

MOTIONS OF THE EARTH THROUGH SPACE

ntil Galileo's day, most people thought the earth didn't move. After all, it doesn't feel like it's moving—unless we're caught in an earthquake. But even as you read this article, you are moving rapidly through space in several directions. Marvel at these amazing movements as the earth

- spins on its axis. As Earth rotates once every 24 hours, a person standing at the equator moves at a speed of 1,100 miles per hour. (This motion is a bit slower for those of us living in North America, but still an impressive 700 miles per hour or so.)
- orbits the Sun. As Earth orbits the Sun once per year, it travels at an average speed of 67,000 miles per hour.
- orbits the Milky Way. Our galaxy, the Milky Way, is a large disk of billions of stars, all orbiting around its center. The Sun orbits at a speed of 490,000 miles per hour. (At this rate, it takes 230 million years for one trip around the galaxy.)
- moves toward neighboring galaxies. The Milky Way is attracted to other galaxies by gravity, causing the entire Milky Way to move through space in the direction of the constellation Hydra. This motion is the fastest yet, at about 1,300,000 miles per hour!