Explain.

EXTENSIONS

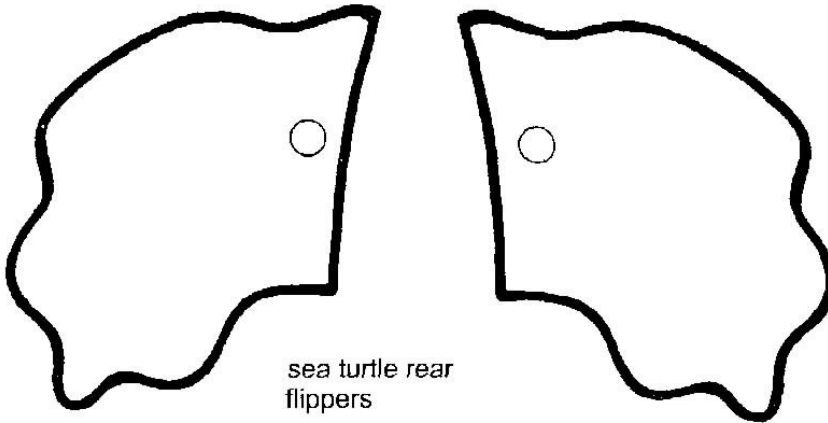
1. Explore animal adaptations through animal coverings by providing pictures of various habitats and asking the students to match a habitat with various animal coverings (feathers, wool, simulated or real animal fur, snail shells, wax paper can simulate smooth skin, cutting small patches from net produce bags can simulate scales from both fish and reptiles) which might adapt well to the environment.
2. Go on a nature walk around the school and discuss how plants are different at different locations (e.g., the open playground; under the shade of a building; where there are sprinklers or a regular source of water; under the shade of an evergreen tree).

TURTLE CONSTRUCTION

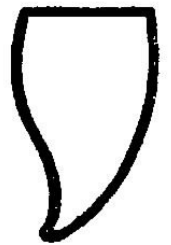
sea turtle front flippers



head

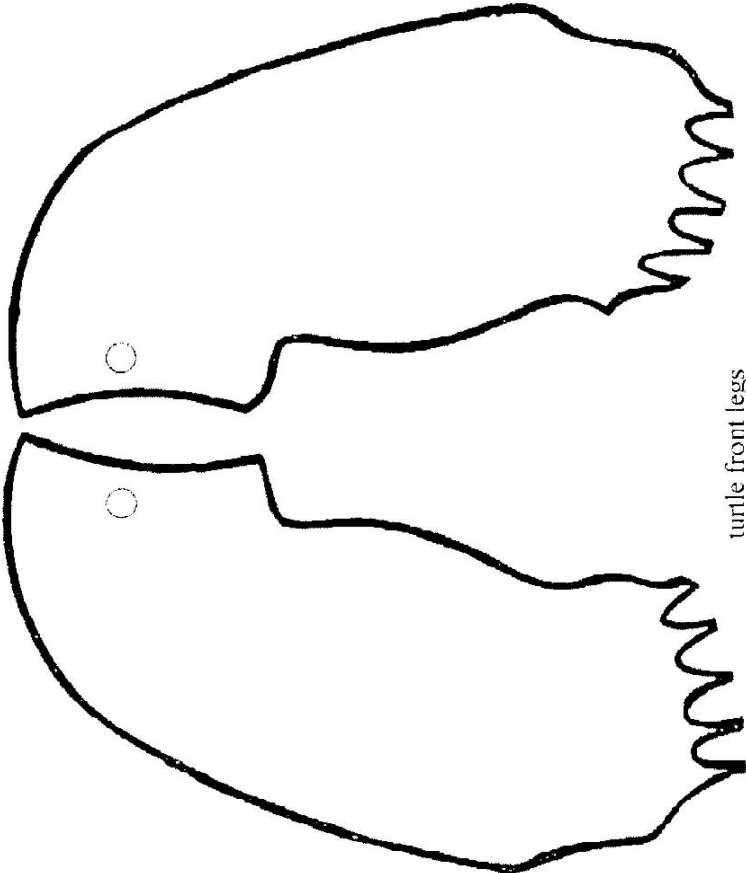


sea turtle rear flippers

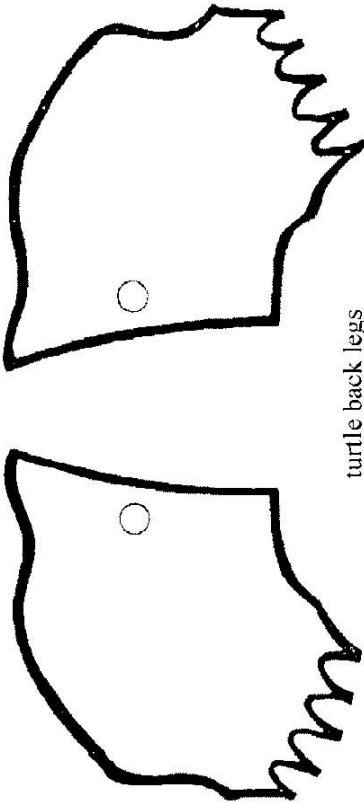


tail

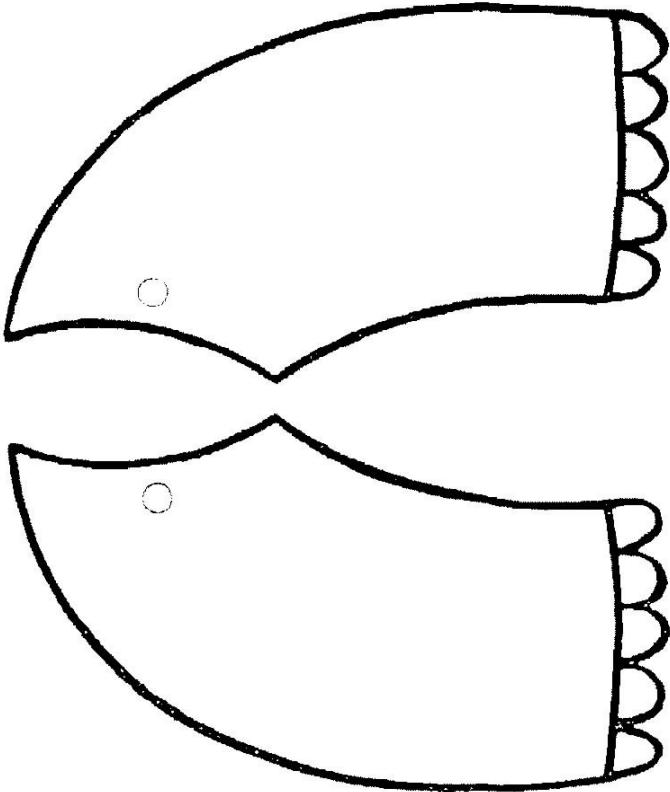
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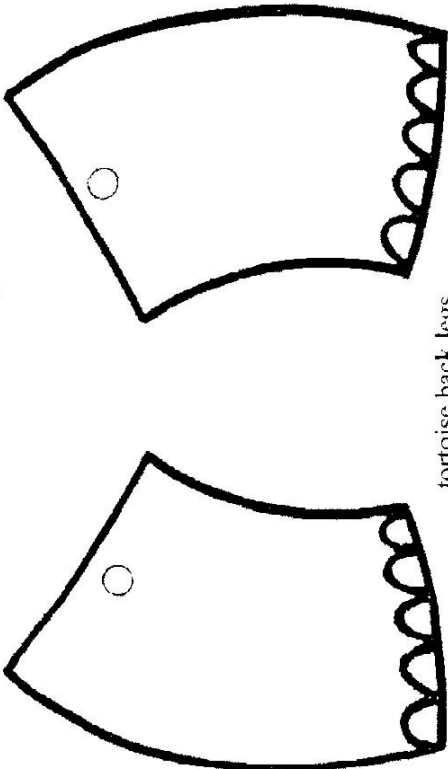
turtle front legs



turtle back legs



tortoise front legs



tortoise back legs