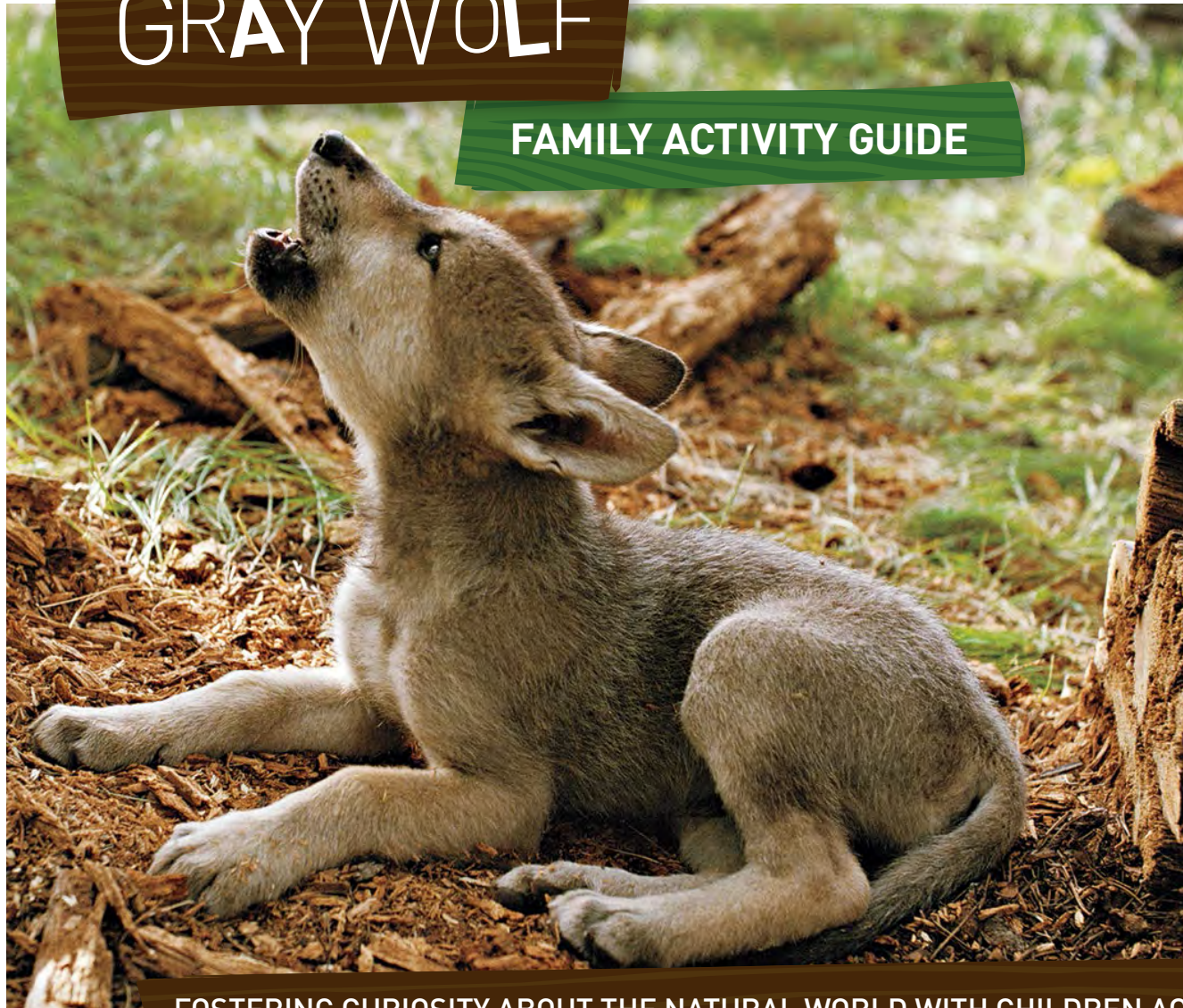


GRAY WOLF

FAMILY ACTIVITY GUIDE



Photograph by Jim and Jamie Dutcher

FOSTERING CURIOSITY ABOUT THE NATURAL WORLD WITH CHILDREN AGES 4-10

Introduction.....	3
Background Information on Wolves.....	3
How to Use This Guide.....	4
Setting Up for Family Fun!.....	5
Reading & Listening.....	6
Writing & Performing	7
Arts & Crafts	9
Games & Play.....	11
Taking Action.....	17
Explore More.....	18
Appendix	20
Wolf Mask	20
Coloring Page	21
Family Crossword Puzzle.....	22
Matching Cards	23



Published by The National Geographic Society

Gary E. Knell, President and CEO

John M. Fahey, Jr., Chairman

Melina Bellows, Chief Education Officer

Created by National Geographic Education

© 2014 National Geographic Society

This family guide is a collaboration of these organizations:



Visit www.NatGeoEd.org/wolves to find more wolf content.

For more information:

The National Geographic Society

1145 17th Street NW

Washington, D.C. 20036

NatGeoEd.org

ABOUT THE DUTCHERS

National Geographic is collaborating with wildlife filmmakers Jim and Jamie Dutcher to bring educational content about wolves to learners of all ages. For 25 years—including six years living in a tented camp on the edge of Idaho’s Sawtooth Wilderness—the Dutchers have focused on the study and documentation of wolf behavior, intimately observing the social and family-oriented lives and behavior of the now famous Sawtooth Pack. As two of America’s most knowledgeable experts on wolves, they are devoted to the betterment and understanding of this keystone species. The Dutchers are the founders of Living with Wolves, a nonprofit organization dedicated to raising broad public awareness about wolves, their social nature, their importance to healthy ecosystems, and the threats to their survival.

For more information:

Living with Wolves

P.O. Box 896

Sun Valley, ID 83353

LivingWithWolves.org

INTRODUCTION

For centuries, wolves have haunted the human imagination. It once was accepted as truth that they were savage predators and creatures of nightmares. Determined to overcome such misconceptions, Jim and Jamie Dutcher lived in a tented camp on the edge of Idaho's wilderness, living with and filming a pack of wolves. By socializing with the pack from the time they were pups, the Dutchers were able to gain the wolves' trust and observe their behavior in a way that few people ever have. What they witnessed, during six years with the Sawtooth Pack, was remarkable: a complex animal oriented toward family life and with strong social bonds.

This guide from National Geographic celebrates the Dutchers' unique experiences with an immersive, hands-on adventure into the lives of wolves, designed to be shared by the entire family. Children are typically drawn to and curious about animals, especially animals that are outside their personal experiences but familiar enough that they have some background knowledge. The activities in this guide are designed to increase children's understanding of this engaging topic and ignite their curiosity about the natural world.

Our hope is that this guide offers fun and engaging activities for your family and increases your understanding of the richness of nature. The guide provides additional emphasis on nature's importance to the well-being of all citizens of planet Earth, as well as our responsibility to become active participants in environmental stewardship and conservation.

BACKGROUND INFORMATION ON WOLVES

Today, the North American gray wolf (*Canis lupus*) ranges across the Northern Rockies, the Pacific Northwest, and the Western Great Lakes region and from the U.S./Canadian border into the Arctic (including Alaska and Greenland). The critically endangered Mexican wolf lives in a small region along the Arizona-New Mexico border, with very few Mexican wolves struggling to survive in Mexico. Many scientists divide North American gray wolves into four to six subspecies (e.g., Great Plains or Timber Wolf, Rocky Mountain Wolf). However, the subspecies vary more by geographic range rather than physical characteristics. Gray wolves around the world share similar characteristics.

An average-size North American male gray wolf might weigh 31-59 kilograms (70-130 pounds), stand 66-91 centimeters (26 to 36 inches) at the shoulders, and stretch 1.5-1.8 meters (5-6 feet) from the nose to the tip of the tail. Females are about 20 percent smaller. A large wolf might weigh 54.5 kilograms (120 pounds) and stretch 2 meters (6.5 feet)—larger than a full-grown German shepherd, which weighs less than 40 kilograms (90 pounds)!

The social hierarchy of a wolf pack is similar to that of a family unit, with parents (founding pack members also known as alphas) making decisions like who eats first and who gets more food. Wolves communicate in a complex mix of vocal and physical communications to express their needs. For example, a pup may solicit adults for regurgitated food by licking their muzzles. When feeding on a carcass, the alpha



Photograph by Jim and Jamie Dutcher



Photograph by Jim and Jamie Dutcher

male and female may growl at other pack members to keep them away until they are finished eating. Humans often interpret this language as being vicious, but it is simply one of the ways wolves communicate.

A wolf pack is an exceedingly complex social unit—an extended family of parents, siblings, aunts, uncles, and sometimes dispersers (“lone wolves”) from other packs. Wolf families can include old wolves that need to be cared for, pups that need to be educated, and young adults that are beginning to assert themselves—all altering the dynamics of the pack.

The job of maintaining order and cohesion in the pack falls largely to the parents or breeding pair, also known as the alphas. The alphas bear the responsibility for the welfare of the entire pack. One of the two will act as its decision maker and alert others to signs of danger. The alpha female is the dominant female of the pack. Often there is a beta wolf, second in rank. Betas may serve as peacemaker and puppy-sitters or guardians.



Photograph by Jim and Jamie Dutcher

HOW TO USE THIS GUIDE

As you work your way through this guide, you will see that the activities are part of a family camping trip theme. However, the camping trip we have in mind is a little bit different from the norm . . . You won't need to leave your house! With activities for your yard or living room and a few more that take you out into your neighborhood, this guide helps you create a family fun adventure filled with storytelling and shared reading, writing and performing, crafts, and hands-on learning—everything you need to bring your whole family together in a quest to learn about the gray wolf of North America.

This activity guide is designed to get the whole family involved. The activities are grouped in different ways to make them easier for you to explore and select things to make your camping adventure one-of-a-kind.

First, they are divided by activity type:



Reading & Listening The activities begin with read alouds and original storytelling activities related to wolves, allowing family members and children to take turns sharing stories “around the campfire.”



Writing & Performing From rewriting classic fairy tales to putting on skits, everyone in the family will take a turn at performing for their family audience.



Arts & Crafts Puppets, masks, simple coloring activities, and building props for skits . . . Wolves lend themselves to all kinds of creative expression.



Games & Play This section includes large and small group games, mapping activities, and races. Select games that are as simple or complex as you'd like.



Taking Action An adventure about wolves wouldn't be complete without exploring the plight of this species that was almost extinguished in the 20th century in the continental United States. Here we provide suggestions for discussion and ways for your family to get involved in efforts to become active participants in environmental stewardship and conservation.

MATERIALS TO GATHER BEFORE CAMPING



Read through all the activities in this guide and gather the materials for the ones you have selected for your family adventure.

Camping Needs

- Materials to create a campfire (indoor or outdoor)
- Blankets or sleeping bags
- Battery-powered flashlights or lanterns
- Moist towelettes
- Paper plates and cups



References and Resources

- Books (See the booklist on page 18. Be sure to have lots of storybooks on hand.)
- Items that should be downloaded or copied before the trip begins (see activity ideas throughout this guide)
- Wolf images (located in books, printed from the Internet, or displayed on a laptop or tablet)

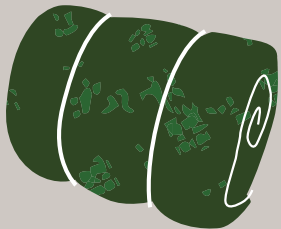
Craft Supplies

- Paper: lined, blank, and construction paper
- Coloring materials (e.g., crayons, markers, colored pencils, paint, chalk)
- Scissors (regular and safety)
- Pencils or pens
- Craft items like feathers, felt, yarn, buttons, and other items to embellish puppets and other crafts



Miscellaneous

- Balls, flying discs like Frisbees, and other outdoor game supplies
- Don't forget snacks and drinks!



In addition, each group of activities has items that are identified by age range. Although we strongly suggest that the entire family join in for every activity, no matter the recommended age (the family that plays together stays together, after all!), if you don't have children of a certain age range listed in the guide you may want to skip activities designed especially for that group. There is something here for everyone from ages four to ten, as well as older siblings, parents, and caregivers. The idea is to have fun together, playing and learning along the way.



SETTING UP FOR FAMILY FUN!



This family fun adventure is designed around a camping trip, but one where you don't have to leave home (unless you want to). Pitch a tent in the backyard (turn off any sprinklers!) or set up some sleeping bags in the basement or living room, and you're ready. Here are some additional ideas for creating a camping "stay-cation":

Outdoor Camping Setup


Pitch a tent in your backyard and set it up as if you were away from home. Try to remember everything you would take on a trip so that you limit the trips back into the house (other than bathroom breaks). Avoid using electricity to keep the camping experience realistic, but be sure to take along a laptop computer or tablet with a wireless connection so that you have access to the images and information found at NatGeoEd.org/wolves during activities.

Indoor Camping Setup

You don't need a real tent for indoor camping; just throw a large blanket over some high-back chairs or card tables, holding down the edges with heavy books or cans from the pantry. Fill your tent with pillows, blankets, sleeping bags, and flashlights or camping lanterns. Create a "campfire" with paper towel rolls for logs and tissue-paper flames, or group together 5–7 jar candles on a metal tray on the floor. Add a circle of rocks and you've got a fire! (A candle fire has the added benefit of allowing you to roast marshmallows during snack time!) You can also hang paper stars and a moon from the ceiling, and look online for a free audio file of outdoor sounds (e.g., crickets, hooting owls, gurgling streams, a crackling campfire) and play it for ambient background noise.


READING & LISTENING

FACT



Throughout history, wolves have often been portrayed as the stuff of nightmares—bloodthirsty killers of people, livestock, and anything living that gets in their way. Stories are filled with tales of the “big bad wolf,” and many children have become convinced of these same ideas. But in reality, wolves are simply animals trying to survive in their environments, just like every other animal (including humans) on the planet.

FUN!



Teaching the true nature of wolves can be as simple as changing the types of stories you tell. The activities in this section will help give your family a glimpse into the world of the wolf through stories and songs.



FUN FOR ALL AGES

Tales Around the Campfire: Reading

Using a selection of stories that celebrate rather than villainize the wolf, take turns reading and discussing the stories or chapters you share. See the book list in the Explore More section of this guide for ideas. In addition:

- Get your youngest children involved by asking questions about the pictures in the stories they see as you read aloud.
- Have young children create their own book retelling the story with pictures.
- Children reading longer books or novels may want to share a single scene or chapter with the family.
- The nonfiction books in the list contain factual information with nice illustrations that you can share to help frame a craft or game found in other sections of this guide.
- Don't forget the importance of silent reading. A quiet time before bed is a great time to model the importance of reading independently for fun.

Tales Around the Campfire: Singing

- Rewrite popular children's songs. It's always fun (and educational) to take a known song and change the lyrics. Work together as a family to create songs celebrating the family life, pack, and plight of the gray wolf. Remember to make the new version a POSITIVE song about wolves. What follows is a short list of children's songs that lend themselves to rewriting, but you can rewrite any song your kids know and like.
 - » Who's Afraid of the Big, Bad Wolf?
 - » Bingo (the clapping song)
 - » Itsy Bitsy Spider
 - » Baby Bumblebee
- Write and sing an original song of any genre (e.g., a folk song, a rap, or a round). Work with children to come up with a song about wolves that is both factual and positive.

FACT

The order within the wolf pack hierarchy is reinforced by displays of dominance and submission in a complex language made up of different forms of communication. Vocalizations, such as growls, barks, whines, yips, and whimpers are equally as important as the non-vocal body language of baring teeth in a warning of pending aggression, or the tucking of the tail in submission.



Photograph by Jim and Jamie Dutcher

Playfully rubbing shoulders, exchanging a brief lick, or soliciting play with a bow are all ways in which wolves communicate non-vocally. Whines and whimpers indicate friendly interaction but also show frustration or anxiety. Growls and snarls are threatening or defensive. Barking is rare, and is

usually used as an alarm signal. Howls seem to be about togetherness, whether the wolves are gathering for a hunt, finished feeding, mourning a lost pack mate, or announcing territorial or mating intentions. Wolves also howl to express excitement and joy.

FUN!

When children engage in role playing, it helps them develop awareness of their thinking and learning processes and also helps them develop feelings of empathy—an important social and emotional skill, especially when considering the misunderstood wolf. Working as a family to develop stories with a performance component will also give children the opportunity to negotiate roles and strengthen cooperative group skills. The interactive stories they create offer an experiential view of life in a wolf pack!

FUN FOR ALL AGES

Tales Around the Campfire: Storytelling

• **Stories with Pictures** Storytelling is easy when you have a good image to jumpstart ideas. On page 8 are two photographs and captions from Jim and Jamie Dutcher's book *The Hidden Life of Wolves*. Using these photographs and other ideas, take turns telling stories that explore the lives of wolves in a pack.

- » *For parents or older children:* Silently read the caption below one photograph. Use that description to tell a story, making up names for the wolves to add personality to the tale. What are the wolves doing, and why? Can you make the story funny? Sad? What information about wolves can you include in an entertaining way?
- » *Including younger children:* Begin another story in the same way as above, but include younger children as your "co-writer," adapting their contributions according to their abilities. Have them insert their ideas into your story as you tell it. (Example: "These are wolves in the [family last name] pack. What is this wolf's name? Right! His job is to tell the other wolves what to do. What does he want them to do?" Now look at this wolf with his ears flattened . . . His name is _____. He feels . . ." and so on.)
- » *No captions:* Once you've used captions as story springboards, try using images without captions to tell stories. Look through the books you gathered, or, if you have access to the Internet during your camping adventure, visit the photo gallery at NatGeoEd.org/wolves. Invite children to select an image and tell a short story about wolves.

• **Round Robin Stories** Tell a story in which the whole family is involved. One parent/caregiver or older child begins a story about a wolf by telling the opening sentence. (You might want to create a set of cards listing story ideas before beginning this activity. See below.) The person sitting next to him or her around the campfire then adds another line, and so on, until the story ends or it gets to another adult who can then bring it to a conclusion. The following are example story ideas:

- » The wolf's howl
- » The lost pup
- » The pup's first hunt

DID YOU KNOW?

Each wolf has a unique howl. Howling is one of many ways wolves communicate with one another.

Tales Around the Campfire: Performing

Using masks or puppets (see Arts & Crafts), role-play life in the pack.

- **“Acting” the Story** Add a performance aspect to your reading time by stopping to act out a scene from a story. Make sure everyone in the family who wants to has a chance to get involved.
- **Role-Playing** Pretend-play a wolf family, while using the vocabulary of wolves as explained in the Fact section on page 7. Let the younger children play alphas, while older children and parents/caregivers take on the roles of beta, mid-ranking, omega, or wolf pups. Ask children if the alpha is being mean to the omega or the pups, and talk about how wolf families are the same as and different from human families.
- **Charades** Play charades, with two family members portraying through their actions one or more wolves interacting. The rest of the family tries to identify whether they are seeing wolf parent/pup interactions or the alpha, beta, or omega interacting with mid-ranking wolves. If you have a large enough family, turn this into a traditional game with two teams competing.

Tales Around the Campfire: Writing

Before “lights out,” take some time for creative writing as a family. A good way to frame this family writing time is to create your own family Wolf Book. Provide family members with loose sheets of paper (lined or unlined) that you can later bind together into a story collection on your wolf theme. Some suggestions for different ages include:

- **Younger children:** Using unlined paper, help very young children create picture stories:
 - » Use an ABC format to brainstorm words related to a wolf’s basic needs for as many letters of the alphabet as you can cover during the adventure (e.g., A is for alpha, P is for paws).
 - » Or create an “animal family” page, with pictures of wolf pups with their parents.
 - » You can also provide coloring pages (see ideas in the Arts & Crafts section) to allow younger children to act as your book’s illustrators.
- **Older children:** Children as young as seven should have a lot of practice writing stories in school, so you can make this activity as open or structured as fits your child’s interests and ability. You can use the pictures or story prompts from the storytelling section and have children work together on stories, or simply ask them to write whatever they’d like to add to the family book.
- **Parents/caregivers and teens:** Keep a journal of your family’s camping adventure to add to the book. Record funny or memorable things that happened during your time together. Keep a camera on hand to take pictures to add to the book.

Set some time aside during campfire reading time to share these stories and pictures with the whole family.



Photograph by Jim and Jamie Dutcher

THE ADULT wolves knew when their howl was over, but young, enthusiastic pups often did not. Caught up in the excitement, they would often let out a final “ooo” before realizing the song was over.



Photograph by Jim and Jamie Dutcher

GROUP HOWLS were risky times for Lakota, here in the center. He always kept his tail tucked, his shoulders hunched, and his head lowered as he tried to make himself as inconspicuous as possible.



ARTS & CRAFTS



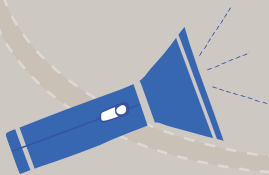
FACT

Gray wolves come in all shades of gray, tan, brown, rusty red, cream, solid black, and white. Arctic gray wolves tend to be creamy white. Wolves roam over large territories and are built for distance running. Their chest is narrow, which makes forging through snow easier. Their legs are long and closely set together at the front, so that the rear paws follow the front paws in the same track. Their paws are large, almost the size of an adult human hand, which allows for easier travel across snow and other terrain. As befits dominant carnivores, wolves have large teeth and jaws with an exceptionally powerful bite force of 1,500 pounds per square inch, capable of crushing the thighbone of a moose.

FUN!

In this section, we've gathered some crafting activities that will help your family get to know the wolf's physical characteristics.

Although they have been grouped by specific age ranges, many of them can be adapted for children of all ages. As with all activities, parents or caregivers and older siblings should join in and create along with the younger members of the family. Be sure to read through the activities and gather materials and complete any preparations beforehand.



FUN FOR ALL AGES

Wolf Masks and Puppets

The Writing & Performing section of this guide includes ideas for performing role-plays with puppets or masks, and making the masks and puppets can be just as fun and informative as the play itself. Puppets and masks can be made out of almost any material. Scraps of paper, bits of fabric (or old clothes), paper plates, old socks, craft sticks, plastic knives, even empty plastic bottles all can be used to craft your own puppets or masks for role-playing games. Here is an easy mask- or puppet-making activity:



Photograph by Jim and Jamie Dutcher

- Before you begin your camping trip, duplicate the wolf's head mask on page 20 for each family member. You might want to paste the image onto cardstock before cutting it out to make it sturdier.
- During the camping craft activity, provide lots of craft materials for coloring and adding embellishments. Give your family's creativity free rein!
- Add a craft stick to make a handheld mask or puppet, glue the mask to a paper bag (use a grocery-sized bag to make it a large puppet or mask), or attach an elastic band to the tabs on each side of the mask to hold it onto the face.
- When making masks, don't forget to cut out large eye-holes to avoid restricting vision. Just remember, this family adventure is about learning to appreciate wolves, so no "big, bad wolf" puppets or masks, please!

Wolf Bookmarks

You can make these personalized bookmarks as simple or sophisticated as you like.

- **Standard bookmarks:** Start with a basic bookmark design from construction paper or felt. Add a wolf illustration and embellishments like feathers, tissue paper, or sequins. Punch a hole in the top and add a yarn tail if you like.

- **String bookmarks:** Begin with a length of string about 6 inches longer than the book. Then add a wolf talisman made from clay or cardboard (or a wolf charm if you have one) and some beads tied to each end to anchor the mark in place.
- **Trivia bookmarks:** Older children can fill the backs of their bookmarks with fun facts or wolf trivia they've learned during the family adventure.

Use your bookmarks in the books everyone shares for campfire reading time.

ESPECIALLY FOR KIDS AGES 3–6

Coloring Pages

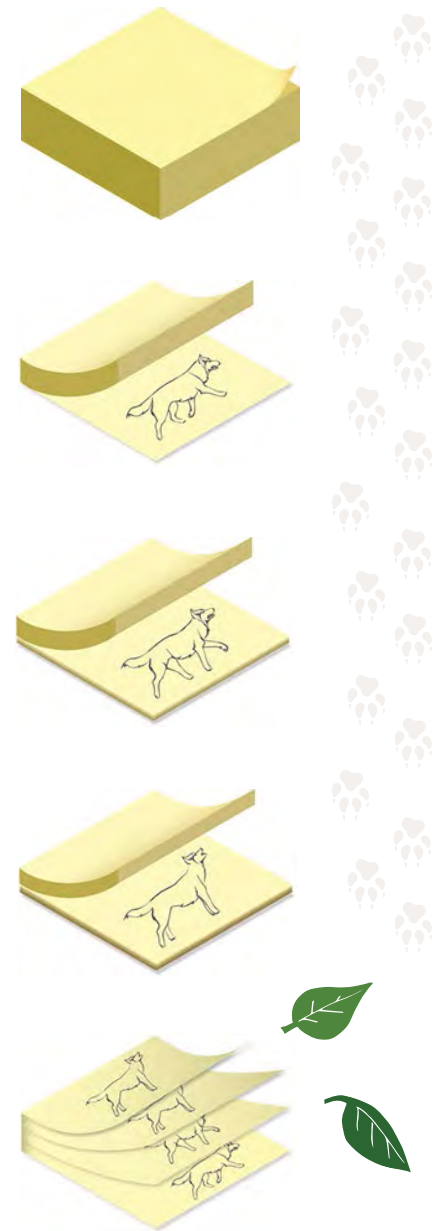
Check out the coloring page at the end of this guide for images that help you explore the physical traits of wolves. It includes three images: a full body, a head, and a paw. Duplicate copies of the page before you begin your camping trip. Use photos and discussion to review some of the variations in wolves' fur colors. Ask each member of the family to design a different-looking wolf. Talk about the size and shape of the wolf's paw and compare it to both dogs and humans.

ESPECIALLY FOR KIDS AGES 7–10

Flip Books

Making flip books is a fun way to show animals in motion. Examine photographs of wolves running or playing together (like some of the images scattered throughout this guide). Then create a flip book that shows that motion. You will need a 3" x 3" pad of sticky notes, as well as a pencil and some coloring materials (markers or colored pencils). Decide what you want to draw . . . a wolf running, a wolf rolling in the grass, two wolves playing . . .

- Think of the LAST thing you would see in the action you're drawing. Will it be the wolf coming to a stop with snow flying away from its paws? Lying on its back with its feet in the air? Go to the last page of your sticky note pad and draw that final image. (Be careful not to separate the sheets of the pad because doing so will make it harder to display the action when you're finished.)
- Go to the next sheet—the next to the bottom sheet—and draw the wolf's action one step before that final one. Perhaps the wolf's paws are just about to land, still slightly above the ground.
- Repeat this process until you end up with a series of drawings that illustrate the wolf's actions. (Note to families: How much the movement changes from page to page depends on the ability and interest of your child.) Be sure you plan the movements according to the number of pages available in the pad. It's okay to leave some blank. Just peel off any pages that aren't needed.
- Now, hold the pad by the sticky side and flip the pages from front to back and watch your wolf in action!





GAMES & PLAY

FACT

Our domesticated dogs evolved from early wolves. Dogs and wolves use much of the same body language to communicate with their families. Here are some ways to tell what a dog is “saying”:

- Wagging tail, lowered chest, and a rump in the air means “Let’s play!”
- Bared teeth and tense body means “Back off!”
- Licks are unthreatening, happy greetings that mean “I’m happy to see you.”
- Ears up, tail upright, and chest held high means “Let’s go!”



Photograph by Jim and Jamie Dutcher

FUN!

Learning through play is an important part in any child’s growth, and this section is filled with ideas for adding hands-on, competitive, and cooperative learning games to your experiences. Some require you to prepare materials ahead of time, so be sure to read through the activities and plan ahead for the ones you’ve selected.

FUN FOR ALL AGES

Family Board Games

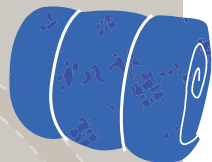
Board games have long been a source of family fun, and there are many available that will fit in your camping adventure. The following games can be played with children ages five and older.

- **Junior Alpha Animals**, by Green Board Games. Players advance around the board, naming animals in a certain category determined by the roll of a dice (air, land, or sea). The challenge is that the animal has to start with the letter of the square the player is on. For extra fun, players have to act like certain animals throughout the game.
- **Hedbanz**, by Spin Master Games. Each player draws an identity card for an animal, food, or common object but with one catch—everyone but you will see the card, displayed in the headband on your forehead. The goal is to figure out who or what you are by asking the other players questions before the clock runs out. (For your camping adventure you may want to select only from the animal cards or tape appropriate nouns to some of the other cards, like alpha, omega, beta, and pup.)
- **Amazing Animal Trivia Game**, by iPlay. Be the first to race around the board and collect sets of cards with trivia about animals. Game pieces include a gray wolf.
- **Linkology**, by Learning Resources. This fast-paced card game also builds content vocabulary and classification skills. Match photo or illustration cards with appropriate fact-based word cards to create connections. Decks include 100 picture and word cards.

Wolf Pack Tag

This outdoor game will help you explore the concept of the wolf pack. While playing, you will learn about the social structure of the pack (e.g., how packs form, pack member hierarchy) and also some basic terms. NOTE: You will need at least four groups for this game. If your family is small, consider inviting other families or some friends to join in the fun.

- Divide into at least four small “packs” of two or more, but choose one person to serve outside the packs as game leader. This person will explain the background and rules of play and also take on the role of the first “it” to begin the game.
 - » **Step 1—The leader introduces the game:** Describe the nature and hierarchy of a wolf pack (cover terms like *alpha* or *leader*, *father* and *mother*, *aunts* and *uncles*, *offspring*, *siblings*, *pups*, and so on). Packs are formed by two wolves breeding and becoming the parents of the pack or family. Explain that, just like in human families, sometimes a member of a wolf family will want to leave the



pack. Wolves who leave their pack and head out on their own for whatever reason are called *dispersers*. Stress the fact that these so-called “lone wolves” may wander alone for a time, but wolves don’t want to be alone, so they are constantly looking for a new pack to join or to create a new one by finding a mate.

- » **Step 2—The leader explains the rules of play:** One person (the game leader first) becomes “it,” and will try to catch a dispersing wolf. Each group of players is part of a pack, but none are alphas—all have the potential to want to disperse at some point.
- » **Step 3—Game setup:** Wolf packs should stand a considerable distance from one another, loosely grouped around a center area. The person playing “it” takes a position in the center of the circle.
 - If a disperser is tagged, the person playing “it” joins a pack, and the tagged person becomes “it.”
 - If a disperser manages to disperse to a new pack, someone from that group will need to run to another group—keeping the number of individuals the same in each pack.
- » Continue the play as long as you like, and then review what was learned in the game using the following prompts:
 - Was our game true to life?
 - What is a disperser? Why do you think dispersers would want to leave their pack? *(A wolf might leave the pack to find a mate, since the pack is made up of relatives and wolves don’t mate with family members, or to join another pack.)*
 - What are the risks of being a disperser? *(A disperser is alone, and therefore faces dangers of starvation and even loneliness.)*



Photograph by Jim and Jamie Dutcher

Did You Know?

Because wolves are misunderstood, they are often feared in many places and have been hunted almost to extinction.

A FAMILY CROSSWORD PUZZLE ABOUT WOLVES

A fun way to review what you've learned about wolves is to complete a puzzle together. This is a family-style crossword puzzle, meaning that there are two types of clues: those written for children (marked with the letter "K") and those written for parents, caregivers, or teen siblings. The facts are taken from all sections of this guide.

- Turn to the blank crossword puzzle on page 22.
- Take turns reading a clue for each group, filling in the puzzle in the traditional way. Look for the letter "K" written in front of kid-friendly clues.
- Assist young children in using the letter clues as the puzzle gets filled in to solve some of the trickier items, and help them with spelling as needed.



Photograph by Jim and Jamie Dutcher

For Kids

TERM	CLUE
LONE WOLF	(K) A wolf that leaves the pack to start a new family
PUP	(K) A baby wolf
CARNIVORE	(K) An animal that eats mostly meat
ALPHA	(K) A leader of a wolf pack
ENDANGERED	(K) Threatened with extinction
PREDATOR	(K) An animal that hunts and eats other animals
PREY	(K) An animal that is hunted and eaten by other animals
MIGRATION	(K) The movement of an animal group from one place to another
HABITAT	(K) A place that includes all the basic needs for an organism to make its home
RANGE	(K) The area where a particular species can be found



For Adults/Teens

TERM	CLUE
DISPERSER	A wolf that has chosen or been forced to leave his or her pack, with no social territory, often living on the fringes of established packs and seeking a partner or new pack
OMEGA	The lowest ranking wolf, often having to beg food and always losing fights
BETA	The wolf that is second in command
VOCALIZATIONS	The whines, yips, and howls that a wolf uses to communicate
DOMINANCE	A display to assert social standing over another wolf
SUBMISSION	Giving in to the will of another, more socially-dominant wolf
BIODIVERSITY	The variety of plants, animals, and other living things in a particular area or region
KEystone SPECIES	A plant or animal that plays a unique and crucial role in the way an ecosystem functions
ADAPTATION	A mutation, or genetic change, that helps an organism, such as a plant or animal, survive in its environment
STEWARDSHIP	Responsible caretaking of the environment





Photograph by Jim and Jamie Dutcher

Did You Know?

Six to eight years is the average lifespan of a gray wolf.

Wolf-Dog-Human!

- Create a set of index cards (about 15–20), each stating one fact that applies to wolves, dogs, humans, or more than one category. For example:
 - » I need water to survive.
 - » The leader of my family is called an alpha.
 - » I am called “man’s best friend.”
- Pick someone (who can read) to be the game host. Assign every other member of the family to represent a wolf, a dog, or a human.
- The host draws a card and reads the fact aloud. If a player thinks the fact fits his or her character, the player should jump up and call out what he or she represents (e.g., Wolf!). Discuss each fact and whether it fits wolves, dogs, humans, or a combination of the three.
- Continue playing until all of the cards are used.

The Bluffing Game

Scattered throughout this guide with the label “Did You Know?” are fun facts about wolves. At different times during your family fun adventure, share these facts with the family. Near the end of your camping trip, play a game together that encourages retention of these tidbits of wolf knowledge and gives the children the chance to show off what they’ve learned.

- Give everyone in the family five small treats (e.g., candies, pretzels) or tokens like small twigs or stones.
- Starting with the youngest, each member of the family states something about the gray wolf. It can be one of the fun facts, another fact learned during the adventure, or something made up.
- If nobody in the family wants to dispute the statement, the play goes on to the next person around the campfire.
- If somebody believes the statement to be false, that person should call out “Bluff!” The challenged person either admits that the statement was a bluff or proves it to be true by reminding the family of one of their activities or by showing the fact in a book or this guide.
- The person who “loses” the challenge must give the winner one treat or token.
- Play until everyone has had a turn, someone runs out of treats, or you have played as many rounds as you wanted. The family member with the most treats or tokens wins.

ESPECIALLY FOR KIDS AGES 3–6

Find Your Mama (or Papa)

Turn to the Matching Cards on page 23. Gather crayons or colored pencils and scissors. Have the whole family work together to color the animals. Then cut out the cards and separate them into two stacks: adults and babies. Shuffle both sets and get ready to play.

- One person in the family (child or adult) is chosen to play the animal baby and secretly selects one card from that stack. The “baby” can study the card, but must not show it to anyone else. The baby should look for distinguishing features of the animal (i.e., Does it have wings? How many legs?)
- The rest of the family each takes an adult card. (If there are more cards than people, have each take more than one adult card).
- The baby animal goes up to one of the adult animals and asks a question, like “I have a tail. Do you?” The adult answers yes or no (if this person is holding more than one card, he or she should discard any cards that don’t match the question).
- If the answer is “yes,” the baby animal asks if that person is the animal the baby is looking for (e.g., “Are you a duck?”). If the answer is no, the baby moves on to the next person.
- Once the baby has found its adult match, discuss some physical characteristics of the animal, and how the baby and adult are the same or different.
- Return the cards to the stacks, shuffle, and repeat the activity with a different family member playing “baby.”

ESPECIALLY FOR KIDS AGES 7–10

Hierarchy Race

The leaders of a wolf pack don’t always eat or perform an activity first, but they often decide the order! Simple races or relays can take on new meaning when they serve to show the responsibility of being the leader of the pack. Pick some type of treat (e.g., snacks, the ability to pick the next activity, the order in which craft materials are chosen) as a prize. Then hold a simple foot race. Whoever wins gets to be the alpha, or leader, of the pack and that person earns the right and responsibility to distribute the prize, deciding who gets first pick. For example, they might choose to give the rights to the family “pups,” to older siblings, to any aunts/uncles, or give it to the alpha...themselves! NOTE: In setting up the race, make sure to even the playing field by asking an adult to race in place of any very young children/toddlers or by placing younger children’s starting marks well ahead of the competition.



Photograph by Jim and Jamie Dutcher

DID YOU KNOW?

One litter of pups is born each year (in spring) in a typical wolf pack.

Gray wolves are known as a keystone species. They help maintain a balanced ecosystem.

Map the Local Fauna

This neighborhood activity requires a lot of cooperation among your family members, with older children, parents, and caregivers working to give younger children a sense of involvement while keeping them safe. Start by selecting the boundaries of the neighborhood that you want to include in your mapping activity.

- Create a map of your neighborhood, as big as you can make it. For example, tape four sheets of paper together to create a large square. Beginning with your house in the center, parents and older children work to sketch boundaries (e.g., roads, waterways), landmarks (e.g., neighboring houses, stores), and natural features (e.g., trees, rocks) to create a working map of the area.
- Go on a series of walking excursions around the territory, looking for a particular local animal. This could be dogs, cats, squirrels, or any other land animals.
- When you find an animal, make note of its location. On returning to camp, mark it on your map (or carry the map and a pencil with you on the excursion). Be sure to record details about the animals you find (e.g., breed of dog, color of squirrel). If you want to be really observant, look for other traces of animals, such as scat (poop), bones of prey, or other evidence of animals you find on your walks.
- Around the campfire, talk about what you learned. Display your map and discuss what areas seem to be more dog-friendly, whether you found cats and squirrels in the same areas, and any other inferences you can make from the mapping activity.



Photograph by Jim and Jamie Dutcher

Did You Know?

Three times bigger than a coyote, the gray wolf is the largest wild member of the canid (dog) family.

A wolf has a sense of smell 100-times stronger than a human's.

An alpha pair of wolves (the parents of the pack) will often remain lifelong partners.

TAKING ACTION

FACT

The gray wolf was once one of the world's most widely-distributed mammals, living almost everywhere north of 10-15 degrees north latitude except in Africa and central Greenland. Today, the gray wolf's range is about one-third of its original size. Wolves have endured a long history of persecution by humans. Even though attacks on humans are extremely rare, some people still believe wolves to be fearsome villains. As a result of this fear, and because they will occasionally kill and eat domestic livestock, countless wolves have been shot, trapped, and poisoned. Gray wolves were once found all over the Northern Hemisphere, but were hunted to near extinction in the lower 48 states in the 19th and 20th centuries. But because of modern conservation efforts facilitated by the Endangered Species Act of 1973, the gray wolf was reintroduced to the American West in 1995 and again in 1996 and is slowly making a comeback. Many people are still fighting this reintroduction, however, and it will take the concerted efforts of people who care to make sure the gray wolf doesn't disappear from the American landscape forever.

FUN!

Today, while the wolf is making a successful comeback in some of its former habitats due to strong conservation efforts, it is also facing a new wave of persecution. Add some activities to your family fun adventure that will encourage your children to take an active role in saving endangered species like the gray wolf. The children of today will become Earth's stewards of tomorrow!

FOR THE WHOLE FAMILY

Get Involved

There are many ways for families to get involved in the stewardship of our planet. The following is a list of just some of the things you can do.

- Around the campfire, read about some of the success stories of endangered animals saved because of the Endangered Species Act (ESA). Share with the family the slideshow found at: <http://www.endangered.org/campaigns/annual-top-ten-report/>.
- Join, volunteer at, or donate to local humane societies, the ASPCA, [Living with Wolves](#), or other wildlife organizations.
- Symbolically adopt a gray wolf at [WorldWildlife.org](#).
- Write letters to your [public officials](#) in support of the Endangered Species Act.
- Compose a family letter to submit to your local newspaper's op-ed section.
- Design a "family flag" that features a wolf image and a slogan that celebrates the wolf.
- Design, create, and attach a bumper sticker to your family car.
- Post your opinion about wolves on your own Facebook, Twitter, or other social media site. Or "like" the Dutchers' Living with Wolves Facebook site so you can see their news updates and add your voices to others'.
- Visit the Dutchers' [Living with Wolves website](#) to find more ways to get involved.



Photograph by Jim and Jamie Dutcher

EXPLORE MORE

ADDITIONAL RESOURCES

BOOKS

Check your local library or online bookstore for books that put a positive spin on the gray wolf. The suggestions in this list have been grouped by target age, but you might find that many books can be enjoyed by the whole family!

Ages 3-4

- Kalman, Bobbie, *Baby Wolves*. It's Fun to Learn About Baby Animals (Book 20). New York, NY: Crabtree Publishing Company, 2010.
- Kasza, Keiko, *The Wolf's Chicken Stew*. New York, NY: Puffin Books, 1996.
- Trivizas, Eugene and Helen Oxenbury, *The Three Little Wolves and the Big Bad Pig*. New York, NY: Margaret K. McElderry Books, 1997.

Ages 5-7

- George, Jean Craighead, *Nutik, the Wolf Pup*. New York, NY: HarperCollins, 2001.
- Gibbons, Gail, *Wolves*. New York, NY: Holiday House, 1995. Marsh, Laura, National Geographic Readers: Wolves. Washington, D.C.: National Geographic Children's Books, 2012.
- Goble, Paul, *Dream Wolf*. New York, NY: Aladdin, 1997.
- Wheeler, Lisa, *New Pig in Town* (Fitch & Chip). New York, NY: Simon Spotlight, 2005.
- Yu, Rachel, *A Wolf Pup's Tale: The Story of Rugmo*. Seattle, WA: CreateSpace Independent Publishing Platform, 2010.

Ages 8-10

- George, Jean Craighead, *Julie of the Wolves*. New York, NY: HarperCollins, 1997.
- Jazyuka, Kitson, *National Geographic Kids Mission: Wolf Rescue: All About Wolves and How to Save Them*. Washington, D.C.: National Geographic Children's Books, 2014.
- Slade, Suzanne, *What If There Were No Gray Wolves?: A Book About the Temperate Forest Ecosystem*. North Mankato, MN: Capstone Press, 2010.

Parents and Teens

- Dutcher, Jim, and Jamie Dutcher, *The Hidden Life of Wolves*, Washington, D.C.: National Geographic, 2013.
- Dutcher, Jim, and Jamie Dutcher, *Living with Wolves*, Seattle: Mountaineers Books, 2005.
- Dutcher, Jim, and Jamie Dutcher, *Wolves at Our Door: The Extraordinary Story of the Couple Who Lived with Wolves*. New York: Pocket Books, 2002.

ONLINE GAMES AND ADVENTURES

- **National Geographic: Wolves** <http://animals.nationalgeographic.com/animals/mammals/wolf/>. Find more facts, pictures, and videos about wolves at this National Geographic site.
- **Gray Wolf: Kids** <http://kids.nationalgeographic.com/animals/gray-wolf.html>. Also from National Geographic, this site provides basic and scientific information about the gray wolf in kid-friendly language.
- **PBS Dragonfly TV: Wolves** <http://pbskids.org/dragonflytv/show/wolves.html>. Two children volunteer at a local wildlife center and conduct experiments to determine which wolf is the pack alpha.
- **Animals Two by Two** <http://archive.fossweb.com/modulesK-2/AnimalsTwoByTwo/index.html>. An interactive game on this site allows players to try to determine what a baby animal will look like when it grows up. (May require a free guest registration.)

DID YOU KNOW?

An alpha wolf shows who's boss by walking tall with its tail held straight up.

CREDITS

This family guide was developed by [National Geographic Education](#).

Research Manager

Johnna Flahive, National Geographic Society Standards and Practices

Writer

Janis Watson, Implementation Manager & Curriculum Specialist, The Creativity Labs @ Indiana University

Editors

Christina Riska, National Geographic Society
Jessica Shea, National Geographic Society

Copyeditor

Jessica Shea, National Geographic Society

Educator Reviewer

Diana Nelson, B.S. Education, M.S. Aeronautics, Master Teacher K-12

Expert Reviewers

Jim and Jamie Dutcher, wildlife filmmakers, authors, and founders of the nonprofit organization [Living with Wolves](#)

Designer

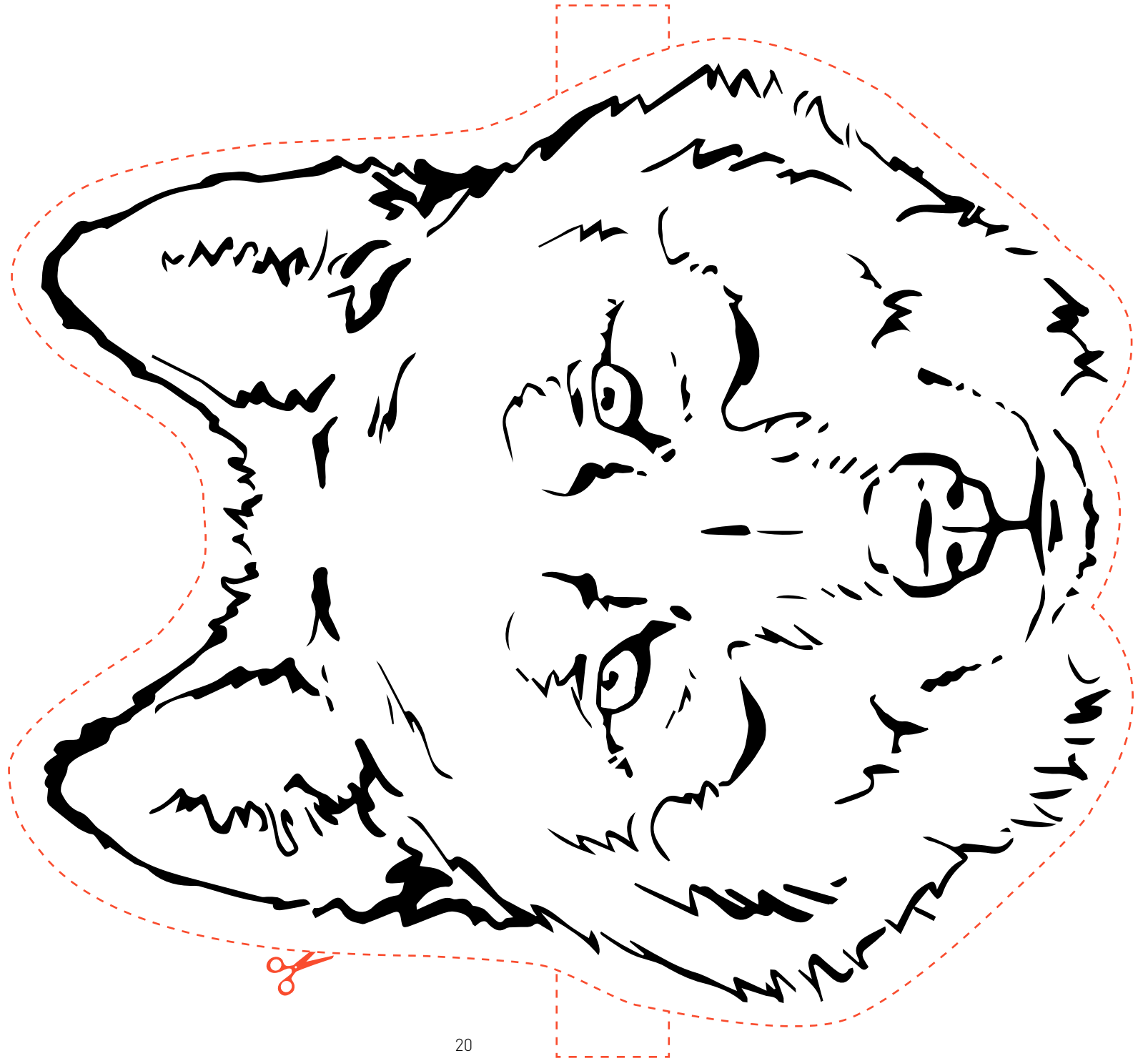
[Project Design Company](#)

Other

"Wolf Mask" and "Coloring Page" illustrations by Natalya Zahn and courtesy National Geographic Kids, copyright © National Geographic Society.

WOLF MASK

Duplicate the image below for each family member. Cut out the image and turn to page 9 to find activity ideas.

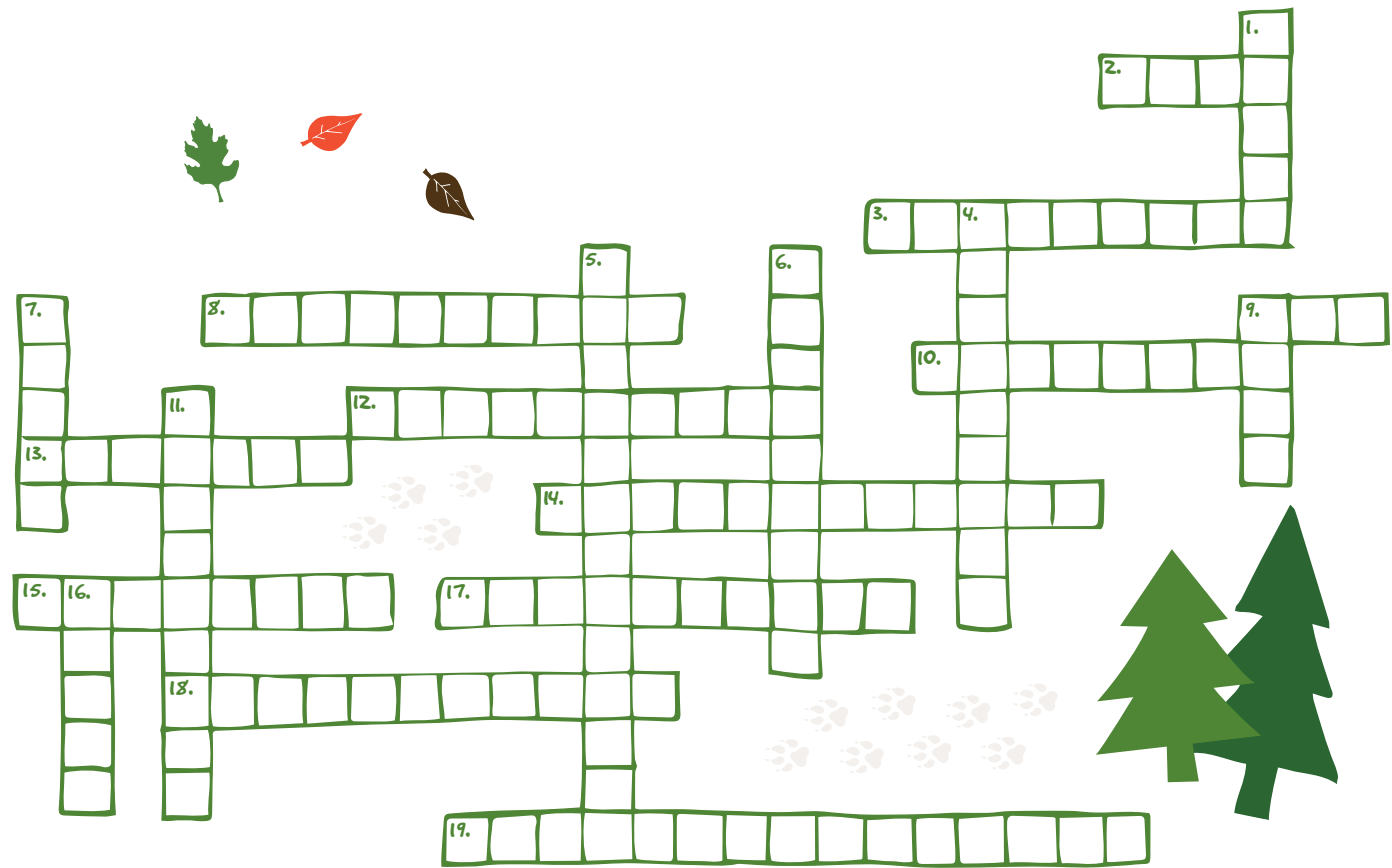


COLORING PAGE



FAMILY CROSSWORD PUZZLE

This crossword puzzle is designed to provide puzzle fun for the whole family. The clues marked with a "K" are written especially for younger family members. Adults should help with spelling and placement, as needed. Turn to page 13 for additional information.



ACROSS

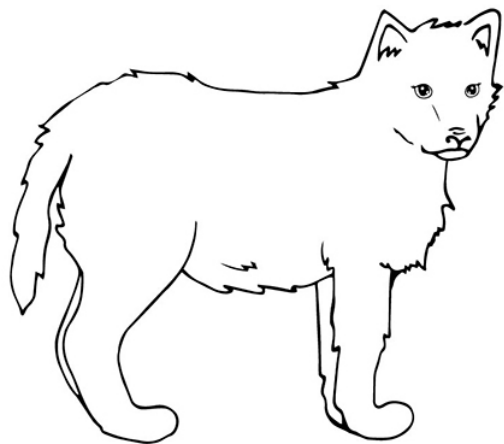
- 2 The wolf that is second in command
- 3 A display to assert social standing over another wolf
- 8 Giving in to the will of another, more socially-dominant wolf
- 9 (K) A baby wolf
- 10 (K) An animal that hunts and eats other animals
- 12 A mutation, or genetic change, that helps an organism, such as a plant or animal, survive in its environment
- 13 (K) A place that includes all the basic needs for an organism to make its home
- 14 The variety of plants, animals, and other living things in a particular area or region
- 15 (K) A wolf that leaves the pack and lives on its own
- 17 (K) Threatened with extinction
- 18 Responsible caretaking of the environment
- 19 A plant or animal that plays a unique and crucial role in the way an ecosystem functions

DOWN

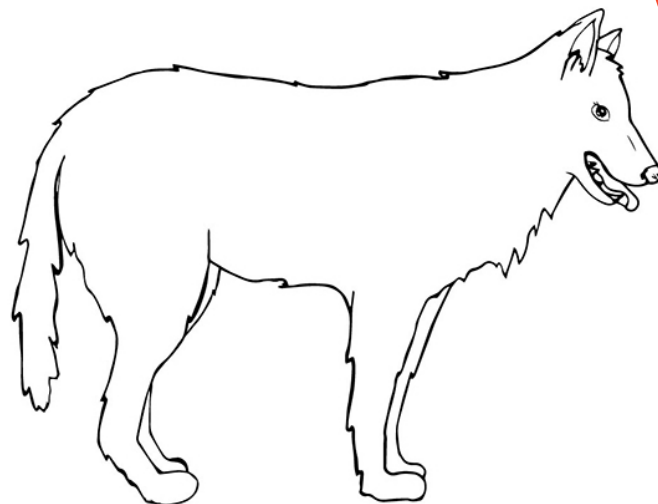
- 1 (K) The area where a particular species can be found
- 4 (K) The movement of an animal group from one place to another
- 5 The whines, yips, and howls that a wolf uses to communicate
- 6 (K) An animal that eats mostly meat
- 7 (K) A leader of a wolf pack
- 9 (K) An animal that is hunted and eaten by other animals
- 11 A wolf that has chosen or been forced to leave his or her pack, with no social territory, often living on the fringes of established packs and seeking a partner or new pack
- 16 The lowest ranking wolf, often having to beg food and always losing fights

MATCHING CARDS

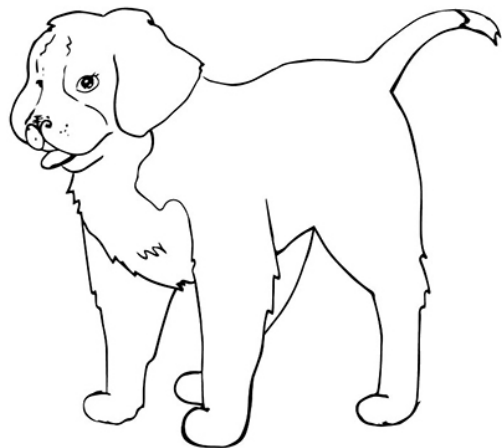
Color and cut out one set of matching cards. Then turn to page 15 to find directions for how to play the game "Find your Mama (or Papa)."



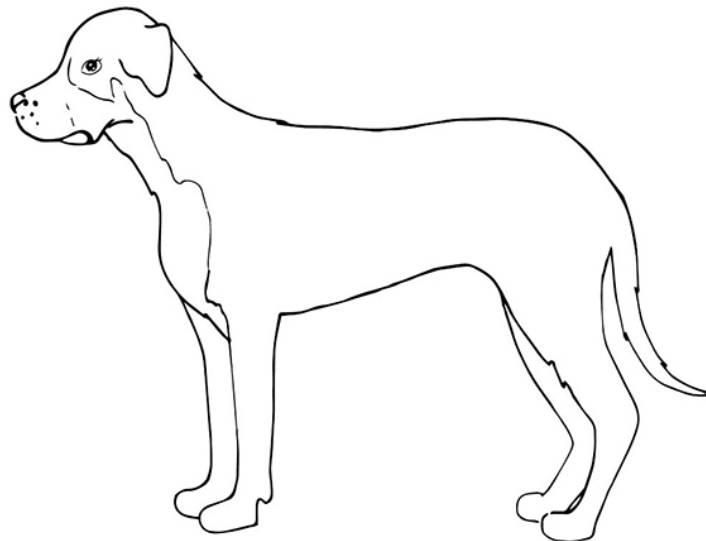
CuB



WOLF



PUPPY

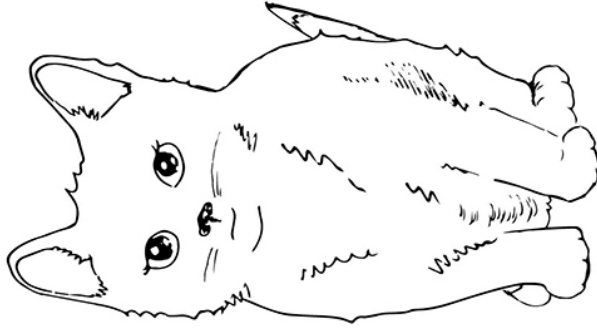


DOG

MATCHING CARDS, CONTINUED



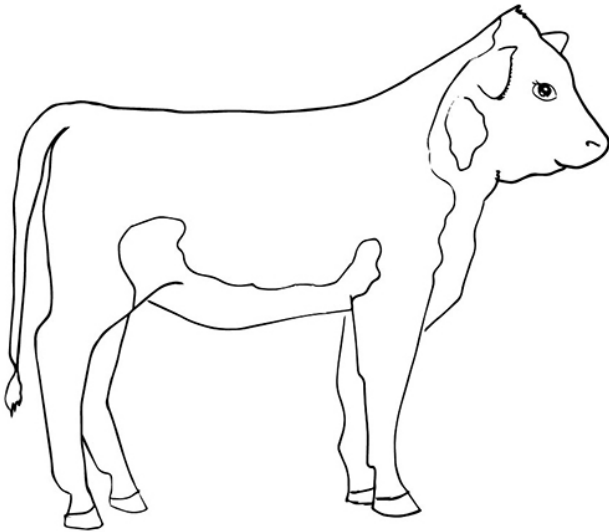
KITTEN



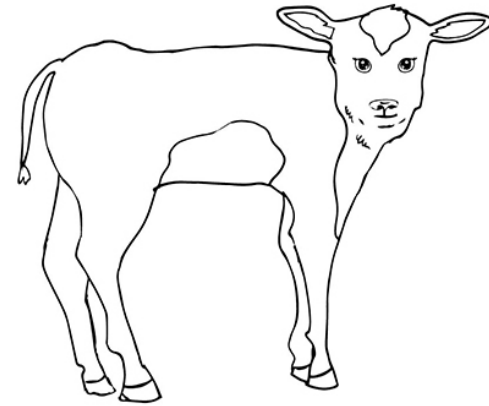
CAT



COW



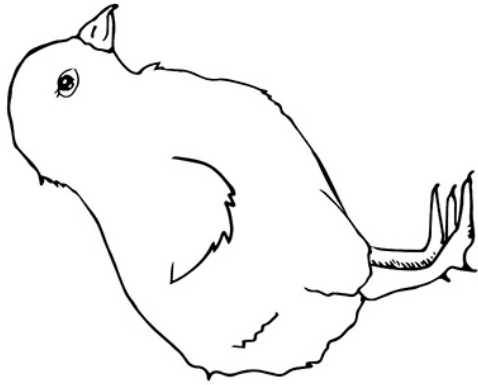
CALF



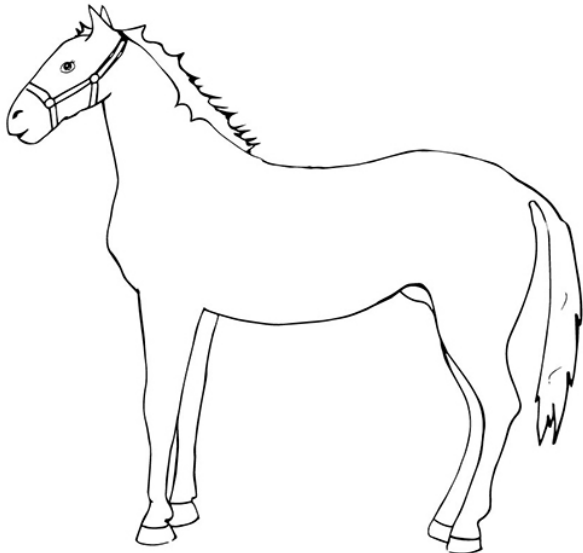
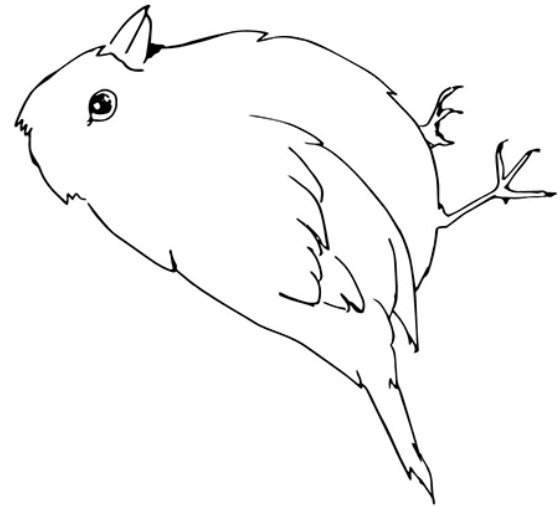
MATCHING CARDS, CONTINUED



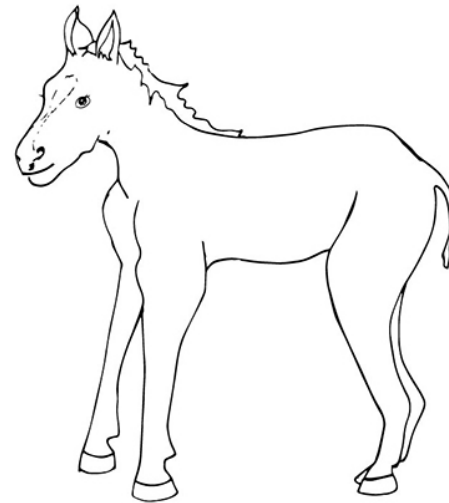
CHICK



BIRD

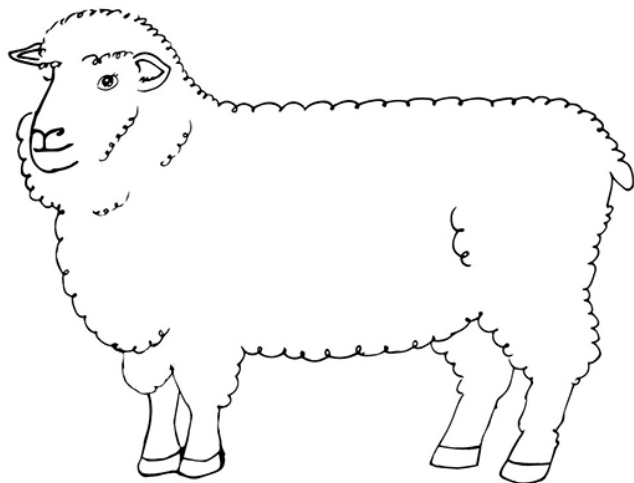


HORSE

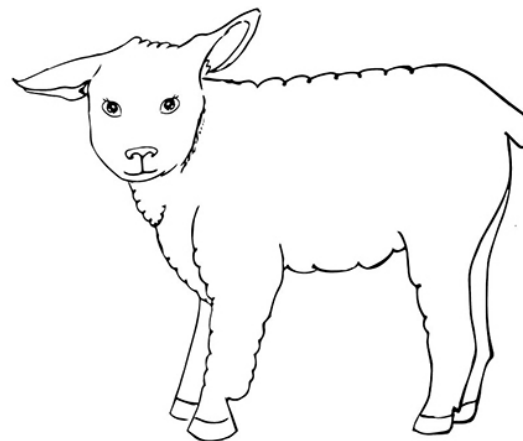


COLT

MATCHING CARDS, CONTINUED

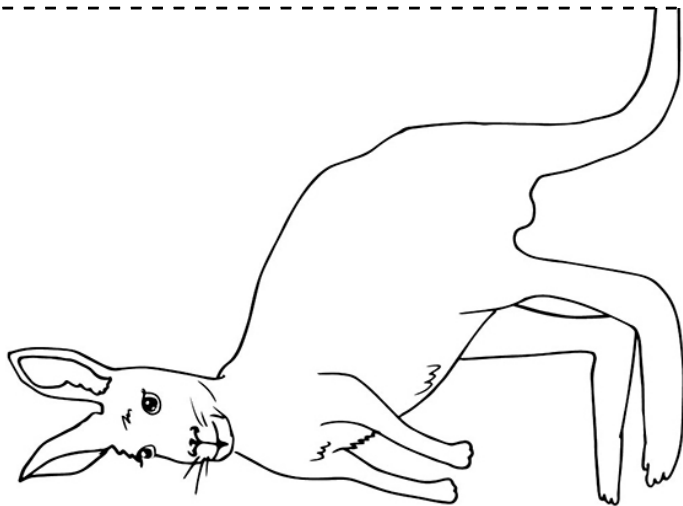


SHEEP



LAMB

KANGAROO



JOEY

