

## Rotation Stool and Masses

### Rotating Stool and Masses

**Time Taken: ~ 10 min**

#### **Objectives: (optional)**

The students will:

- Understand the effect that radius has on the rotational velocity of a body
- Understand the term moment of inertia
- Use conservation of angular momentum to understand relation between distribution of mass and rotation velocity

#### **Materials:**

- Rotating platform
- Stool
- Masses
- Volunteer

#### **Vocabulary: (optional)**

- Radius
- Moment of inertia
- Rotational velocity
- Conservation of angular momentum

#### **Procedures:**

- Ask for volunteer
- Have volunteer sit on stool and hold two 1 Kg masses in each hand
- Have student hold out masses and legs
- Spin student slightly
- Have them bring their arms and legs in and observe the increase in angular velocity

#### **End of activity questions to ask: (optional)**

- Why does the student speed up when mass is close to the body