

BEARS

There are technically 8 species of bear which include the Asiatic Black Bear, Black Bear, Brown Bear, Panda Bear, Polar Bear, Sloth Bear, Spectacled Bear, and the Sun Bear. That being said, the North American black bear is the most abundant bear in the world and has a wide range of habitats on the North American continent. The Brown bear is also very popular consisting of both the Grizzly and the Kodiak which are prominent in the Alaskan Wilderness and the northern most regions of the continent. Lastly, we can't forget the Polar Bear who lives in the Arctic Circle and is known as the largest species of bears. They are also the most carnivorous.



Grizzly Bear Photo by Y. Krishnappa



American Black Bear Photo by Michelle Buntin



Polar Bear Photo by Jerzy Strzelecki

Omnivores

Did you know that bears are mostly *omnivores*? An omnivorous diet means that an animal eats both meat and vegetation (fruits, vegetables, nuts, etc.). A bear's diet ranges from plants, insects, honey, nuts, small mammals, and fish. Although about nearly 85% of their diet is still vegetation. As mentioned early however, Polar Bears are mostly carnivores. *Class discussion: Can you talk about why Polar Bears would eat mostly meat rather than vegetation?*

Hibernation

Bears *hibernate* or sleep during the winter months. For several weeks before, they will prepare by eating thousands of calories a day. When preparing for hibernation, there's a period of time called *hyperphagia* that lasts anywhere from 2-4 months. During this time a bear can eat up to 20,000 calories a day and drink several gallons of water. During their *normal activity* which is in late spring and summer, they only consume between 5,000 and 8,000 calories a day.

The fat that is stored in their bodies from all of their food consumption is how their bodies survive long winters. A bear's heart rate drops to a mere 8-28 beats a minute and they only breathe every 45 seconds while sleeping during hibernation. How long a bear hibernates depends on its location. Some bears in Mexico for example hibernate about 6 months, whereas bears found in Yellowstone only hibernate about 5 months. Pregnant polar bears actually hibernate. They will find a den, stay there to give birth and come out three months later.

Interesting Fact

Did you know that for a long time it was thought that bears didn't actually hibernate? This is because their hibernation pattern was a little bit different than other mammals who are *deep hibernators*. Many deep hibernation mammals have a dramatic decrease in body temperature, while a bear's temperature is only about 12 degrees different than their normal body temperature. What difference does that make? You CAN wake a sleeping bear and it will be alert unlike many other deep sleeping mammals that may take longer to respond.

Finding a Den

Not only do bears eat a lot to prepare for winter they also build dens. Where a bear finds its den depends on its environment. Dens can be found in many places such as hollow trees, crevices, above ground nests, caves, or even culverts if a bear is in a more residentially populated area.

Reproduction

Most of the bears mentioned have a very similar reproduction pattern. Females are not ready to have offspring until they are much older. They reach maturity at about 4-5 years old. Males can take up to 5 years to reach maturity. Depending on the environment and bear, a litter of bears can consist between one and three bears.

Lifespan

Bears can live long lives ranging anywhere from 15-32 years old. But the life expectancy of a bear not only depends on the animal & its genetics, but other *circumstances* including hunting, disease and parasites. 20-50% of bear cubs will not reach adulthood.

Unlike many animals, the age of a bear can be determined by examining its *premolar* tooth, a tooth near their canine teeth. Very similar to counting growth rings on a tree, there are *rings* on their teeth!

In 2013, the oldest recorded bear in the world (who was collared), was a black bear who died at 39 years old! For more information on her you can go to the following link: <http://voices.nationalgeographic.com/2013/09/02/oldest-wild-bear-in-the-world-dies-in-minnesota-at-almost-40-years-of-age/>

Other Interesting Bear Facts

- Bears are bowlegged! This gives them better grip and balance.
- They are also flat footed
- Bears can run up to 40mph.
- Bears can walk on their hind legs for short distances. Some Native American tribes have called them “the beast that walks like a man.”
- Bears can see in color.
- Of the five senses, bears have an outstanding sense of smell. Their sense of smell is 100 times greater than a person. Polar bears for example can track an odor they smell that is 20 miles away!
- 98% of grizzly bears live in Alaska.
- A male bear is called a “bore” and a female bear is called a “sow.” A group of bears is called a “sloth.”
- During hibernation bears do not defecate. Their body somehow recycles the waste into protein. Scientists are still trying to understand this process.
- President Theodore “Teddy” Roosevelt (1901-1909) would not shoot a black bear cub one time during a hunting trip. Later on, the stuffed bear AKA the “Teddy bear” was created.
- License plates in the Canadian Northwest are shaped like polar bears!
- If a human ate polar bear liver it would be fatal because of the high levels of vitamin A.
- A bear has almost no natural predators. Cougars can be a threat to newborn cubs. All male bears can be aggressive and will go after cubs which are considered a threat because of mating.

Activities:

Lower Elementary (K-2nd) & Upper Elementary (3rd – 6th)

Suggested Readings

Bears: Polar Bears, Black Bears and Grizzly Bears by Deborah Hodge & Pat Stephens

Any of the National Geographic Readers about Bears

As a class, read one of the books (upper elementary can take turns) and discuss as you go along new things students are learning about the bear. Checking for Understanding / Evaluation: Student participation.

Middle School / High School

Have students use their creative writing skills to write a story “If I were a bear.” Student should be imaginative and discuss what species of bear they would be, where they would live, what they would eat, would they be old or young? etc.,

Students could also create a poem.

Checking for Understanding/Evaluation: Students’ writing should have correct format and accurately depict which ever bear they are discussing even though it is imaginative writing.

Information sources

North American Bear Center – www.bear.org

National Geographic – www.nationalgeographic.com/animals/mammals/brown-bear/

Polar Bears International – www.polarbearsinternational.org