Flipping Physics Lecture Notes:

Angular Velocity Introduction

The equation for average *linear* velocity is: $\vec{v}_{avg} = \frac{\Delta \vec{x}}{\Delta t}$

- Average *linear* velocity equals change in *linear* position over change in time.

Therefore the equation for average *angular* velocity is: $\vec{\omega}_{avg} = \frac{\Delta \vec{\theta}}{\Delta t}$

- Average *angular* velocity equals change in *angular* position over change in time.
- The symbol for angular velocity is the lowercase Greek letter omega, ω .
- The two most common units for angular velocity are:
  - $\frac{rad}{s}$ used most often physics.
  - $\frac{revolutions}{minunte} = \frac{rev}{min} = rpm$ used most often in the "real world".

Note: For quite a while we will not discuss the direction of angular quantities like angular displacement and angular velocity. In my experience it is much easier for students to get to know the angular variables without direction first and then introduce direction. Have patience, direction will come soon enough.

- For those of you who are not satisfied with that, understand that clockwise and counterclockwise are observer dependent and therefore we will be using the Right Hand Rule instead of clockwise and counterclockwise, but not yet.

Examples of objects with angular velocity: