

For Creative Minds

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Black Bear Life Cycle

Put the black bear life cycle in order to discover the missing word.

The mama bear _____ the orphaned cub.

O By spring, the cubs weigh 10 pounds. They leave the den with their mom and learn how to forage for food.

T By three years old, the bears are adults. They can find other adult bears and have babies of their own.

P When the cubs are a year old, they are called yearlings. The yearlings stay with their mom until they are ready to leave and establish their own territory.

A An adult female bear carries her cubs inside her for over 7 months.

S Like all living things, bears eventually die. Most black bears in the wild live for 12-25 years.

D The cubs are born in winter. Newborn cubs weigh about as much as a cup of yogurt. The cubs nurse and grow big in their winter den.



Answer: The mama bear **ADOPTS** the orphaned cub.

Stages of Bear Hibernation

Hibernation

Hibernation can last up to seven months, depending on climate. Talk about a nice nap!

Walking Hibernation

A few weeks before the bear wakes up, its body temperature starts to rise. Metabolism returns to normal.

Scientists are still studying bears to figure out if bears are true hibernators or if they just go into a seasonal torpor. Hibernation is a very long nap; torpor is shorter. Hibernation is driven by the length of the day and hormones. Torpor has to do with temperature and food availability. During their winter sleep, black bears' body temperatures drop, their hearts beat more slowly, and they take fewer breaths than normal.

Metabolism is the process that changes food into energy for a living thing to use. Living things use energy in everything they do.

Normal Activity

During the spring and summer, bears eat and sleep. Black bears in some areas are active during the day (diurnal) and in other areas are active at night (nocturnal).

Hyperphagia

Bears need a lot of food to get ready for hibernation. They eat ten times more each day than a human, and drink gallons of water.

Fall Transition

Bears eat less as they get close to starting torpor. They won't pee or poop during their months in the den, so they don't want full bellies.

Animals store energy in their bodies as fat. Bears' bodies can use this energy during hibernation.

"hyper" = very
"phagia" = hungry
What do you think "hyperphagia" means?



Q&A with Bear Biologist Mark Boersen

Mark Boersen is a biologist with the Wildlife Division of the Michigan Department of Natural Resources (DNR). This book is based on the work Mark does with orphaned black bear cubs.

Did you know you wanted to be a scientist when you were a kid?

I always knew I wanted to be a scientist because I loved nature and learning how things work, but I didn't know what kind of scientist I wanted to be until 9th grade. My biology teacher had been a wildlife biologist. When he talked about his experiences and I learned I could get paid to study wildlife and their habitats, I realized that's it! I knew I wanted to be a wildlife biologist.

How and where do people usually find bear dens?

Sometimes people find bear dens when they are exploring outdoors. The DNR asks them to not disturb the animal, and to report the location to us. With smart phones and GPS, they can drop a pin and provide the exact location. Technology is really helpful!

Where are orphaned cubs found?

Orphaned cubs can be found anywhere in bears' normal range. A mother bear could become separated from her cubs at the den site, or a mother may be hit by a car when travelling in the spring. Cubs are most vulnerable from birth to six months old. There aren't many places that can take care of a bear this young, so we developed the collared bear program. We average one or two orphaned cubs in the program each year. Older cubs can find food and avoid danger on their own.

What's the trickiest part about working with bears?

Keeping track of where they are is tricky and requires a lot of time! Bears can cover a lot of ground. Some females stay within five miles of their dens, but bears can move up to 100 miles or more. We use aircraft and radio signals to help us track the collared bears.

What do you most enjoy about working with bears?

I love the hands-on work in the winter. I get to lead a team of wildlife professionals to bear den sites. The collaring program allows me to monitor the health of our bears, including newborn cubs. When I come back a year later to check on them, they've grown from little, helpless, five-pound furballs to 60-pound yearlings! Black bear sows are really good mothers. They put a lot of effort into caring for their young.



Furry Fun Facts

There are three types of bears in North America: black bears, grizzly bears (brown bears) and polar bears. Black bears are the smallest and the most common. They live in North America, from Canada and Alaska all the way down to Mexico and Florida.

	oso negro	oso grizzly	oso polar
Scientific name	<i>Ursus americanus</i>	<i>Ursus arctos</i>	<i>Ursus maritimus</i>
height at shoulder	3 feet (0.914 meters)	4.5 feet (1.37 meters)	3.5-5 feet (1-1.5 meters)
average weight	180-200 lb. (82-91 kg.)	300-1200 lb. (136-544 kg.)	400-1200 lb. (181-544 kg.)
fur color	black, brown, cinnamon, blonde	brown with light tips	white
diet	mostly plants, some meat	both plants and animals	mostly meat, some plants

Like most bears, black bears eat both plants and animals (omnivores). They eat plants, fruits (they love berries), insects, honey, fish, small animals and animals that are already dead.

Bears will go dumpster diving and eat humans' trash. People who live in the same areas as bears lock their garbage cans so the bears won't get into them. Bears have such a keen sense of smell that they can sniff food in a car and break in to get it.



Did you know? *Ursus* means “bear” in Latin. *Arctos* means “bear” in Greek. These bears’ scientific names tell us that the black bear is an American bear, the polar bear is a maritime (ocean) bear, and the grizzly is a bear-bear!