Name_____

# ENGINEER

1. **What is the Conservation of Momentum?**

**2. Conservation of Momentum Demonstration. (See teacher for supplies.)**
**a) Have one five-pound weight in each hand (a total of 10 pounds.)**
**b) Sit on a rotating office stool or chair.**
**c) Hold your arms (with the weights in each hand) straight to the side.**
**d) Have one of your classmates lightly spin the stool.**
**e) Make note of how fast you are spinning.**
**f) Slowly move your arms into your body.**
**g) Make note of how fast you are spinning.**
**h) Slowly move your arms straight to your sides again. Note your speed again.**

***Virtual Demonstration: View the following website for a demonstration of Conservation of Angular Momentum.***

***Questions:***

**1. What happened to your speed when you pulled your arms into your body?**

**2. How does this demonstration explain the Conservation of Momentum?**

**Change in Pressure Demonstration**

**a) Obtain a balloon from your teacher.**
**b) Blow into the balloon. Seal the end with your finger.**
**c) Let go of the balloon.**

***Questions:***

**a. What kind of pressure did you have in the balloon (High or Low) when you sealed it?**

**b. In comparison, what kind of pressure did you have in the room (High or Low)?**

**c. When you released the balloon, did the air flow from high pressure to low pressure or vice versa?**

**d. How is the strength of the force of wind related to air pressure difference?**