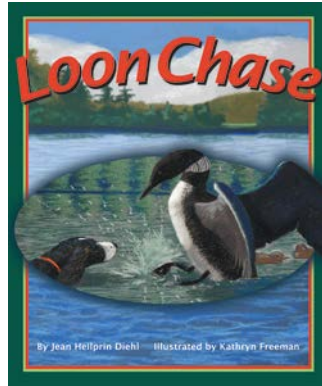


Teaching Activities

for



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Teaching Activities are intended for use at home, in the classroom, and during story-times.

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Questions to ask children before reading the book

- What do you think the book is about by looking at the cover?
- What does the cover illustration show?
- What do you think the loon is telling the dog?
- Can you tell by the cover where the story takes place? (ocean, mountains, lake, etc.?)
- Have you ever seen a loon? Where? What was it doing?
- Have you ever heard a loon calling? What do you think it was doing?

What do children already know?

- Young children are naturally inquisitive and are sponges for information. The whole purpose of this activity is to help children verify the information they know (or think they know) and to get them thinking “beyond the box” about a particular subject.
- The children should write down their “concepts” (or adults for them if the children are not yet writing) on the provided chart found on the next page.
- Use the questions to get children thinking about what they already know. Feel free to add more questions or thoughts according to the child(ren) involved.

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What do children already know—activity chart

Ask children to write down what they think they know before reading the book. If the information is verified while reading the book, check “yes.” If the information is wrong, mark “no” and cross it off. Write the correct information in another section, below. Make a note of how you verify the information.

<u>What do I think I know?</u>	<u>Yes</u>	<u>No</u>	<u>Verified</u>
What type of animal is a loon?			Text Illustration Info in FCM Other
Where does a loon nest in the summer?			Text Illustration Info in FCM Other
Where do they build their nests?			Text Illustration Info in FCM Other
How are humans hurting loons and their nesting areas?			Text Illustration Info in FCM Other
What are humans doing to help loons?			Text Illustration Info in FCM Other
Where do loons go in the winter?			Text Illustration Info in FCM Other

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Use this chart for any other thoughts the children might have.

<u>What do I think I know?</u>	<u>Yes</u>	<u>No</u>	<u>Verified</u>
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other
			Text Illustration Info in FCM Other

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After reading the book—writing prompts & thinking it through

- Did the cover “tell” you what the book was about?
- If not, how does the illustration on the front relate to the story?
- Draw your own cover
- Write a song
- Can you think of another title for the book?
- Why do you think the parent loon and the chicks did not fly away when threatened by the dog?

Re-read the book looking for more information

Go back and re-read the book studying each page carefully.

- What, if any, facts are mentioned in the text?
- What can be seen or inferred from the illustrations that is not or are not mentioned in the text?
- What, if anything, can be inferred from the text?
- Pause during second readings and ask the child(ren) if they remember what happens next.

Comprehension Questions

- Where did lives and his mother go on their canoe ride?
- What did the boy want to do by himself?
- How did Miles get to the island?
- What were the mom and boy doing on the island?
- How did they know that Miles had left?
- Why was the boy scared?
- What did the loon parent do to protect the chicks?
- Why did Miles turn around?
- Why did the boy want to go back out and check on the loons?
- How many loons did he see?
- What did one of the adult loons do?
- Do you think it was the loon that scared off the dog? Why or why not?
- What did the boy and his mother see after dinner?

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What do children already know—activity conclusion

- Do the children have any more questions about loons? If so, write them down on the chart.
- Identify whether the information was verified and how.
- If the concept is correct, make a note of how the information was confirmed (illustration, in text, in fun fact notes)
- If the concept was not correct, what IS the correct information – with above confirmation notes as above.
- If the concept was neither confirmed nor denied, look the information up in a reliable source and note where it was confirmed.
- Wrap it all up by adding notes with new information that they learned either through the reading or the research while looking up something else.

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Language Arts

Developing a vocabulary “word wall”

If using the book as a way to introduce a topic or subject, this is also a great way to introduce subject-related vocabulary words. If you don't have the time (or the inclination) to develop the word wall by playing the Vocabulary Game (below), we have provided a vocabulary list for you.

Vocabulary words for the “word wall” may be written on index cards, on a poster board, or on a chalk board. If writing on poster board or chalk board, you might want to sort into noun, verbs, etc. right away to save a step later. Leaving the words posted (even on a refrigerator at home) allows the children to see and think about them frequently.

Vocabulary game

This activity is designed to get children thinking of vocabulary words which will then be used as the beginning vocabulary list for a science lesson.

Select an illustration and give children a specific length of time (five minutes?) to write down all the words the children can think of about the particular subject. *If you do not have classroom sets of the book, it is helpful to project an illustration on a white board. Check Web site (www.ArbordalePublishing.com) for book “previews” that may be used for this purpose.*

Their word list should include anything and everything that comes to mind, including nouns, verbs and adjectives. At the end of the time period, have each child take turns reading a word from his/her list. If anyone else has the word, they do nothing. If however, they are the only one with the word, they should circle it. While reading the list, one person should write the word on a flashcard or large index card and post it on a bulletin board or wall.

At the end, the child with the most words circled “wins.” And you have a start to your science vocabulary list. *Note if children use an incorrect word, this is a good time to explain the proper word or the proper usage.*

Putting it all together

The following activities may be done all together or over a period of several days.

- Continue to add words to the vocabulary list as children think of them.
- Sort vocabulary words into nouns, verbs, adjectives, etc. and write what it is on the back of the card. When the cards are turned over, all you will see is “noun,” etc. *(These can then be used to create silly sentences, below)*
- Now sort the vocabulary words into more specific categories. For example, nouns can be divided into plants, animals, rocks, minerals, etc. They can be divided into living/non-living, or into habitat-related words.
- Have children create sentences using their vocabulary words. Each sentence could be written on a separate slip of paper.
- Have children (individually or in small groups) sort and put sentences into informative paragraphs or a story.
- Edit and re-write paragraphs into one informative paper or a story.

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Loon Chase

Suggested vocabulary list

<u>nouns</u>	<u>verbs</u>	<u>adjectives</u>
bird	call	black
blueberries	chase	eerie
bones	fly	hollow
call	hear	large
canoe	lift	solid
crayfish	migrate	water
dock	swim	webbed
dog		white
duck		
eggs		
feathers		
feet		
fish		
frogs		
insects		
island		
lake		
loons		
nest		
ocean		
paddle		
salamanders		
shoreline		
snails		

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Loon Chase

Sequence sentence strips

Preparation: Cut into sentence strips, laminate if desired, and place in a “center.” Have children put the events in order. Children may work alone or in small groups. Cards are in order but should be mixed up when cut apart.

-----✂-----

Early one summer morning, before breakfast, Mom and I paddled to Big Island to pick blueberries.

-----✂-----

At Big Island, I stood in the canoe picking berries while Mom held the boat steady.

-----✂-----

Sound carries a long way over water. Before we saw Miles again we heard, “*Pfuh-huh—pfuh-huh, pfuh-huh—pfuh-huh.*” The sun bounced so brightly off the lake that we had to squint to see him, out in the middle, his black head pointed straight toward three tiny specks—the loons.

-----✂-----

Mom canoed faster than ever. I started to paddle, but I got so scared Miles would catch a loon chick, that I froze-up and quit.

-----✂-----

----- ✂ -----
She turned the canoe so it crossed Miles' path, but he
swam around the boat.

The big loon rose up in the water, stretching high
above Miles' head. It flapped its wings and splashed
its webbed feet.

----- ✂ -----
Miles was turning back. He was swimming toward our
canoe!

----- ✂ -----
When Miles passed us, we could see that there was
nothing in his mouth except bubbles.

----- ✂ -----
Alone in the canoe for the first time, I wasn't scared,
just disappointed not to find the loons on the other
side of the island or in the cove.

----- ✂ -----
There they were two big loons now, and—yes—the
two chicks between them.

----- ✂ -----

The loon looked at me with its red eye and did not
move.

----- ✂ -----

One of the loons whisked through the moonlit air,
close to the surface of the lake.

----- ✂ -----

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Loon Chase

Word search

Find the hidden words. Even non-reading children can try to match letters to letters to find the words! Easy – words go up to down or left to right.

For older children, identify the coordinates of the first letter in each word (number, letter).

	A	B	C	D	E	F	G	H	I	J
1	L	O	B	L	A	N	B	U	R	T
2	A	W	L	O	O	N	I	P	A	C
3	F	E	A	T	H	E	R	S	I	H
4	T	B	C	A	L	L	D	O	L	I
5	A	O	K	S	O	A	S	L	I	C
6	N	E	S	T	O	K	O	I	D	K
7	I	W	H	I	T	E	C	D	A	S
8	M	I	G	R	A	T	E	E	D	N
9	Y	H	P	L	U	M	A	G	E	O
10	Z	O	A	M	W	I	N	G	S	W

___, ___ LOON
 ___, ___ BLACK
 ___, ___ LAKE
 ___, ___ WEB
 ___, ___ PLUMAGE

___, ___ BIRDS
 ___, ___ WHITE
 ___, ___ MIGRATE
 ___, ___ SOLID
 ___, ___ NEST

___, ___ FEATHERS
 ___, ___ CALL
 ___, ___ OCEAN
 ___, ___ WINGS
 ___, ___ CHICKS

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Science

Edible sorting and classifying activity

Gather together a cup of edible “sorting items.” For example:

- As many different kinds of M&Ms as you can find
- Chocolate & peanut butter chips
- Hershey kisses
- Peanuts or other type of nuts

Ask the child to sort the items into groups. There is no right and wrong, only what makes sense to the child. When finished, ask the child:

What criteria or attribute (color, size, ingredient, etc.) did you use to sort the items?

- Are there some items that fit more than one group or don't fit any group?
- Is it easy to sort or were there some items that were a little confusing?

If more than one person did this, did everyone sort by the same criteria? To really extend the learning, graph the attributes used to sort the items. *(blank graph below)*

Sorting by attribute graph

Graph the attributes that children used to sort their items.
What was the most common attribute (size, shape, color, etc.) used?

10					
9					
8					
7					
6					
5					
4					
3					
2					
1					
Attribute:					

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Classifying animals

Animals can be sorted too. What are some attributes you might use to sort animals?

- By habitat
- Do they have a backbone?
- Do they have arms or legs?
- How many legs do they have?
- Do they have stripes or patterns on their bodies?
- Do they walk, swim, jump, or fly?

Some things are very easy for scientists to sort or classify, other things are not so easy. The first question they will ask is whether the item is (or was) alive or not. Both plants and animals are living things.

If the item in question is an animal, like the animals in the story, scientists will then ask other questions:

- Does it have hair or fur, feathers, or dry skin or scales?
- Does it breathe oxygen from air through lungs or water through gills?
- Are the babies born alive or from eggs?
- Does the baby eat milk from its mother?
- Is it warm or cold-blooded?
- How many body parts does the animal have?

By answering these (and other) questions, scientists can sort or classify the animals into “classes” such as mammal, bird, reptile, fish, amphibian, or insect.

Birds are the only animals that have feathers. Not all birds, however, can fly.

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Animal classification chart at class level (vertebrates)

Information on the five classes of **vertebrates** (animals with backbones) is given in the table below. Using information found in the book or below, fill in the blanks for each of the animals mentioned in the book (text and the *For Creative Minds* section).

Have the children use the chart to determine to which class of animals each animal belongs (mammal, bird, fish, or reptile). The chart may also be used to complete a Venn diagram.

	Breathes oxygen from air or water	Warm or cold-blooded	Lays eggs or live birth	Hair, scales, or feathers
Mammals	Air	Warm	Mostly live	Hair
Birds	Air	Warm	Eggs	Feathers
Fish	Water	Cold	Varies	Scales
Reptiles	Air	Cold	Mostly eggs	Scales
Amphibians	Water, then air	Cold	Eggs in water to larva	Moist skin that is naked & smooth
Loons				

A day in the life of a loon

Research the loon and write a about it:

- Explain where you live (habitat).
- What do you eat?
- What animals might eat you?
- How do you protect yourself from those animals?
- Where do you sleep or rest?
- Write a paragraph about what do you do during the day (or night if nocturnal).

Bird Life Cycle

Sequence Sentence Strips for:
Christmas Eve Blizzard (2005)
Loon Chase (2006)
The Best Nest (2008)
Whistling Wings (2008)

Preparation: Cut into sentence strips, laminate if desired, and place in a "center." Have children put the events in order. Children may work alone or in small groups. Cards are in order but should be mixed up when cut apart.

----- ✂ -----

The female lays her eggs in the nest. Depending on the type of bird, she will lay between two to six eggs.

----- ✂ -----

She then sits on the nest to keep the eggs warm
(incubate) until they hatch.

----- ✂ -----

While the female is incubating the eggs, the male will guard them. If a predator gets too close, the male will make a lot of noise and fly around to try to distract the predator from the nest. He will also deliver food to the female as she sits on the nest.

----- ✂ -----

----- ✂ -----
The baby birds **hatch** out of the eggs.

----- ✂ -----
It takes a few weeks for their feathers to develop and for them to be big enough to fly but they can swim after a few hours.

----- ✂ -----
The parents provide less and less food to teach the fledglings how to find food. After a short amount of time the parent birds chase the fledglings out of the nest.

----- ✂ -----
Many birds will lay several groups of eggs (**broods**) a year. Sometimes the female lays more eggs within days of one brood leaving the nest.

Instincts

Why did Miles chase the loons? And why did the big loon fight back? A combination of instinct and experience!

- “Instinct” is the word that describes behavior an animal is born able to do. Instincts are important because they help animals feed and protect themselves so that they and their young can survive. Mammals, for example, are born with an ability to suck mother’s milk. Baby mammals need that food from their mothers to survive. Smiling is an instinctive behavior for human babies, who usually start smiling when they are six to eight weeks old. Why do you think humans are born knowing instinctively how to express happiness on their faces? What is it about smiling that might help a human baby to survive?
- All animals inherit instincts through their genes, which are codes inside cells that tell cells what to do. Chemicals in an animal’s body, called “hormones,” also affect instinctive behaviors.
- If you’ve ever watched a cat pounce on a string, chase a ball of wool, a real bird or a mouse – or a toy that looks like a mouse – you’ve witnessed the cat’s *instinct* to stalk its prey while it hunts for food.
- Dogs have instincts to bury bones, to dig and circle around before lying down and to guard a territory and defend it by barking or biting. Dogs instinctively leave scents to mark territory. Some dogs, like Miles, have very strong instincts to chase after moving objects and catch them, especially birds.
- Speaking of birds, many young birds are born knowing when and where to fly to spend the winter, far away from where they were hatched. Loon chicks are born with instincts to swim. Just hours after they climb free of their eggshells, they move from their nest to the water and start swimming, without being taught.
- Miles chased the loon because of his instinct to go after birds. The loon fought back out of its instinct to protect itself and its chicks.
- But the behavior of dogs, loons, people and most other animals combines “instinct” with “learned” experiences. Adult loons, for example, have no natural predators. That is, there are no animals that attack adult loons to try to eat them. However, there are plenty of natural predators for loon eggs and loon chicks. Mink and raccoon may try to steal loon eggs; a large fish or snapping turtle, or a swooping eagle, can pull a swimming chick from the surface of the water. So adult loons are likely to have to fight off other animals to protect their eggs and chicks. The adult loon could combine its instincts with those experiences when it met Miles on the lake.

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Science journal

Have children draw a picture to define the vocabulary word or concept

Bird (animal classification)

feathers

Webbed feet

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wingspan

migration

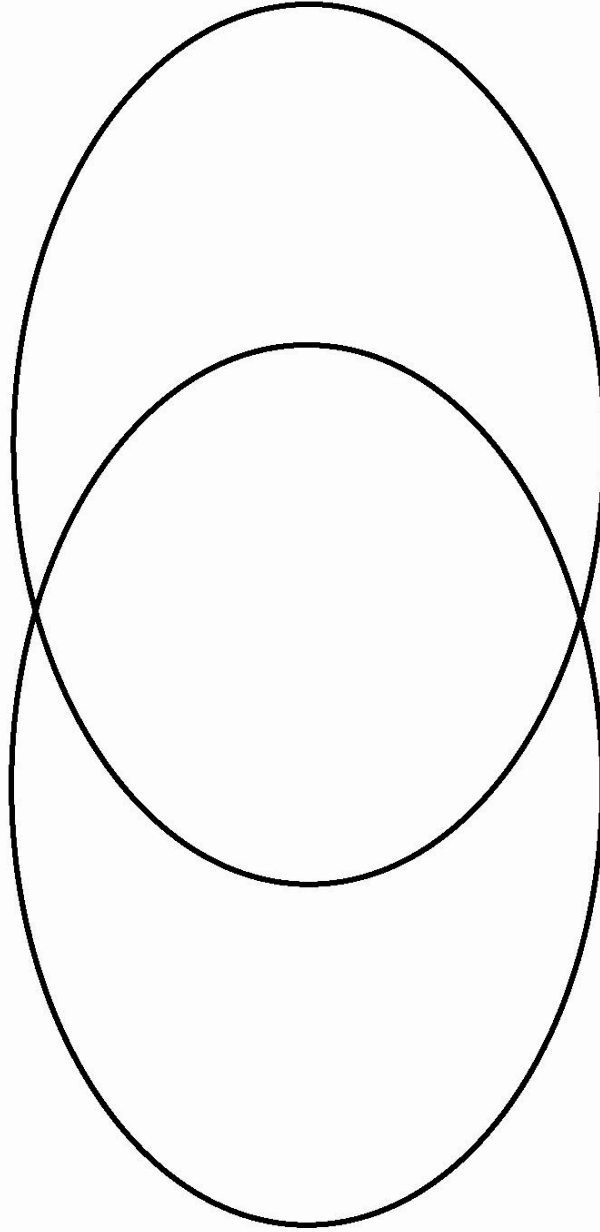
instinct

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Venn diagram

Birds versus Mammals

- breathe air
- hair or fur
- warm-blooded
- most are born alive
- feathers
- hatch from eggs
- eat milk from mother



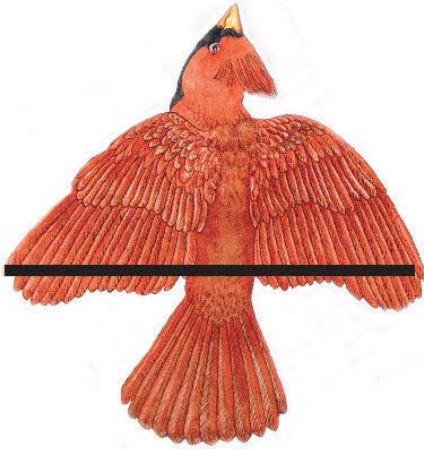
Mammals

Common

Birds

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Math



Cardinal Wing Span
10 to 12 inches



Loon Wing Span
58 inches

Measuring (comparing and contrasting)

Animals come in all shapes and sizes. Some animals are so small, they can only be seen with a microscope. Other animals are so big that they are the size of a school bus when they are born!

Comparing and contrasting by size and weight

It is easy to say that a loon's wingspan is 58 inches, but what does that really mean?

What standard measuring tool would you use to measure something in:

- Inches or centimeters
- Feet or meters
- Pounds or kilograms

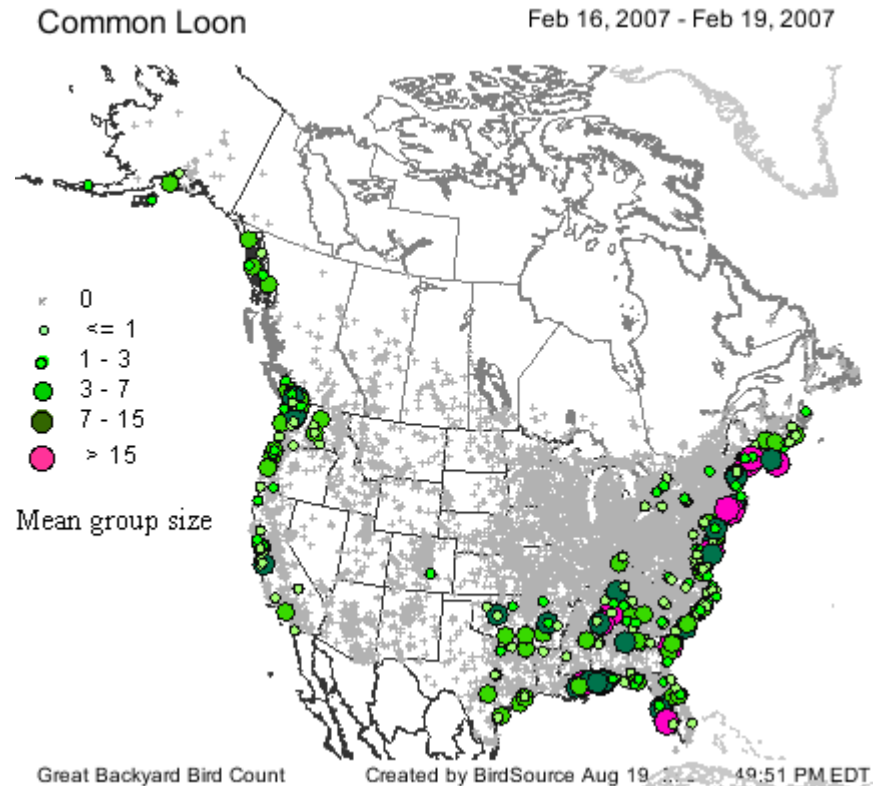
Try to imagine how big or small the animal is compared to something you know:

- Using the right measuring tool (yard stick or measuring tape) and chalk, mark off how big 58 inches is on the playground, sidewalk, or driveway. *How many feet is that?*
- If you were to lie down on or next to the line, how many times would you have to lie down in order to equal the size of the loon's wingspan.
- If someone shorter or taller than you did it, how many times do they have to lie down?

Math Activity: Take A Bird Census

- In the summer, when common loons are easiest to see because they are living on lakes, volunteers take a loon '*census*.' Taking a '*census*' means counting how many loons are alive in a certain area at a particular time.
- All over the world, people count wildlife populations. The number of healthy birds and other animals is one way to tell how clean our environment is – or isn't.
- Try taking a mini bird census of your own. You can do this outside anywhere, anytime. Here are some suggestions: Spend five to fifteen minutes outside counting the number of birds you see. You can count the type of bird, or the total number of birds you observe. Be careful not to count the same bird twice!
- If possible, count three different times in one day. Or count once a day, for three days, always at the same hour and for the same number of minutes. Also remember to watch from the same place each time.
- Each time you look for birds, write down the time of day, the weather, and your numbers on a piece of paper. If you make enough observations, say, three times a day for a week, you may find a pattern. What is it? Did the weather affect the number of birds you saw? Did you see more birds at certain times of day? If you paid attention to the type of bird, which kind did you see in the greatest numbers?
- A couple of extra tips: A good time to look is in the early morning, at sunrise, when birds are especially active. It may be easier to see birds if you stand or sit with your back to the sun.
- About the Loon Census: In some states, a loon census is taken each summer. Other states take a census every five years. Volunteers observe loons at many lakes on the same day at the same time. They record the number of adults, young loons and chicks. When the results are added together, wildlife biologists get a better idea of whether the number of loons is going up or going down. While it is impossible to be sure that volunteers have counted the exact number of loons in the United States, the results of the census are good enough to help scientists understand if enough loons are being born and growing up to keep the loon population stable. This helps people know if new conservation efforts need to be started to further protect loons. For information about how you and your family can volunteer to help with a loon census, check the websites of the loon organizations mentioned in these pages.

- If you are interested in participating in a national bird census, you and your family or class can volunteer for the Great Backyard Bird Count, co-sponsored each year by the Audubon Society and the Cornell Lab of Ornithology. All over the United States, people count birds on the same four days, for one day or all four days. Their results are put together on a large map. For information about how to help with the Great Backyard Bird Count, go to: <http://www.birdsource.org/gbbc/>



Using the information from the Great Backyard Bird Count for Loons spotted in North America between February 16 and February 19, 2007, answer the following questions:

What color dot represents the most loons seen in an area?
 How many loons were seen in a group for that color dot?

2007 Results: Common Loon (*Gavia immer*) from Great Backyard Bird Count: next page

Click on the state for a list of where loons were seen. Then click on the location to see all the birds spotted during the observation period.

- Which state or Canadian province reported seeing the most loons during the census period?
- Which state or province reported seeing the least loons?
- Pick two states and figure out the difference in the number of loons seen.
- What do the numbers tell you about where the loons were during the time period?

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2007 Great Backyard Bird Count Common Loon

<u>State/Province</u>	<u>Number of Birds</u>	<u>Number of Checklists Reporting the Species</u>
<u>Alabama</u>	275	27
<u>Alaska</u>	132	35
<u>Arkansas</u>	21	5
<u>British Columbia</u>	75	21
<u>California</u>	47	21
<u>Colorado</u>	3	1
<u>Connecticut</u>	19	3
<u>Delaware</u>	26	5
<u>Florida</u>	177	60
<u>Georgia</u>	51	17
<u>Indiana</u>	4	1
<u>Kentucky</u>	15	2
<u>Louisiana</u>	22	7
<u>Maine</u>	200	47
<u>Maryland</u>	66	19
<u>Massachusetts</u>	26	13
<u>Mississippi</u>	71	9
<u>New Brunswick</u>	5	1
<u>New Hampshire</u>	3	2
<u>New Jersey</u>	86	21
<u>New York</u>	172	25
<u>North Carolina</u>	49	26
<u>Nova Scotia</u>	118	22
<u>Ohio</u>	1	1
<u>Oklahoma</u>	25	6
<u>Ontario</u>	6	4
<u>Oregon</u>	65	21
<u>Pennsylvania</u>	1	1
<u>Rhode Island</u>	42	6
<u>South Carolina</u>	157	23
<u>Tennessee</u>	92	11
<u>Texas</u>	87	28
<u>Vermont</u>	4	2
<u>Virginia</u>	74	37
<u>Washington</u>	168	56
Total	2,385	

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Research and geography

Create a color code for the number of loons seen during the observation period.

- _____ 1 to 25
- _____ 26 to 50
- _____ 51 to 75
- _____ 76 to 100
- _____ over 101

Using your color code and the information from the Great Backyard Bird Count on the previous page, color the state to show how many loons were seen.

Circle the state in which you live. How many, if any, loons were seen in your state?



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Follow Loons As They Fly

Migrate means, 'to move from one place to another.' Every spring loons fly from their winter ocean homes to their summer lake homes where they nest and raise their chicks. Their plumage takes on its distinctive black and white pattern. When fall comes, the loons *migrate* back to the ocean. Their feathers turn gray-brown. In North America, some loons spend the winter along the Atlantic Coast, from Maine to the Gulf of Mexico, and some loons live along the Pacific Coast, from Alaska to Mexico. Loons also live in Northern Europe; in England, the Common Loon has a different name. It is called the Great Northern Diver.

You can see where loons spent the summer, the path they flew to their winter homes, and back to their summer lakes. In recent years, scientists working with the U.S. Geological Survey have attached satellite transmitters to some common loons in Wisconsin, Minnesota, Maine and New Hampshire to learn more about their movements. The transmitters send signals to the satellite, and the satellite sends the signals back to the scientists. Then the scientists make maps to show the flight path of the loons. Knowing more about when and where loons migrate can help governments make decisions about the best ways to protect loons now and in the future.



Map from USGS Upper Midwest Environmental Sciences Center.

- Click on the map or the link below to go to the interactive website to see the migratory past of several common loons.
http://www.umesc.usgs.gov/terrestrial/migratory_birds/loons/migrations.html
- Find where you live on the above map.
- Do loons spend time in your area? If so, when: summer or winter?
- Do they have to fly over your area as they migrate?
- How does this map compare to the Great Backyard Bird Count map on the previous page?

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Character

According to Character Counts (<http://www.charactercounts.org/defsix.htm>), one of the six pillars of character is:

Citizenship

- Do your share to make your school and community a better place
- Cooperate with others
- Get involved in community affairs
- Stay informed; vote
- Be a good neighbor
- Obey laws and rules
- Respect authority
- Protect the environment

Was boy being a good citizen? How?

What could he have done to better protect the loons?

Do you think he cared about the loons? Why or why not?

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