

Name \_\_\_\_\_

## The Marvels of Circular Motion

### Short Answer Key

1. Example: Spinning a yo-yo. When you spin a yo-yo, the string exerts centripetal force, pulling the yo-yo toward the center of the circle formed by the string.
2. Centrifugal force is often misunderstood as a real force pushing objects outward in circular motion. In reality, it is a result of inertia, giving the illusion of an outward force.
3. Centripetal force pulls objects toward the center of the circle, while centrifugal force appears to push them outward. These forces balance each other, preventing objects from leaving the circular path or collapsing inward.
4. Gravity provides the centripetal force needed to keep planets in their orbits around the sun. It acts as an attractive force pulling planets toward the sun, preventing them from moving in a straight line.
5. Example: The Gravitron ride. It spins rapidly, creating centripetal force, which pushes passengers against the ride's walls. The friction between riders and the walls prevents them from falling, ensuring their safety.

