



## STARRY SKIES CHALLENGE | *Twinkle, tiwnkle!*

### FOR THIS ADVENTURE, EXPLORE THE NIGHT SKY.

Spending time outdoors after sunset offers unique benefits for your children, including **sensory development** (the cool air, quiet sounds, and light/shadow contrast), **bonding and connection** (sharing quiet moments under the stars), and sparking **curiosity** ("What do you see?" or "How does the moon make you feel?")

#### DIRECT SKY OBSERVATION (LOOK UP & WONDER)

These activities focus on simply looking at the sky and encouraging observation.

#### Activity

#### What To Do

#### Learning Goal

#### General Observation

Go outside for a few minutes, look up, and ask simple questions like, "Do you see the big, bright moon?" or "How does the moon make you feel?"

The most crucial step! Fosters simple awe and makes the night sky feel special and comfortable.

#### Night Sky in the City

Find a spot in your yard or on a balcony. Point out the moon and any visible stars. Talk about how the city lights make the sky look different.

Teaches them to observe their immediate surroundings, wherever they are.

#### Moon Tracker

Each night, go outside and find the moon. Draw a simple picture of its shape in a journal.

Introduces simple pattern recognition and the concept that the moon changes slightly over time (the lunar cycle).

#### Cloud Gazing by Day

Spend time looking at the clouds during the day. Ask, "What shapes do you see?"

Builds the fundamental skill of observation and looking for patterns to apply to the stars at night.





**FUN WITH LIGHT & SHADOW (COMFORT IN THE DARK)**

Activity

What To Do

Learning Goal

**Flashlight Walk**

Provide each child with their own flashlight and go for a very short walk around the yard or neighborhood.

Gives the child a sense of control and agency in the dark, turning a potentially scary environment into an exciting, magical place.

**Shadow Puppets**

Use a flashlight or headlamp to cast shadows of objects or hands onto a wall, tent, or fence.

A hands-on way to play with the concepts of light and shadow in a safe, fun, and interactive way.

**Star Jar**

Take a clear jar with glow-in-the-dark stars inside. Let it "charge" in the light. Put it in their room at bedtime.

It offers a portable, personal, and calming night sky that connects outdoor fun to the comfort of their room.

**EXPLORING THE NATURAL WORLD (BEYOND THE STARS)**

Activity

What To Do

Learning Goal

**Nature's Night Sounds Concert**

Sit quietly on a blanket for 5-10 minutes. Close your eyes and focus on listening for crickets, owls, or rustling leaves.

Fosters comfort by emphasizing that the night is full of life and gentle sounds, not just silence.

**Night Hikes for Wildlife**

Take a very short, slow walk at dusk. Use a light to look for nocturnal animals like moths, crickets, or worms.

This activity combines simple outdoor observation with wildlife watching, deepening their connection to nature.

**Make Constellation "Dots"**

On dark paper, use a white crayon to draw a few dots and connect them with a line.

A simple, creative introduction to the idea of constellations (patterns in the sky) without the pressure of finding them in the real sky.





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### **FOR THIS ADVENTURE, EXPLORE THE NIGHT SKY.**

Did you know that Utah has the most designated dark sky parks in the world?

**Apps:** Here are some [helpful Apps](#) for identifying the stars

**Stargazing** - Spend time under the stars! You can bring a telescope or binoculars to get a closer look at things like planets, the Milky Way, or constellations. You can borrow telescopes from some libraries.

**Identify Constellations** - Did you know that many cultures have their own constellations and constellation stories? Constellations are also different depending on the hemisphere you live in. See how many constellations you can find and name. Then find and name your own constellation!

**Astronomy Programs or Star Parties** - many parks and outdoor places offer programs that teach you about the night sky. These programs often feature astronomers or experts who show you different constellations, planets, and other cool things in space.

**State and National Park Events** - Attend events like full moon hikes or meteor shower watches. Some national and state parks host special events during these times, so you can learn more about the night sky while taking a guided hike or listening to a talk from a ranger or other expert.

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**Camping in Dark Sky Reserves** - some national parks or dark sky reserves have campgrounds where you can experience the night sky at its best. You can camp in a tent, camper, or hammock and enjoy the stars while exploring the outdoors during the day. Backpacking - backpacking to camp in remote areas lets you experience the wilderness at night under dark skies. The quiet and peaceful surroundings make stargazing even more magical.

### **TAKE IT UP A NOTCH!**

**Light Pollution** - Light pollution impacts our health and our animal friends. Research the impacts of light pollution and find something you can do to help.

**Throw a Party!** - Gather friends and family to admire the night sky. Help them identify your 5 favorite constellations.

**Night Sky in the City** - if you live in a city environment, try to observe the night sky. What can you see despite the city lights? Do you notice any stars, the moon, or the clouds? Describe your nighttime sky experience in the city by writing or with a sketch.

**Moon Tracker** - watch the moon each night for a fun project and track its phases for a month. Write down what it looks like and draw its shape in your journal. Note how it changes from crescent to half moon to full moon. The moon rises about 50 minutes later each day, so use a weather app to know when to go outside. A moon phase chart can help you track its changes and notice other things around the moon, like clouds or stars.





**See Shooting Stars** - Meteor Showers happen when Earth passes through debris from comets, causing meteors (or "shooting stars") to streak across the sky. In Utah, you can catch some amazing meteor showers each year. Check apps or with local astronomy clubs for dates and peak times (usually after midnight, so you might need to set an alarm!). Popular meteor showers in Utah include the Perseid Meteor Shower in August and the Geminid Meteor Shower in December.

**Night Hiking or Walking** - hiking or walking in the dark can be a peaceful and different experience compared to daytime hiking. With the right gear, like a headlamp and good shoes, you can enjoy the quiet of the night and connect with nature and the stars.

**MoonTracker** - Watch the moon each night for a fun project and track its phases for a month. Note the appearance of the moon each night in your nature journal and track any changes you see.

**Astrophotography** - if you want to capture the beauty of the night sky, try astrophotography! To get the best shots, find places with little light pollution. Use long-exposure settings for best results, and aim your camera at a part of the sky with no lights or obstructions.

**Dark Sky Sites** - Utah has the highest concentration of Dark Skies in the world. Visit one of the sites and learn about what qualifies an area as a Dark Sky.

**Night Hikes** - Night hikes are a great time to observe nocturnal and diurnal wildlife. Using a headlamp with a red light will help you see and still allow your surroundings to stay dark.

