

WACKY WATER HATS

Dear Presenter,

This is a HANDS-ON language arts activity with approximately 25 ten year olds. You MUST do this activity at home BEFORE you attempt to lead the activity during the water festival.

As each new group of students arrive, find the classroom teacher, introduce yourself, and let the teacher know this is a hands-on activity and you will need assistance from him/her. If you do not ask for assistance, the teacher will assume that YOU are the EXPERT and they are the observer! When you “practice “ this at home, visualize 25 little bodies doing this with you or as you verbally instruct them. Plan when you will ask the teacher for assistance. DO NOT hesitate to call the teacher by name and politely ask for their assistance with ANY of your needs.

As each session begins, introduce yourself to the students. “Good morning, my name is..... and I work for, I am a, or simply I am happy to be here today” are some suggestions. Then introduce the topic of this presentation. Each step of this presentation is explained in this packet. **These are recommended guidelines and do not have to be followed exactly word for word.** However, you may present this material just as written. Feel free to personalize the presentation to suit you if necessary.

Thank you for volunteering to present “Wacky Water Hats.” Have fun, enjoy yourself, and we hope you will consider volunteering again next year.

Big Sioux Water Festival
Presenter Kit Committee

WACKY WATER HATS

MATERIALS LIST

(FOR 6 SESSIONS WITH 25 STUDENTS PER SESSION)

PATTERNS

Most patterns for this activity were photocopied from books, “Paper Hat Tricks I, II, III” by Patt Newbold and Anne Diebel

We use the following patterns:

Dragonfly	*Crayfish	*Raccoon	*Salamander
Frog	Duck	Beaver	
Pelican	Ladybug	*Bald Eagle	
Turtle	Spider	Goose	

CONSUMABLES

- 30 glue sticks
- 1 skein green yarn
- 1 box staples
- 45 black markers
- 1 box brass fasteners
- 24 pencils
- 1 pad - 3M Post-It notes
- 20 each animal description cards per hat (multi-colored)
- 1 ream of paper in the following colors: ivory, white, red, black, green, blue, gray, pink, yellow, orange, gray-green, tan, brown, mint, light blue, light yellow (Note: use a heavy card stock for paper)
- 2 large garbage bags
- 1 roll of masking/packing tape

NON-CONSUMABLES

- 30 pairs of scissors
- 10 staplers
- 4 hole punches
- 2 sets of laminated hat patterns (12)
- 2 sets of pattern piece list cards - one for each station and one extra
- 2 sets of laminated construction directions
- 2 sets of the materials list for each hat (12) - one for each station and one for the presenter
- 1 set of presenter information cards
- 2 large storage drawers
- 2 small storage boxes
- 2 sets of 2-gallon Ziplock bags, labeled with a set of animal labels
- 1 Rubbermaid large storage container

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This activity is a hands-on activity. To best explain and supervise this activity, **YOU MUST DO THIS ACTIVITY BEFORE** the actual presentation.

BACKGROUND information is provided as a basic overview with both general and specific information. Share this information with the students throughout the activity.

WATER ANIMAL FACTS AND THEIR HABITAT

Most habitats are home to many species of plants and animals and these species are dependent on each other. The interaction of living and nonliving things in different habitats creates an ecosystem. In an ecosystem, all living things exist in a balance that helps support the entire community of life.

For example, an oak tree can be a habitat for many creatures and an important part of an ecosystem. In order to live, the tree needs soil, water and sunlight. All the while the tree is living and growing, it is also providing a home to animals such as voles that may burrow beneath the tree's roots, squirrels and birds that live in its branches, and insects that live on the branches or beneath the bark. Squirrels and other animals eat the tree's acorns, and insects eat its bark and wood. Some birds, such as chickadees, warblers, and vireos help the tree by eating the insects that feed on the tree. Foxes, hawks and other predators prey on the squirrels and birds living in the tree. Although squirrels eat a lot of the tree's seeds, they also help plant new seedlings by burying acorns.

The interactions of plants and animals in a habitat form a complex web of life. Every plant and animal plays an important role in this web, with each participant relying on others for survival. Were any one of the components of the ecosystem to be disturbed or removed, the entire web may suffer. If someone were to spray insecticides on an oak tree, the chemicals might kill the insects that harm the tree. But the insecticide might also poison the birds and predators that naturally keep the insects in check, and the loss of a food source might reduce the number of birds that could live in the area. Once the pesticide washes away, the leaf-eating insects reproduce fairly quickly and might rebound to the point that they could kill the tree if the birds - their natural predators - were not there to control their numbers.

Without the right habitat, living things just can't survive. That's why many plants and animals are endangered. If you take away a habitat by building on it, draining its water, or polluting it, then you take away the things that keep the plants and animals there alive. Take away enough of any habitat, and the living things will have nowhere to go, causing them to die out or become extinct. With more and more people developing land, using natural resources, dumping in and polluting the water, and

moving into wild areas, plants and animals are losing habitat rapidly. Habitat preservation and restoration may be the most critical factor in saving many threatened or endangered species.

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FROG - Do you know how frogs breathe when they are under water? They breathe through their skin! This allows them to stay under water for extended periods of time. Wouldn't that be fun? In the winter, frogs go down to the mud at the bottom of the pond and hibernate. *Additional info: The global amphibian population are in decline due to several factors: (1) loss of habitat - some frogs only go to ponds to lay eggs and breed, spending the remainder of their life in wooded or prairie areas. If a road is placed in between the pond and the woods or prairie, the frogs may not be able to get to the breeding pond; (2) increasing ultraviolet radiation - because amphibian skin is sensitive, the thinning of the ozone layer has caused an increased levels of ionizing radiation which directly affect frogs; (3) increased use of pesticides causing loss of a food source.*

TIGER SALAMANDER- Tiger Salamanders are four-legged, tailed amphibians. Adult salamanders are often mistaken for lizards. Unlike reptiles, amphibians have moist, scaleless skin, bulging eyes, and no claws on their feet. The adult normal body length for a tiger salamander is 6 to 8 inches with a record of 13 inches. Tiger salamanders have 5 toes on their hind feet and only 4 on their front. The tiger salamander is the only salamander species found in South Dakota. They are found statewide, but three different subspecies exist in the state. The blotched tiger salamander is found west river and over a large area east of the Missouri River. The gray tiger salamander is found in the northeastern part of the state and the eastern tiger salamander is found in the southeastern counties. *Additional Information: Salamanders do not have fracture zones in their tails as some lizards do, but are able to regenerate entire limbs. Regenerated parts are usually distinguishable by the lack of characteristic pigmentation.*

RUSTY CRAYFISH- Rusty crayfish can be identified by their strong claws, and by dark, rusty spots on each side of their shell. The spots are located on the shell as though you picked up the crayfish with paint on your forefinger and thumb. The spots may not always be present or well developed on rusty crayfish from some waters. Rusty crayfish feed on a variety of aquatic plants, worms, snails, leeches, clams, aquatic insects, decaying plants and animals, fish eggs, and small fish. *Additional Information: Invading rusty crayfish in new areas of water can displace native crayfish, reduce the amount and kinds of aquatic plants, decrease the density and variety of invertebrates (animals without backbones) and reduce some fish populations.*

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DUCK - When a duck hatches out of its shell, the first living thing it sees it automatically assumes is its mother. So, it's very important that the mother is nearby when the ducklings hatch, since she knows best how to raise them! *Additional info: Coastal and inland marshes provide breeding, resting and wintering habitats for thousands of ducks. Ducks are the largest group of waterfowl and also the most diverse. Frequently males and females are colored differently with the male having the brighter plumage of the two. The nesting area of a mallard duck is throughout the entire Northern Hemisphere in places where climatic conditions are not too severe. Loss of wetland habitat has distressed the duck populations to a point that many states are now protecting many species by limiting purchases of wetlands and hunting seasons.*

PELICAN - A pelican can have a wingspan of 6 ½ feet. That's longer than most adults are tall! Pelicans can soar high in the sky or skim the waves going around 30 miles per hour. They can also dive beak-first into the water from 30 feet high, and float with the waves. *Additional info: The pelican is a large, web-footed bird with an enormous throat pouch for scooping up fish. The white pelican catches fish by scooping them up in its pouch as it swims, while the brown pelican dives from the air to catch it's dinner. It is found mainly in and around inland lakes and marshes. Pelicans fly in flocks in a long line with their elongated necks bent back over their bodies. They flap their wings only 1.3 times per second while a hummingbird beats its wings 50-70 times per second.*

LADYBUG - The ladybug is a type of beetle which is useful to any gardener. Ladybugs eat aphids, which can destroy tomatoes and other tasty garden delights. 3,000 ladybugs can protect an acre of fruit trees from pests! *Additional info: Ladybugs are known primarily as predators of plant lice (aphids). More than 5,000 aphids may be eaten by a single adult ladybug in its lifetime. There is no denying that ladybugs are beneficial insects and are good to have around. Since ladybugs are beneficial "pest controllers" insecticide treatment of plants is not suggested. Plants like angelica dill, dandelion and wild carrot attract ladybugs to your yard.*

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TURTLE - Turtles have sharp, bony jaws, but no teeth! Female turtles lay eggs in the dirt or sand, and the warmth of the sun incubates them. Some male turtles have RED eyes. Young turtles eat snails, crayfish, and tadpoles, but the adult turtle eats only water plants. *Additional info: The North American box turtle is listed as a threatened species. Turtles are a long-lived species of reptiles with a low egg/clutch number, high hatchling mortality rate and ever shrinking habitat. Their survival depends on active conservation. Turtles live in many different environments, but in South Dakota are generally found in the grasslands and close to prairie potholes.*

SPIDER - The spider is known as a hunter. It hunts down and catches its prey with the help of its good eyesight. Spiders eat mostly insects, but occasionally will eat other spiders. *Additional info: Myths and a few fatal poisonings have made many people afraid of spiders. Spiders may be annoying by their habit of building webs across doorways, in corners, on furniture and in other places. Unpopular as they are, most spiders are shy and harmless to humans. Most have fangs too small and weak to puncture human skin. Most are quite beneficial by feeding on harmful insects (flies, crickets, etc.) and mites in and around the home, yard, garden, and fields. Spiders lay eggs within silken egg sacs that are often ball-shaped and either hidden in the web or carried by the female. Spiders have eight legs.*

GOOSE - Geese migrate each year from their winter homes to their summer homes and then back. They lay their eggs at their summer home and hatch their little goslings and teach them to fly. Most geese fly hundreds of miles each year. Geese mate for life. *Additional info: Geese are migratory birds - they require the presence of wetlands in their breeding habitat and on their wintering grounds. Since these two regions are often thousands of miles apart, they also need wetlands to provide them with food and rest in between. Many communities of geese are declining due to wetland habitat disappearance and degradation.*

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DRAGONFLY - Dragonflies are ancient insects. Their name comes from their fierce jaws, which they use to catch flies. Dragonflies were around before dinosaurs. - they lived 300 million years ago and were a lot bigger then they are now. The largest known dragonfly had a wingspan of 24 inches long! Today, the largest dragonfly is found in South America and has a wingspan of slightly over seven inches.. Dragonflies have four wings, six legs and three body parts. *Additional information: Dragonflies are very beneficial to humans. They are called the “mosquito hawk” because they catch and eat so many mosquitos. They have excellent eyesight and have the ability to maneuver so well they can usually out-fly their prey. When a dragonfly reaches full maturity, it crawls out of the water onto a plant stem. Then its skin begins to split. It takes 2 days before the adult dragonfly’s beautiful colors fully develop. Sadly, they only life a few months.*

BEAVER - American Indians called the beaver the “sacred center” of the land because this species creates rich habitats for other mammals, fish, turtles, frogs, birds, and ducks. Beavers mate for life. Both parents care for the kits (usually one to four) that are born in the spring. The young beaver normally stay with their parents for two years. Beavers use peeled sticks to build teepee-like lodges (houses) on the shores of rivers and streams. *Additional information: A beaver colony can consist of six or more beavers, including parents, yearlings and kits. They will peacefully coexist in a lodge with underwater access for four months or more. A beaver can build a dam as long as 2 football field and twice as tall as a person. Beavers are wonderful builders.*

RACCOON- Raccoons can be found living in caves, rocks, hollowed out trees or even your attic. The diet of a raccoon is often determined by what is available. Fish, crayfish, mice, frogs, birds, eggs, and honey are all part of a racoon’s “natural” diet. Because raccoons live where people do, and vice versa, they will eat whatever we leave behind too. Raccoons are often attracted to garbage cans. Nearly anything that was once on our plates, will be eaten by a scavenging raccoon, including breads, meats, vegetables, sweets, even soda. *Additional Information: Baby raccoons, known as kits, are born in litters of two or three and remain with their mother for only about 12 weeks. The average life span for a raccoon in the wild is 2 to 3 years. They can weigh anywhere from 4 to 23 pounds.*

BALD EAGLE- Both male and female adult bald eagles have a blackish-brown back and breast; a white head, neck, and tail; and yellow feet and beak. Juvenile bald eagles are a mixture of brown and white; with a black beak in young birds. It takes about five years for their head and tail feathers to gradually turn white. Eagles sit at the top of the food chain. Once an eagle spots a fish swimming or floating near the surface of the water, it approaches its prey and snatches the fish out of the water with a quick swipe of its talons. The bald eagle is found across Canada and the United States of America and slightly into Mexico. This species typically breeds in forested areas next to large bodies of water such as rivers, lakes, reservoirs, and coastal areas. *Additional information: The largest bald eagle nest on record was 9.5 ft (3 m) wide and 20 ft (6 m) high. It weighed more than two tons. Bald eagles have 7,000 feathers. Eagle feathers are lightweight yet extremely strong, hollow and yet highly flexible.*

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ROOM REQUIREMENTS

- Tables for work stations
- 1- 8' table for display and supplies located at the front of the room

PRE-PREPARATION

(To include any or all of the following)

- Check supplies against supply list
- Re-supply staplers with staples
- Pre-cut 18" lengths of yarn for turtle hat (enough to accommodate 20 hats plus a few extra for broken strings during your sessions)
- Assemble sample hats to exhibit during presentations
- Pre-cut paper for each pattern - example: cut 8 ½ x 11 sheets for larger face pattern, small squares for eyes, longer pieces for headbands, etc.)
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PREPARATION: APPROXIMATELY 35 MINUTES

(Done the day of presentations)

- Line large garbage can with one of the garbage bags or tape garbage bags to the ends of all work stations.
- Set up work stations for each hat. Each station will accommodate 3-4 students. Follow materials list shown on the back of each laminated picture instructions card for materials needed at each station.

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SAMPLE ROOM SETUP

Front of room

Set up 9 work stations
with each station seating
3-4 students

Supplies and Display Table

Large garbage can

Duck

Goose or Bald
Eagle

Raccoon

Tiger Salamander

Spider or Crayfish

Frog

Ladybug

Pelican or Beaver

Turtle or
Dragonfly

Student

Student

Ladybug

Pencils

Staplers

Scissors

Glue

Paper

HAT
INSTRUCTIONS

Student

Student

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INTENDED STUDENT OUTCOMES

By completing this activity the students should be able to:

- Understand that animals need different habitat to survive and maintain a healthy ecosystem
- Know a few fun facts about the animals from which they've constructed hats

PROCEDURE

1. Introduce yourself with enthusiasm to the students.
2. This activity works well with a discussion about the food web, animal and plant habitat and why some animals and plants are threatened and/or endangered.
3. Break the class into groups of 3-4 students (or less). You may wish to ask the teacher to assist you with this step. If the room is set up as suggested, this step will happen automatically when the class enters the room.
4. Explain to the students that they will be constructing wacky water hats, making different animals that have to do with water - they either live in it, on it, or use it for food or transportation, or a combination of several of these.
5. Suggest to the teacher and her adult helpers that they help supervise the construction activities at each station.
6. Tell the students that they have about 20 minutes to construct their hat. Point out that each station has instructions on how to construct the hat at that station and shows a picture of what it can look like upon completion of their project. Tell the class that all the materials to successfully complete a hat is at the station where they are sitting. **Each student will construct only one hat.**
7. As the students are constructing their hats, read/explain some of the fun facts from the Presenter Information Cards (yellow on green laminated cards).
8. Walk around to all the stations and help any students who are having difficulty with constructing their hats.

9. Upon completion of each student's hat, hand them a fact card to glue into the band of their hat.
10. While students are gluing the cards, have teacher or room helper take the garbage can around and have everyone deposit their paper scraps into the bag. If you've taped bags to the ends of each table, have students or helpers deposit paper scraps into the bags.
11. Summarize your presentation by explaining the importance of habitat preservation and answer any questions the students may have concerning the items you've discussed throughout your presentation.
12. Thank the class for their participation and compliment them on their wonderful hats. Encourage them to "show them off" during the rest of the Festival.

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FINAL CLEAN UP AFTER LAST SESSION

(Approximate clean up time is 30 minutes)

- ▶ Replace all text and Presenter Information Cards into folder
- ▶ Replace all non-consumables into marked storage containers
- ▶ Gather up all unused paper and other materials and replace in the large Rubbermaid storage container
- ▶ Do a room walk-through to make sure all surfaces and floors are clean