

GUIDE FOR ACTIVITIES

1. Air Pressure
2. Center of Gravity

AIR PRESSURE

(AFTER EACH PERSON USES BLOW GUN, FUNNEL AND SPOOL, PLACE MOUTHPIECE IN ALCOHOL TO STERILIZE)

1. STRAW IN WATER

- a) Remove some water from the glass with the drinking straw. What supports the column of water? What is the maximum height one could draw the water?

2. BALL AND FUNNEL

- a) Turn funnel so that the large mouth is toward the floor.
- b) Place funnel stem to your mouth. (Stem must be kept perpendicular to the floor)
- c) Hold ping-pong ball inside of flanged portion of funnel.
- d) Blow hard through the stem at the same time releasing support of the ball. Observe results and discuss.

3. SPOOL AND CARD

- a) Repeat Activity Number 2, but this time use a spool and 2" x 2" card. Compare results. (Spool must be kept perpendicular to floor)

4. SPRAY GUN - Lecturer will demonstrate.

5. SUSPENDED BALLOONS

- a) Place the balloon string on the stick so the balloons are separated by one inch. Carefully blow between them with the drinking straw. Note results. Increase separation distance 1" at a time. Note result each time. Conclusions. (Repeat each experiment with straw in approximately same position)

6. BLOW GUN (Green Plastic Tube)

- a) Place one white ball in the tube and blow so that ball will rise out of lower tube and enter an opening above to complete a circle. Discuss the principle of this operation. (Blow gun must be kept parallel to the floor)

AIR PRESSURE - (Continued)

7. BALL AND LAUNCHER

- a) Place the ball in the trough of the "launcher".
- b) Use a quick snap to pitch the ball from the launcher overhanded. Repeat with an underhanded motion.
- c) Observe the path of the ball.

CENTER OF GRAVITY

1. BALANCED BELT

- a) Place belt on crook of lever so that the lever will balance on the opposite end. (Note: the belt can be placed leaning toward or away from the holder)
- b) Where is the center of gravity located? Discuss.

2. FIND CENTER OF GRAVITY

- a) Suspend weighted string from the bolt, holding the small bolt so that the board and weight swing free. Mark a line with chalk along string on board.
- b) Repeat using different holes.
- c) Observe results and discuss.

3. UP-HILL WHEEL - Lecturer will demonstrate.