

# Rising and Setting of the Sun - Educator's Guide (Ages 8 -11)



## At the end of these Night Sky activities students will understand:

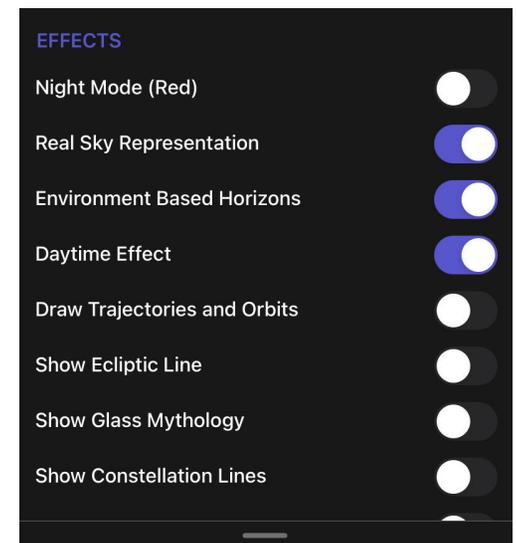
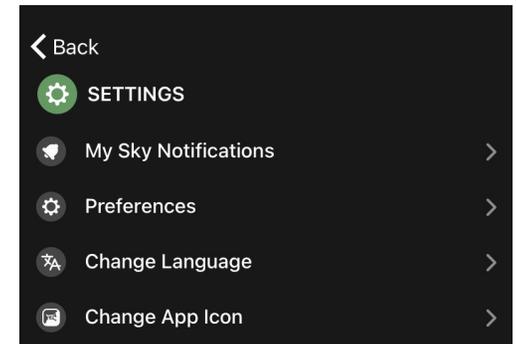
- The position of the Sun changes throughout the day
- Why the sun rises in the east and sets in the west
- What causes day and night
- That the Earth rotates and how long it takes for one rotation
- The meaning of the terms sunrise, sunset, horizon and rotation

## Astronomy background information

As the Earth moves in orbit around the Sun, it also turns on its axis, the imaginary line running between the north and south poles. This turning movement is called *rotation*. Earth makes a complete rotation once every 24 hours with respect to the Sun, this is why *a day is 24 hours long*.

The Earth's rotation is so slow that we cannot feel it. However, it has the effect of hanging what we can see in the sky. For example, the Sun appears to move across the sky during the course of a day. It rises above the *horizon* (the line that separates the ground and sky) in the east in the morning, crosses the sky during the day and sets under the horizon in the west in the evening. The *day* is defined as the time between sunrise and sunset.

The Earth rotates west to east, so Earth would turn counter-clockwise if it was viewed from above the North Pole. This direction of movement is why *the Sun appears to move from east to west through the day*.



## Night Sky App Essential Settings

Go to Night Sky Settings  and make sure the following Preferences are set.

### Turn On these Effects:

Real Sky Representation,  
Environment Based Horizons  
Day Time Effect

### Turn Off these Effects:

Show Trajectories and Orbits  
Show Ecliptic Line  
Show Glass Mythology  
Show Constellation Lines