



# Sun and Moon Dance

Explore the movements of the Moon around the Earth and the Earth around the Sun through a fun dance.

## Materials

String (3-4 ft)

Chalk

Bigger "Sun" object (a ball, box, toy, rock, etc.)

Smaller "Moon" object (a ball, a box, toy, rock, etc.)

10 square feet of open flat concrete (like a sidewalk or driveway)

## Instructions

1. Draw a chalk circle. This will be your "orbit" around the Sun.
  - a. Have an assistant (or tape, or rock) hold one end of the string on the ground.
  - b. Hold the other end of the string so that it is pulled all the way out and hold a piece of chalk at the end.
  - c. Keeping the string fully extended and your assistant at the center, place the chalk on the ground and walk in a circle around your assistant to make a circle.
2. The big object will be the Sun, the smaller object will be the Moon, and YOU will be the Earth!
3. The Earth goes around the Sun.
  - a. Put the "Sun" in the center of the chalk circle.





- b. As the Earth, walk along the chalk circle around the Sun. How long did it take you? (It takes the Earth one year to travel around the Sun once—you were probably faster than that!)
    - c. Challenge: Walk counterclockwise around the Sun.
4. The Moon goes around the Earth.
  - a. Hold the “Moon” in your hands.
  - b. The Moon travels around the Earth (that’s you!).
  - c. Stretch your arms to hold the Moon out in front of you and slowly spin in a circle. How long does it take the moon to make one full circle? (It takes the Moon one month to go all the way around the Earth once—you were probably faster than that!)
  - d. Challenge: Spin counterclockwise.
5. Put it all together.
  - a. Walk around the Sun on your chalk circle while spinning the Moon around you. Can you stay on the chalk circle? How many times can you spin the moon around you in the time it takes you to walk around the circle once? The Moon spins around the Earth about 12 times for every one time the Earth goes around the Sun.
6. Extra: Dance with music!
  - a. Add music to your dance—play a song, sing, hum, or maybe just think of it in your head (since there is no sound in space). Fun ones to try: “What is the Sun Really Made of?” by They Might Be Giants, or “Planets Suite” by Gustav Holst.
7. Challenge: Add more planets and moons!
  - a. Once you have perfected your dance, share it with friends or family and see if they want to dance with you! After all, 8 planets go around our Sun, not just Earth, so there’s room for more. They all move at different speeds—planets closer to the Sun go faster and planets farther away go slower, so pretend to be different planets by dancing in a faster circle closer to your “Sun” or in a slower circle farther away from it. Additionally, some planets have no moons, some have lots, so pretend you have one, two, or even no moons to see how that changes your dance.