

Day 1 Night Sky

Pick a time that you will observe the night sky for the week. What do you see when you look at the night sky? Stars make their own light whereas the moon is reflecting the light off our star, the sun. If your student is interested in the names of the stars and constellations search "night sky" on any app store- there are several options for free applications available.

Day 2 Solar System

The sun is the center of our solar system providing heat and light to each planet. As the sun sets make a model of our solar system using natural materials like leaves, sticks, rocks, or whatever you have available. The order should be: Sun (biggest by far), Mercury (smallest), Venus (small), Earth (small), Mars (small), Saturn (large), Jupiter (large), Uranus (medium), Neptune (medium). As your student is building the model have them pay attention to the difference between the temperature when the sun is out and when it has set. How does the sun affect Earth? Does it affect the other planets in the same way?

Day 3 Stars

Lay out a blanket as the sun sets. As it gets darker, how do the stars begin to appear in the sky? Notice the number and size of the stars as they come into view. Why do they not all appear at once? Are the stars always there? Why can we not see them during the day? Enjoy the view of the night sky as you have a conversation about stars with your student.

Day 4 Constellations

Long ago people looked at the sky and saw pictures; today those pictures are called constellations. Look at the sky tonight and see if your student can see a picture in the stars. Have them make up a story about what they see and share it with you. Get crafty and have your student make their name into a constellation. [Print off this grid](#) and have your student write each letter of their name in a box at the top of the grid. They can use one finger to move down the grid from the letter on top and use a finger from the other hand to follow the same letter from the left to the right; draw a star where the two fingers meet. Have them connect the stars with a straight line to make their very own name constellation.

Day 5 The Moon

The moon changes shape due to the positions of the Earth, moon and sun. Light waves move in a straight line and when the Earth is between the moon and the sun the light from the sun illuminates the half of the moon facing the Earth, reflecting a full moon back at us. When the moon is between the sun and the Earth the illuminated side is facing away from the Earth, allowing us to see a new moon. Make a moon chart that records the shape of the moon for the next 28 days and discuss where the moon, Earth and sun could be in relation to each other. Talk about what pattern your student notices and have them make hypothesis about what shape they think the moon will take the next night.



Kindergarten

Discuss how the sun affects the Earth. Go outside and make a list of observations about what the sun is shining on and hypothesize how that object or organism uses the sun.

1st Grade

After observing the day and night skies draw or write about patterns that are noticed. What happens to the sun during the day? What happens to the moon over the week? Are there any changes to the stars?

2nd Grade

Go on a plant hunt and look for plants that are using sunlight. Why do plants need sunlight? Do all plants need the same amount of sunlight? What do the plants do at night?

3rd Grade

Keep track of the temperatures during the day and night for a week. How does the sunlight affect the weather on Earth? Is there a benefit to being active at night instead of during the day?

4th Grade

Discuss with your student where they think the moon gets its light from. Talk about reflection and how light waves move through space and bounce off of other objects. This is what is happening to the moon. Have them use a mirror, cell phone screen or some other reflective surface to move light onto a targeted object to see how light waves can be manipulated.

5th Grade

Use sidewalk chalk, rocks or another means of tracing on a driveway, fence or ground to keep track of shadows throughout the day. How do the shadows change? Do they get longer or shorter? Do they change direction? Have a discussion with your student about why they think the shadows are changing and how that relates to the sky.