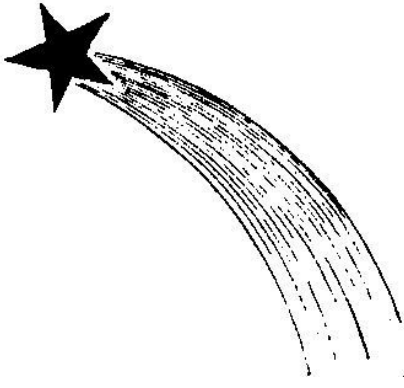


Name \_\_\_\_\_

## Shooting Stars vs. Meteors: Unraveling the Cosmic Confusion



Have you ever gazed up at the night sky and seen a streak of light zip across the darkness? You might have excitedly called it a "shooting star," but did you know that shooting stars aren't stars at all?

### Shooting Stars: The Celestial Misnomer

Shooting stars, as they are commonly referred to, are not stars at all. Instead, they are meteors, and their journey begins far away from our planet, Earth. Meteors are small fragments of rock, dust, or metal that

travel through space. When one of these meteoroids enters Earth's atmosphere, it ignites due to the intense friction with the air. This combustion creates a brilliant streak of light in the sky, which we perceive as a shooting star.

### The Life of a Meteoroid

Meteoroids, the precursors to meteors, are remnants of comets, asteroids, or even pieces of the Moon and Mars. These objects wander through space until they encounter Earth's gravitational pull. As a meteoroid plunges into our atmosphere, it can reach speeds of tens of thousands of miles per hour. The air resistance causes the meteoroid to heat up and produce the luminous trail we observe.

### A Meteoroid's Fate

The journey of a meteoroid doesn't end with its brief but dazzling appearance in the night sky. Most meteoroids are relatively small, often no larger than a grain of sand. As a result, they completely burn up during their fiery descent through the atmosphere. This incineration is what makes meteors appear as shooting stars, leaving no remnants to reach the Earth's surface.

### Meteorites: Survivors of the Descent

While most meteoroids disintegrate during their fiery entry, some larger ones manage to survive the journey and land on Earth's surface. These surviving fragments are called meteorites and provide valuable insights into the composition of celestial bodies. Meteorites can vary in size, from small pebbles to substantial chunks of rock.

### Distinguishing Between Shooting Stars and Meteors

To summarize, the term "shooting star" is a misnomer. Shooting stars are actually meteors, and meteors are meteoroids that burn up upon entering Earth's atmosphere, creating streaks of light in the night sky. Meteoroids, the initial cosmic travelers, come from various sources in the solar system.

While shooting stars and meteors are not the same thing, they are closely related phenomena. The next time you spot a meteor streaking across the night sky, you can impress your friends with your newfound knowledge about these celestial wonders.

