

# ASTROLYMPICS SPEED

**DEFINITION:** distance traveled  
over a certain period of time

We often note when something is moving faster or slower than something else. Speed is often used interchangeably with velocity, but they are in fact not the same. Speed measures distance over time, and velocity does this and adds direction. Therefore, two objects may have the same speeds but different velocities if they are moving in different directions.

**Units:** miles per hour (mph), kilometers per hour (kph), meters per second (mps)

## COSMIC EXAMPLE

**Cassiopeia A shockwave moving into  
interstellar medium: 10 million mph  
(16 million kph)**

The supernova remnant Cassiopeia A has a shockwave from the explosion that destroyed the star moving into space at 10 million mph (16 million kph).



## EVERYDAY EXPERIENCE

Typical US speed limit on  
highways: 60 mph (96 kph)

## OLYMPIC EXAMPLE

Fastest sprint: 27.8 mph (44.6 kph)

