

## Red and Blue Moment Bar

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**Time Taken: ~ 5 min**

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

The students will:

- Understand the concept of moment of inertia and be able to relate it to a linear analogy

#### **Materials:**

- Red/blue moment bars

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

- Moment of inertia
- Distribution of mass

#### **Procedures:**

- Tell the students that the two wands are the same mass
- Have several come up and hold the wands from the center and begin to twist them
- They notice that one is harder to twist.
- Ask them why
- Tell them that the distribution of mass is different for the two
- Have them relate this knowledge back to the equation for moment of inertia to explain why one is harder to twist
- (BONUS) make an analogy to mass and linear momentum.