

Our Night Sky: Part 1, Wildlife, The Moon, Constellations, and Shooting Stars & Satellites

We are going to be discussing the night sky and what it is made up of. We will start small, and gradually widen our view.

SECTION 1. The Night Sky and Wildlife

There are a lot of things to see in the night sky, but we are going to focus on how wildlife uses night to survive, the moon, constellations, and shooting stars and satellites.

1. Why is the night sky important for some animals?

2. What does nighttime offer that daytime doesn't?

3. Can you guess which nocturnal animal are hiding in the darkness of the night sky below?



Answer Key

1. Why is the night sky important for some animals?

The night sky provides protection in the darkness and allows animals to use the moon and stars as their own compass.

2. What does nighttime offer that daytime doesn't?

Nighttime provides a dark background for both predators and prey to move around safely. Predators can hunt in the dark because they have adaptations that allow them to survive in the dark. It also allows prey to move more stealthily in the darkness.

3. Can you guess which nocturnal animal are hiding in the darkness of the night sky below?



Moth



Fox



Owl



Raccoon

PART 2: The Moon

Our moon has 8 phases, and each one looks different. Each phase lasts about 3 days. See what the phases look like below.



Understanding the Terms:

- A **waxing moon** is when the right side of the moon is visible, and the illuminated side will continue to grow, up until the full moon.
- A **waning moon** is when the left side of the moon is visible, and the illuminated side will continue to fade, up until the new moon.
- A **crescent moon** is when the moon is showing more than a new moon and less than a half moon.
- A **gibbous moon** is when the moon is showing more than a half moon but less than a full moon.
- A **waxing half-moon** is also known as a first-quarter moon or half-moon.
- A **waning half-moon** is also known as a third-quarter moon or a half-moon.

Moon Activities:

1. Journal Entries: Every 3 nights or so, look outside your window or go outside to find the moon. Study it. Can you tell what phase it's in? Keep track of what you notice in your journal.
2. Drawing the Phases: Take a piece of paper and draw the moon phases in order and label them. You can color them in and color the background to make it look like they're actually in the night sky!



PART 3: Constellations

Hundreds of billions of stars make up the night sky. Constellations are multiple stars that, when looked at, make up an identifiable pattern and are given a name. There are 88 recognized constellations in the Milky Way. Most constellations are named after gods and goddesses, animals, and other parts of stories from ancient civilizations including Roman, Greek, and Middle Eastern.

Constellation Activities:

1. 3-D Constellations: You can represent the constellation in a 3-D way by constructing them out of toothpicks and marshmallows. Just as the stars do not lay flat in the sky, your constellation models will look more realistic. As an alternative, pipe cleaners can also be used.
2. Constellation Wall: To create your own constellation on construction paper. Punch holes for the stars. If you make the room dark and hold the paper over a light, your stars will glow.
3. Blacktop Constellations: For a full classroom or family activity, use sidewalk chalk on a blacktop to draw a full sky-full of constellations.

PART 4: Shooting Stars and Satellites

Shooting stars aren't stars at all. They are bits of rock from space that fall into Earth's atmosphere, also known as meteoroids. Sometimes we have predicted meteor showers which means you can see a lot of shooting stars all in one night, or even over the span of multiple days. Though, shooting stars can be seen all the time! All you need to do is find a comfy spot outside on a clear night and look up. No equipment is needed to look for shooting stars, they can be seen just with the naked eye.

While you're looking for shooting stars, you might also see some satellites moving up there. Thousands of manmade satellites have been launched into space to orbit and document different planets.

How can you tell the difference between a satellite and a shooting star? You will only be able to spot a shooting star for a few seconds. They shoot into the atmosphere and then in an instant, they're gone. They look like a streak in the night sky, some are small streaks, and others can be long and bright. Satellites, on the other hand, can be followed with your eye until they are out of sight. They orbit the planet in a straight line at a constant speed.

Learn more about satellites [here](#).

Extra: Just like how you can see stars in the night sky, planets are also visible with the naked eye. Mercury, Venus, Mars, Jupiter, and Saturn can all be seen! To help you locate different planets, stars, and constellations, you can use this free night sky viewing app for [Apple](#) and [Android](#).