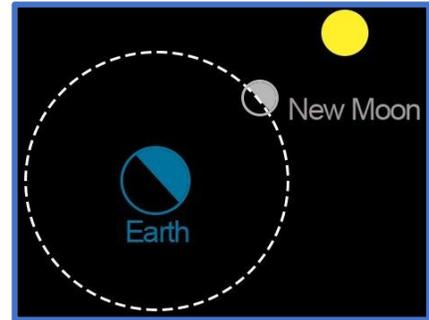


# At Home Science – Nocturnal

## Science for Families: using what you have at home

This week with **Be Outside With Brevard Zoo**, we suggested taking a moonlight stroll. What did you see? What did you find? I found lots and lots of stars! I love using the star gazer app on my tablet or phone to identify the constellations in the night! I don't know about you, but I did NOT find the moon! April 22<sup>nd</sup> was the first day of a new moon, which means the sun and moon are aligned and the moon is in between the Earth and the sun. This causes a shadow over the moon, which keeps it hidden from our view. Wow, even the moon has a shadow! By May 7<sup>th</sup>, we will all see a full moon. For a lunar calendar and moon phases, follow this link <https://www.timeanddate.com/moon/phases/usa/orlando>



### Fun With Learning

#### Diurnal, Crepuscular, and Nocturnal

Although, many of you have heard of and understand the word Nocturnal, can anyone guess what “diurnal” might mean? How about “crepuscular”? Nocturnal animals are active during the night. Diurnal animals are active during the day. Humans are diurnal. Crepuscular animals are active at twilight and dusk. Crepuscular animals may adjust their activity time, depending on predators or prey, within their habitats. Humans also affect crepuscular animals. Some may become more active, once the humans have left the area. Bobcats are typically crepuscular, but they may become more active during the day depending on the activity of the prey. On the other hand, in some places, bobcats have become nocturnal in order to avoid humans.

**Challenge:** It's time to take a walk or several walks throughout the week, at different times! Use the scavenger hunt and use your senses to find as many of the items as possible!



### Cool Science

Did you take a moonlit stroll with Be Outside with Brevard Zoo? I hope you used one of the Star Gazing Apps! We already know there was no moon. So, how did you see in the dark? Flashlight or a lantern? How do animals see in the dark? They can't carry flashlights! Nocturnal animals have several adaptations to help them survive the night. Many have special eyes, like our friend Errol. Owls have very large eyes, as do many nocturnal animals. These large eyes help take in as much light as possible. Others, such as cats, may have a reflective layer at the back of their eyeballs, called tapetum lucidum, which allows them to absorb more light. We call this “eye shine”. Nocturnal animals may also have large ears for better hearing. My favorite nocturnal adaptation is vibrissae, or you might know them as whiskers. Vibrissae help nocturnal animals feel their way through the dark. What animals have “eye shine”? What animals have vibrissae? Think of as many animals with eye shine and make a list (*Hint: many live in our Wild Florida Loop*). Make a list of animals with vibrissae. Are they nocturnal? It might surprise you!



**Give it a try!** Materials: light colored paper, tacks, or tape, watch or stopwatch. Attach small pieces of light-colored paper on a tree. Now go outside at night, let your eyes adjust. Time how long it takes for you to be able to see the papers. Are you able to see better once your eyes have adjusted? How long did it take? Go back inside and then try it again. Make your papers smaller or darker. How long does it take? Believe it or not our eyes take several hours to **fully** adapt to darkness but we still can't see as well as an owl. Learn more here <https://wtamu.edu/~cbaird/sq/2013/08/09/how-long-does-it-take-our-eyes-to-fully-adapt-to-darkness/>