

Cadette Night Owl Badge

STEPS

1. Take a field trip to explore the night
2. Tour your word after dark
3. Meet people who work night hours
4. Explore nature at night
5. Host an extreme nighttime party



STEP 1: TAKE A FIELD TRIP TO EXPLORE THE NIGHT

Find information about life after dark.

Find three paintings of famous nighttime scenes, or three bedtime books or poems about the night. Virtually, tell your friends the stories behind the pictures, or read the poems or stories together.

Or, head outside to your backyard or large field to go stargazing. Take a large tarp, or your sleeping bags to lay on. You may go out a little before dark and let your eyes adjust as the sun goes down. One thing you can do while Stargazing is look for constellations, or a grouping of stars that have a recognizable pattern that is traditionally named after the shape of the grouping. Astronomers have divided the night stars into 88 constellations.

Try to find Ursa Major, or the Big Dipper. This is a constellation that will look like this:



Photo credit: <http://earthsky.org/favorite-star-patterns/big-and-little-dippers-highlight-northern-sky>

Use the right two stars to find the North Star, Polaris. This is the tail of Ursa Minor, or the Little Dipper.

Ursa in Latin means bear, so these constellations are Big Bear and Little Bear. Constellations have always been a source of storytelling for many cultures. There are many stories about these two constellations in cultures all around the world. Share these two stories with your girls.

After, have your girls hear the story, have them come up with stories of their own to share. It could be about this constellation, or any constellation that they see.

STEP 2: TOUR YOUR WORD AFTER DARK

Get out and enjoy how the cloak of darkness and glitter of stars make the ordinary extraordinary. How do things change after dark? Scribble thoughts in a journal by flashlight, record audio or video, or find your own way to document your experience so you can share the night mysteries with others.

Map out your route and follow it during the day. Then, travel the same route after dark. Take some time while stargazing to have the girls be silent and observe .

What do they hear?

What do they see?

What do they smell?

What do they feel?

How is any of this different from what they experienced during the day?

STEP 3: MEET PEOPLE WHO WORK NIGHT HOURS

Many people are on the job while the rest of the world sleeps. Find out what it's like to be employed as a night owl, and capture your experience. See examples at the end of this packet.

Interview someone who works the night shift and record audio to share.

Or, find nighttime work pictures in magazines or online. Put together a photo essay or photo collage that captures your feelings about what it's like to work at night.

STEP 4: EXPLORE NATURE AT NIGHT

From planets to constellations, from moonflower to evening primrose, from bats to owls to anacondas, some parts of the natural world come alive—or only appear—at night. Become more familiar with the natural night world.

Some animals are nocturnal, which means they are active mainly at night. Can you think of any? Learn more about how animals see at night at the end of this packet!

Create a nocturnal animal. How do cats see in the dark? How do bats navigate? Design your own super-night-sense animal, combining aspects of real animals and your own ideas. Share it as a sketch, sculpture, or collage.

Or, sketch a landscape plan for your own “midnight garden.” These gardens are full of night-blooming flowers and flowers that shimmer in moonlight. For inspiration, try to see at least one such flower in the dark. A nursery is a good place to start!

STEP 5: HOST AN EXTREME NIGHTTIME PARTY

Get to know even more about those wee hours by ramping up a nighttime or slumber party. Even if it's your family in sleeping bags in the living room, it can still be an adventure!

Have a power down party. Make a rule that no one can use their phones, or even their flashlights once the sun sets. Pretend you live before electricity. Spend at least three hours using no lights, television, or other electronics. Figure out how to light and heat your house, cook food, and entertain yourselves.

Talk about how people could entertain themselves, heat their homes, and cook their foods without electricity. How could people see at night without electricity? How would they like to have to live without electricity? There are people in the world who do. How would their life be different?

CONSTELLATION STORIES

Native American

The Mima Indians of Nova Scotia and the Iroquois along the St. Lawrence Seaway share one story about the Big Dipper.

In this story, the quadrangle of the dipper represents a bear that is pursued by seven hunters; the three closest hunters are the handle of the dipper. As autumn approaches, the four farthest hunters dip below the horizon and abandon the hunt, leaving the closest three hunters to chase the bear. The hunters are all named after birds. The closest hunter to the bear is named Robin, the second closest is Chickadee, and the third is Moose Bird. Chickadee is carrying the pot in which the bear will be cooked. The second star in the handle is actually two stars [the famous double star system] called Mizar and Alcor which represent Chickadee and the pot. In autumn, as the bear attempts to stand up on two legs, Robin wounds the bear with an arrow. The wounded bear sprays blood on Robin, who shakes himself and in the process colors the leaves of the forest red; some blood stains Robin and he is henceforth called Robin Redbreast. The bear is eaten, and the skeleton remains traveling through the sky on its back during winter. During the following spring a new bear leaves the den and the eternal hunt resumes once more.

Roman

A Roman myth involves both bears, Ursa Major and Ursa Minor. A beautiful maiden, Callisto, hunting in the forest, grew tired and laid down to rest. The god Jupiter noticed her and was smitten with her beauty. Jupiter's wife, Juno, became extremely jealous of Callisto. Some time later, Juno discovered that Callisto had given birth to a son and decided that Jupiter must have been the father. To punish her, Juno changed Callisto into a bear so she would no longer be beautiful. Callisto's son, called Arcas, was adopted and grew up to be a hunter, while Callisto continued to live in the forest. One day Callisto saw Arcas and was so overjoyed at seeing her son that she rushed up to him, forgetting she was a bear. Arcas thought he was being attacked and shot an arrow at Callisto. Jupiter saw the arrow and stopped it from hitting Callisto. To save Callisto and her son from further damage from Juno, Jupiter changed Arcas into a bear also, grabbed them both by their tails, and swung them both into the heavens so they could live peacefully among the stars. The strength of the throw caused the short stubby tails of the bears to become elongated. Juno was even angrier with Jupiter and managed to exact still more revenge on poor Callisto and Arcas. She went to the gods of the sea and forbade them to let the two bears wade in their water or streams on their long and endless journey around the pole star.

NIGHT SHIFT EXAMPLES

Bakers	Newspaper Reporter
Security Guards	Hospital Worker
Farmers	Emergency Medical Units
Delivery Drivers and Truckers	Police Officer
Staff at All-Night Diner	Fire Departments
Radio DeeJay	Utilities Workers
TV News Anchor	Airplane and Airport Staff
	Graduate Students

HOW ANIMALS SEE AT NIGHT

Cones and Rods

Eyes have parts to them called cones and rods that catch light, and help us see. Many animals who see well at night have larger eyes with more cones and rods, which help them gather more light than humans. Some animals like cats and raccoons also have a reflector called a tapetum that helps double the amount of light their eyes can gather. This is why when you shine a light at your cat in a dark room or if you use flash in a picture you take of them, their eyes seem to glow. You are seeing the light hit their tapetum.

Echolocation

Bats have small eyes, but can still see very well at night. However, they do not see with their eyes. They see with their ears. What? A bat sends out a high-pitched noise, and the sound waves bounce off of objects back to their ears. Their brains are then able to put together a picture of their surroundings using those sound waves. Some blind people are able to do something similar using clicks of their tongues.