

Grouse Glyphs

Subject: Reading and Science

Objective: Students will read information sheets about grouse species and complete a grouse glyph to check for comprehension.

Materials

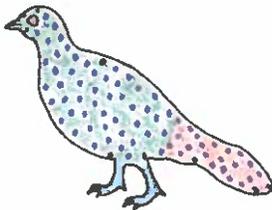
- Copies of the grouse reading sheets – enough to evenly split the 5 species among the class.
- Copies of Grouse Glyphs worksheet and Grouse Glyph Codes (one for each student)
- Colored pencils or crayons



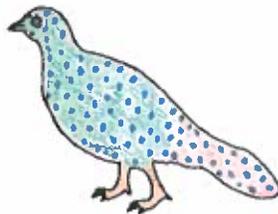
Procedure:

1. Pass out copies of the grouse reading sheets to students. Evenly divide the species among students. Reading levels for the sheets are *Spruce Grouse* 4.4, *Dusky Grouse* 4.0, *Ruffed Grouse* 4.3, *Sage-grouse* 3.6, *Sharp-tailed Grouse* 4.9. Students could read in groups or read by themselves.
2. After students have read about the grouse, pass out the Grouse Glyphs worksheet and codes sheet. Explain that they are to color the grouse according to the code that matches the grouse they read about. They should try to arrive at the correct answer without referring back to the sheet. Have students color their grouse according to their codes.
3. If students are not already in specific grouse species groups, have the students form groups according to the species sheet they read and compare their colored grouse. The students should have grouse colored the same. If there are differences, have the students figure out where their errors were made.

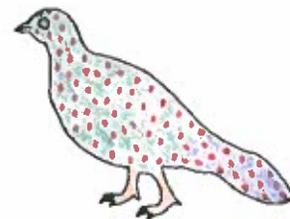
Ruffed



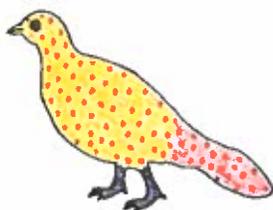
Dusky



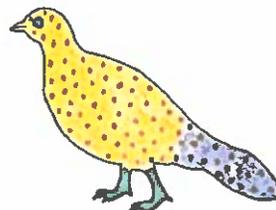
Spruce



Sharp-tailed



Sage-grouse



Spruce Grouse

You probably can tell by the name that spruce grouse love spruce and pine tree forests. They especially like thick forests with lots of smaller shrubs and grasses. Spruce grouse are only found in central and northern Idaho.

Spruce grouse find shelter in the branches of trees and eat the needles and buds of spruce, fir and larch trees. They will also eat berries, seeds, mushrooms, leaves and some insects.

Their body is spotted and barred with brown and white. They have black colored throats and tail feathers with brown or buff colored tips.

Males have bright red eye combs over their eyes that they stick up to attract females. The males also sing for the females. Their song is a deep trill like a dove call that ends with a donkey ee-a.



Dusky Grouse

Dusky grouse were named for the color of their feathers. They are a brown-gray and black-gray color. When the light hits their feathers just right, they have a blueish look. It is similar to dusk; the time of night when the sun just disappears. The bright colors of nature look grayish-blue in the dim light.

Dusky grouse like to live in forests that are not too thick. You could look right through their favorite forests. Dusky grouse like a mixture of shrubs, fir, pine and other trees. They are found in northern, central and eastern Idaho.

In the winter, dusky grouse eat mostly the needles and buds of fir trees. In the summer, they enjoy berries, insects, flowers and leaves.

Males like to show off for the females. They have fancy yellow-orange eyebrows over their eyes and air sacs on their chests. They puff out the eyebrows and air sacs to get the females' attention and sing. Their song is a deep hoot that sounds a bit like water dripping. You can almost feel the song more than hear it.



Ruffed Grouse

Ruffed grouse come in two color phases. They may be a mottled rufous (red) color, or they may be a mottled gray. Both phrases have a slight crest on the head, a fan shaped tail and black feathers on the side of the neck that look like a ruffled collar. Can you guess how ruffed grouse got their name?



Ruffed grouse like to live in dense forests with deciduous trees. Deciduous trees drop their leaves before winter. They especially like forests with aspen trees. This species of grouse is found in central, northern and eastern Idaho.

Young ruffed grouse eat mainly insects and spiders. Adults eat insects, nuts, flowers, buds, fruits, seeds and leaves. Aspen, willow and rose are important food plants for ruffed grouse.

Males drum to get the attention of females. They beat their wings on logs in an accelerating drum roll. It sounds like a distant motor starting up.

Sage-grouse

Sage-grouse love sagebrush! You can find them across southern Idaho in foothills, plains and on mountain slopes where sagebrush grows.

Sage-grouse eat sagebrush during the winter. At other times of the year, they may eat flowers, leaves and buds of other plants. Ants and grasshoppers are also on their menu.



Sage-grouse are a gray color on their backs and wings. They have dark bellies and white breasts. The males have yellow-orange eye combs (eyebrows) and air sacs on their chests.

The males do a courtship dance for the females to attract mates. They fan out their spiky tail feathers and fill their air sacs with air. As the air leaves the sacs, it makes a bubbling pop-pop sound.

Sage-grouse are sometimes called sage chickens. They cluck like chickens when flushed.

Sharp-tailed Grouse

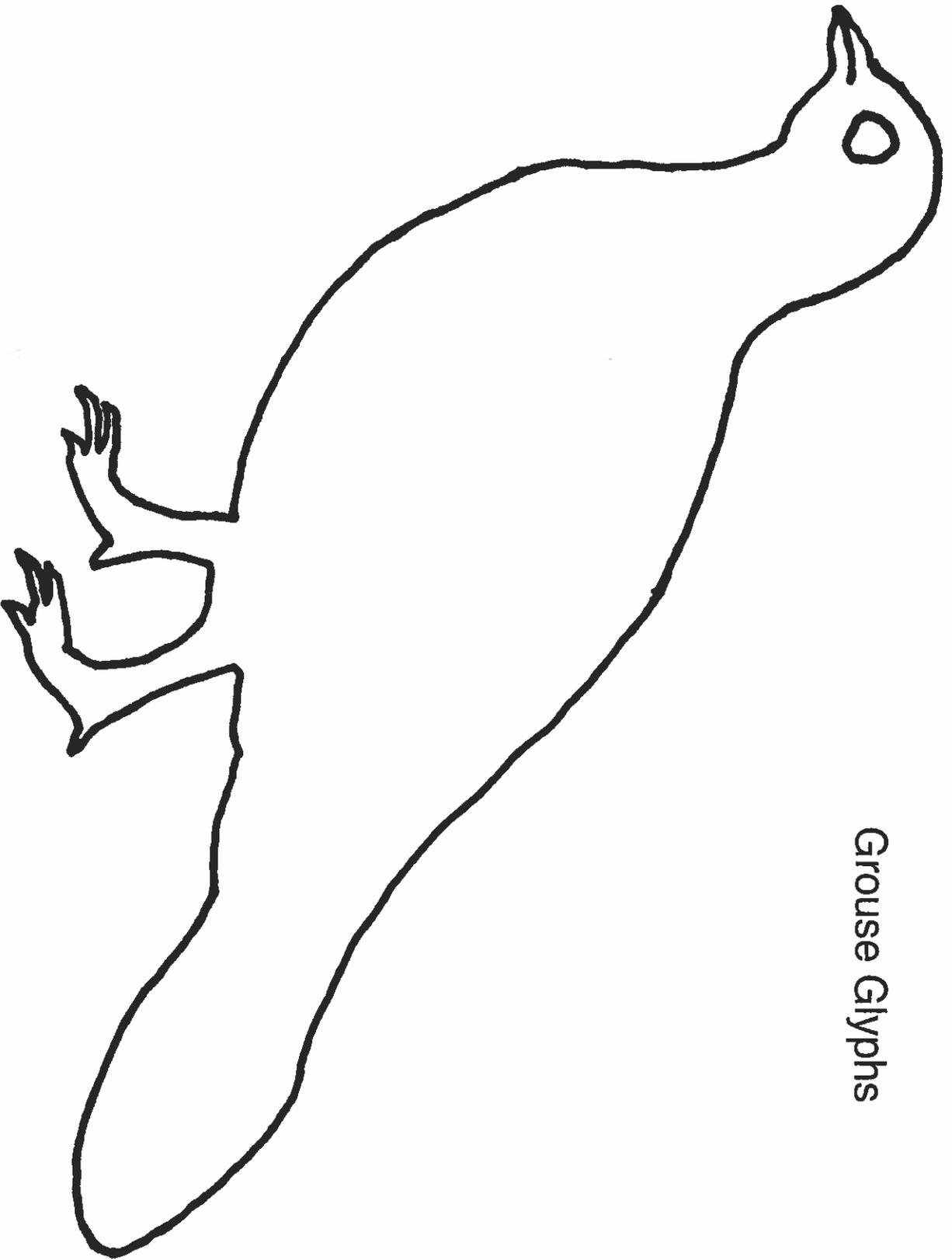
Can you guess how sharp-tailed grouse got their name? Their middle tail feathers are longer than the side feathers, so the tail looks pointed and sharp. Their bodies and wings are dark with light spots, but their bellies are light with dark spots.

Sharp-tailed grouse are found in west-central and eastern Idaho. They like to live in grasslands, sagebrush covered hills, and along water where shrubs and trees grow.

Sharp-tailed grouse chicks eat insects and some berries. Adults eat berries, grain, leaves, buds and flowers.

Males come together in groups to show-off for the females. They try to win a mate by sticking their tails up, showing off their yellow eye combs and puffing out their violet colored neck sacs. The song they sing for the females is a low, dove-like co-coo. They also make squeaky, bubbly, cracking sounds.





Grouse Glyphs

Grouse Glyphs Codes

Read the information sheet about grouse. Use the information you learned from reading to pick the correct glyph code to color the grouse. Cut the grouse out.

1. If your grouse is found in northern Idaho, color the body green.
If your grouse is not found in northern Idaho, color the body yellow.
2. If your grouse lives in grasslands and sagebrush hills, color the eye green.
If your grouse lives in thick spruce and fir forests, color the eye purple.
If your grouse lives in mixed fir forest with shrubs, color the eye black.
If your grouse lives in aspen forests, color the eye orange.
If your grouse lives in sagebrush, color the eye blue.
3. If your grouse was named for its appearance, color the tail red.
If your grouse was named for its habitat, color the tail purple.
4. If your grouse's chicks eat insects and spiders, color the legs and feet blue.
If your grouse eats sagebrush, color the legs and feet green.
If your grouse's chicks eat insects and berries, color the legs and feet purple.
If your grouse eats the needles of fir trees, color the legs and feet orange.
5. If your male grouse's song is a deep hoot, cover the grouse with blue dots.
If your male grouse makes bubbling pop-pop sounds, cover the grouse with brown dots.
If your male grouse's song ends in a donkey ee-a, cover the grouse with red dots.
If your male grouse drums his wings on logs, cover the grouse with purple dots.
If your male grouse's song is a low dove-like co-coo, cover the grouse with orange dots.



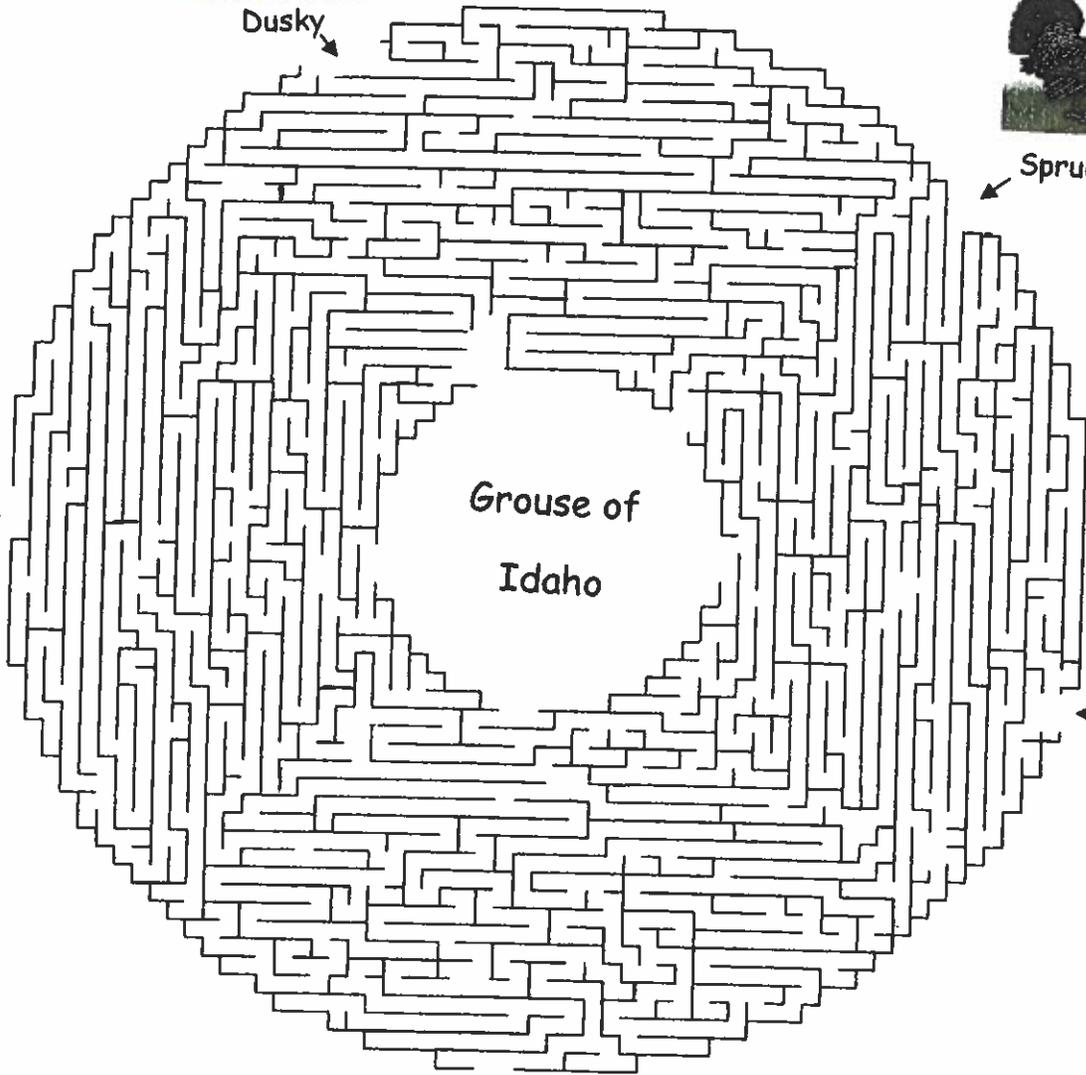
Dusky



Spruce



Ruffed



Grouse of
Idaho



Sharp-tailed



Sage-grouse

Scrapbook for the Birds

Subjects: Science & Art

Objectives: *Science:* Investigate the diversity of plants and animals.
Art: Create a work of art using personal experience and skills.

Materials:

- bird and nest field guides & reference books
- drawing paper, construction paper
- colored pencils and/or crayons
- card stock or cardboard from cereal boxes

Procedure:

1. Discuss scrapbooks and family albums with your students. Ask them what sorts of events are in their baby books or family albums. You might even want to bring in an example of yours.
2. Explain to students that they will be creating a scrapbook for a particular species of bird. You may want to choose some or let them feel free to pick a species that interests them. Brainstorm some important events in a bird's life. Have the students research and take notes on the bird of their choice. Some specific things they may want to research are what the adult looks like, what the juvenile looks like, what the nest are made of, where the species of bird lives in the winter, etc.
3. After researching, students should set up their albums. Pages might include My Parents, Egg, Just After Hatching, First Meal, Family Nest, Learning to Fly, Summer and Winter, My Mate and I, Building Our First Nest. Students should write two or three sentences on each page and draw a picture.
5. Follow instructions for **Book Making** on next page.
5. Once books are created, students can begin filling in their pages! If you're worried about students making mistakes on the pages after the books are sewn, have them sewn after the students write and illustrate them.
6. Share the books with one another! Leave in library for all students to see!



Book Making Instructions

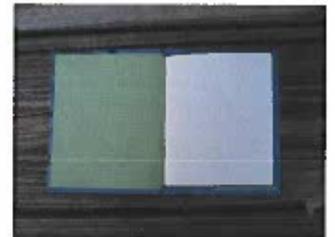
Materials:

Cereal or cracker box Glue stick Masking tape
One sheet of 12" X 18" construction paper (preferably light colored)
One sheet of 9" X 12" construction paper
8 - 12 pieces of legal sized copy paper
Cutting board Scissors Sewing machine

- A. Cut the box into two equal sizes.
- B. Lay the 12" X 18" construction paper down on table. Place the two pieces of cardboard in the center about 1/2 "apart. It works best to face the printed side of the cardboard up. Make sure you have about 2" of paper around the edges of the cardboard. Glue the cardboard down with a glue stick. Wrap the rest of the construction paper around the cardboard. Fold the edges neatly, like you would if you were wrapping a package. Tape this down with masking tape.



- C. Cut another piece of construction paper to fit over the top of the folded edges that you taped down. Glue this piece of paper down for the inside of your book. Match the corners up and fold the book in half to form the front and back cover.

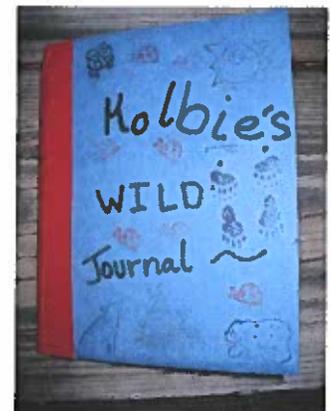


- D. Open your book. Cut the legal sized paper to fit all the way across your book. Fold paper in half.
- E. Open the entire book. Lay flat and use a sewing machine to stitch the pages to the book cover. Be careful not to use too small of a stitch. (You don't want to perforate your paper!) Fold your book in half and you're done!

Optional:

- Add a ribbon for a bookmark.
- Add colored duct tape for a binding (over the stitches.)
- Use stamp pads to decorate.

Enjoy!





Avian Antics

Participants take part in this hilarious game of charades to discover the diversity and importance of courtship rituals for birds who are seeking mates.

Need to Know

Somersaults, fervent songs, strutting, bowing, dancing, and bringing special treats are just a few of the unusual antics that birds perform to attract mates.

Each species of bird has evolved with a unique set of *displays*—a set of behaviors that function like language to communicate emotions or intentions. Each spring, birds take part in courtship displays to attract mates. These rituals vary tremendously from one bird species to another. Male courtship displays may include behaviors from singing, strutting, and shaking their feathers to bringing special treats for the female friend to eat. Some ornithologists believe that courtship displays help to initiate and strengthen the bond between the mating pair. The displays also may help a bird judge how effective a possible mate may be at helping to raise young. Finding a mate is important for each bird, because a bird without a mate is a bird without offspring.

Getting Ready

1. To make the Courtship Behavior Cards, cut out large cards from sturdy paper or poster board. Copy the Courtship Behavior Cards pages, cut them out, and tape or glue them onto the white cards. If possible, laminate the cards to protect them. (Alternatively, you can follow the Courtship Behavior Cards and use a black permanent marker to write the courtship behavior information on one side of the card and the name of the bird on the other side.)
2. On the day of the festival, set up your station. Hang your station sign so participants can identify your booth. You may want to hang some interesting pictures of bird behavior to attract participants. Have the Courtship Behavior Cards and other props ready for use.

Unless participants are experienced bird watchers, they will not know the answers to this activity. The purpose of the activity is to introduce participants to the idea that different species of birds do different things to attract a mate—and that observing such behavior can be fun and interesting. To help participants have an easier time guessing, provide a list of answers with the eight possible bird behaviors and a poster with pictures of the birds.

NEED TO GET

- One or more large tables
- Hat or other container
- Copies of Courtship Behavior Cards pages
- Sturdy paper or poster board
- Orange ballons
- Red balloons
- 2 music sticks, drumsticks, or wooden rulers
- “Peacock” tail feathers made of sturdy green paper
- Thistle seeds or other seeds
- Pens or pencils
- Paper for keeping score
- A sturdy stool or chair for participants to stand on
- Tape or glue

Optional:

- Laminating materials
- List of possible bird behaviors
- Poster with bird pictures

TIME

Preparation: 30 minutes
Activity: 45 minutes

TERM TO KNOW

displays



ZOOM IN, ZOOM OUT!



For this variation, you will need: Velcro tabs, heavy white poster paper, a large poster board, scissors, and permanent markers.

The Courtship Behavior Cards can be mounted on a large poster board with Velcro tabs. Make the writing on the cards large enough so that it can be easily read. Directions on how to play can be provided at the top of the board. The challenge is for participants to figure out what bird matches with a specific courtship behavior. The board can be set up with the answers on the back of the cards or as a matching game with possible answers to the side of the cards. Participants can play individually or in teams.

Each species of bird has evolved with a unique set of displays.

Taking Flight!

Festival participants gain knowledge of bird courtship behaviors by taking part in a playful game of charades.

1. Participants can play this game in small or large groups. You can keep score or let participants play just for fun. If keeping team scores, designate one of the station leaders as the scorekeeper.
2. To introduce this activity, say:

Have you ever watched birds as they look for food, sing, or build a nest? These are all different types of bird behaviors. (Behavior is the way the animal acts. For example, how birds react to each other, to other species, and to the environment.) Have you ever seen birds doing any unusual behaviors such as fanning their feathers, strutting, or doing what looks like a silly dance? These behaviors may be courtship displays. Each spring, birds perform these courtship displays, or "rituals," to help them find a mate or strengthen the bond between birds that mated in previous years.

3. Next, participants take turns picking a card out of a hat. After pulling a card, the individual or team acts out the behavior described on the card. The other individual or team tries to guess what bird performs that specific behavior. If no one guesses the correct answer, tell them the answer and move on to the next card—this time the acting out is performed by the other individual or team.
4. Continue taking turns until all of the cards have been used. (If more than eight players want a chance to pick a card and act it out, the cards can be put back in the hat and used over again. Repeating the cards can help to reinforce the information.)
5. If you kept score, tally the results at the end of the activity. Ask participants if they have any questions before ending the activity.



Quiz Your Guests

1. What does "bird behavior" mean?
2. What are some examples of bird courtship behaviors?
3. Why are courtship displays so important to birds?
(One answer is that courtship rituals help birds attract and keep a mate, which is essential to having offspring. Also, courtship behaviors help birds establish their breeding territory by warning other birds away.)

IN STEP WITH SCIENCE STANDARDS

STANDARD C: LIFE SCIENCE

- Reproduction and heredity
- Regulation and behavior





Courtship Behavior Cards Use the this information to make the front of your cards.

When this male bird sings its courtship song, it often rises several feet off its perch, as if propelled by the passion of its song.

(Action: Sing your school song while jumping up and down.)

Flashing its handsome black and white crest, this bird swims around and around the females, then he leaps into the air and does a somersault before coming to rest on the water.

(Action: Run around in a circle, then do a somersault.)

This male bird makes loud drumming noises by tapping its beak on hollow branches or other objects, like telephone poles or the drainpipes on a house.

(Action: Tap two sticks together to make loud drumming noises.)

This male bird flaps its wings rapidly to make a muffled drumming sound. This is often done while standing on a log or large rock.

(Action: Stand on a sturdy stool or chair while quickly moving your arms up and down. Tap your legs with your arms to make a drumming sound.)

This male bird has a brilliant red throat patch that it inflates during its courtship display.

(Action: Tuck a red balloon under your chin and walk around showing it off.)

This male bird struts, bows, and makes a loud whistling sound by blowing up orange air sacs on its neck.

(Action: While holding an orange balloon on each side of your neck, walk with a strut, then take a bow. Try to whistle while you do this.)

This male bird brings special treats like thistle seed to win over a female bird.

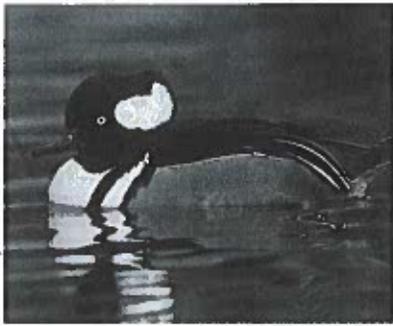
(Action: Collect and offer some seeds to a "female bird.")

This domesticated male bird has a long tail of green and bronze feathers that it fans and shakes during courtship.

(Action: Hold up a fan of long green paper "feathers" behind your back.)



Courtship Behavior Cards Use the this information to make the back of your cards.



Hooded Merganser



Orchard Oriole



Ruffed Grouse



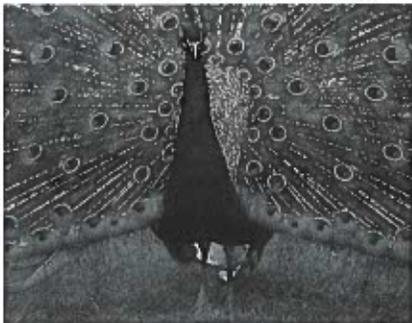
Downy Woodpecker



Greater Prairie-Chicken



Magnificent Frigatebird



Common Peafowl
(Males are called Peacocks)



Lesser Goldfinch