

Spinning Around the Sun

Explore how the Sun, Earth, and Moon rotate!

Warning: This activity can make you dizzy. Use caution.

Materials Needed:

2-3 participants. Objects to represent the Earth, Moon, and Sun (balls, round fruit, colorful scarves, printed pictures or paper circles, etc.).



Instructions:

Decide who will play the roles of Sun, Earth, and Moon, and choose objects to represent each one. The Earth is a good choice for an adult in the group, as it has the most complex movements. For 2-person groups, you can do two separate demonstrations: Earth-Sun and Earth-Moon.



Step 1: The Sun. The Sun actor and object goes in the center of a room or outdoor area and stays in one place. The Sun actor can spin their object very slowly. *On average, the sun rotates around itself once every 27 days.*

Step 2: The Earth orbits the Sun.

- The Earth actor walks with their object in a circle around the Sun. *The Earth orbits around the sun in one year, or 365.24 days (the time between two birthdays!).*
- At the same time, the actor spins the object. *The Earth rotates on its axis (invisible line through the Earth from pole to pole) once every 24 hours, giving us days and nights.*
- Try spinning the object at an angle to show that Earth's axis is tilted. *The side of the earth tilted towards the sun changes through the year, giving us different seasons.*



Step 3: The Moon. The Moon actor walks with their object slowly around the Earth as it moves. *The moon orbits the Earth every 27 days.*

Perform your demonstration in front of your family or take a video for a virtual audience. Next time you see the sun move across the sky, think about the Earth spinning in space, under our feet!

Spinning Around the Sun Printables

Print the Sun, Earth, and Moon pictures to use as props, or use the images as inspiration to find or make your own props.

Sun

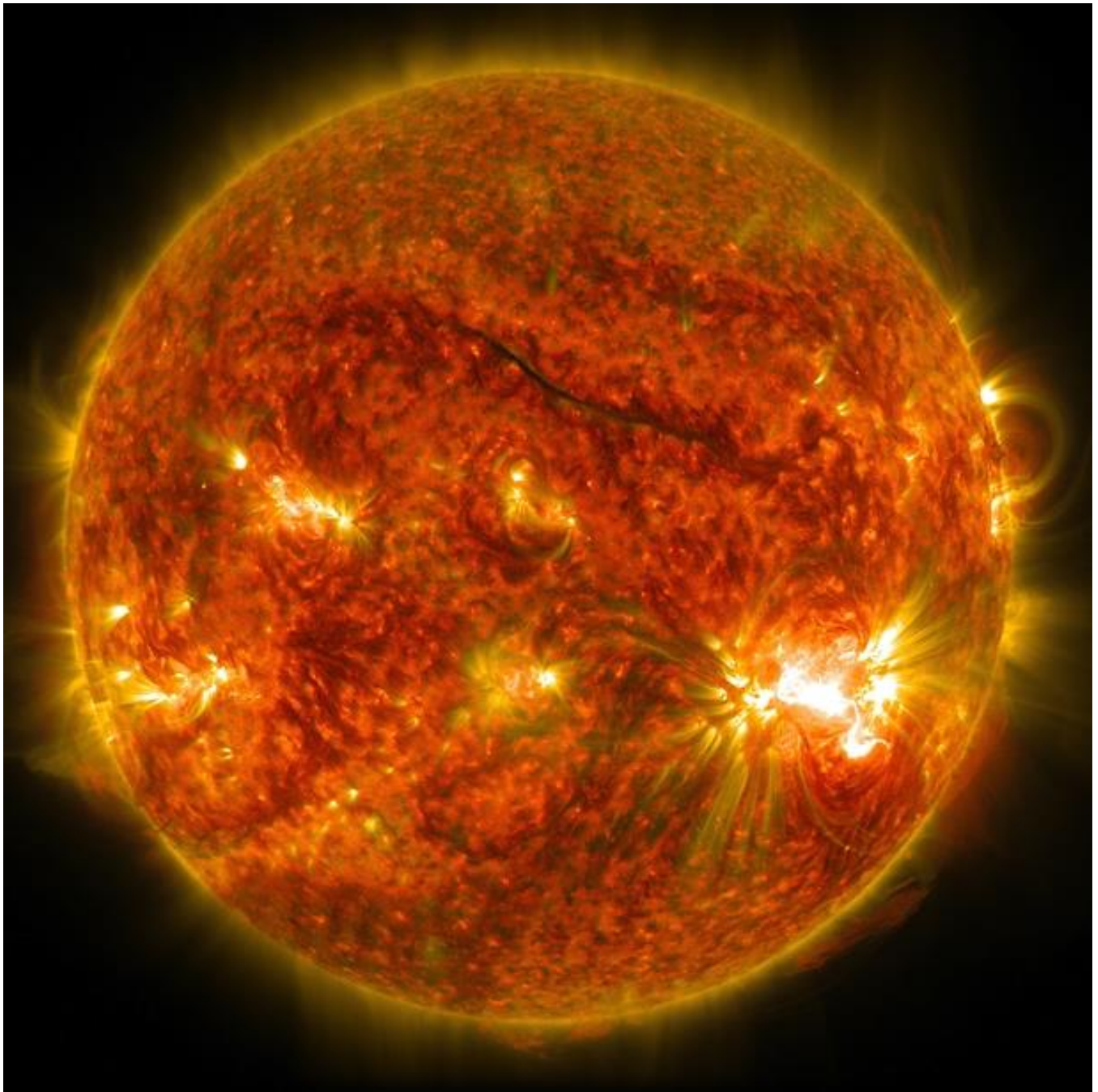


Image from NASA-Goddard: www.nasa.gov/content/goddard/one-giant-sunspot-6-substantial-flares/

Spinning Around the Sun Printables

Earth



Image from NASA/NOAA: www.nasa.gov/multimedia/imagegallery/image_feature_2159.html



Moon

Image from NASA:
[www.nasa.gov/mission_pages/apollo/40th/
images/apollo_image_25.html](http://www.nasa.gov/mission_pages/apollo/40th/images/apollo_image_25.html)

Note: Images are not to scale.