

Connecting With Your Child

Experiencing Earth's Rotation

To help your child learn more about Earth's rotation, visit a place where you can watch a sunrise or a sunset. Be sure your location allows your child to see the horizon. Large open areas without tall trees or buildings—such as a field, a beach, or atop a building—are the best choices. Have your child write down observations of the Sun, its motion, and the shadows on the land. Discuss these observations with your child and encourage him or her to notice the length and direction of the shadows and how quickly (or slowly) the darkness changes into light. Make sure not to look directly at the Sun during your observations.

Then, have your child explain the scientific reason behind each observation. Encourage your child to draw diagrams or construct models showing how your position on Earth rotated into the Sun-facing side during your sunrise observations or into darkness. For any explanations that your child doesn't know, have him or her use the knowledge of Earth's rotation to hypothesize a possible explanation.



Then, ask your child why the Greeks thought the Sun god Helios traveled across the sky each day. How did your observations correlate to the ancient Greek myth? Take your child to a library or conduct an internet search to find stories about day and night from other ancient cultures. What do the stories have in common? How are they different? Why do you think so many cultures have myths about day and night? Which are the most scientifically accurate?

Here are some questions to discuss with your child:

- How did the shadows change during sunrise or sunset?
- What did the sky look like just before you saw the Sun (sunrise) or just after the Sun disappeared (sunset)? Why did it look like this?
- If we wanted to see sunrise or sunset during the summer, would we have to arrive at this location earlier or later? How about during the winter?