

ROTATION

The idea of rotation can be found in many places from children's toys (merry-go-rounds) to household appliances (washing machines). The description of rotation is often used interchangeably with 'spin' and 'revolution'. By measuring how many rotations (or cycles) an object makes over a certain amount of time, we can compare how quickly each is turning.

DEFINITION: when an object turns around a central axis. Rotational speed is defined as the number of turns around an axis over a given time.

UNITS: revolutions per minute (RPM), one cycle per second (Hertz)

COSMIC EXAMPLE

Crab Nebula Pulsar:
1,800 RPM (30 Hertz)

The Crab Nebula spews a blizzard of high-energy particles, as detected by NASA's Chandra X-ray Observatory, from a dense core that spins at 1,800 RPM (30 Hertz).



EVERYDAY EXPERIENCE

Washing machine:
1,200 RPM (20 Hertz)

OLYMPIC EXAMPLE

Figure Skating: Ice skaters can rotate 300 RPM (5 Hertz).

