

ACTIVITY: Wheelbarrow pilot

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SINCE YOU CAN'T TAKE A CLASSROOM IN THE AIR,

you can duplicate some of the sensations associated with controlling an airplane with this activity.

MATERIALS:

Wheelbarrow
Model airplane

TO DO IT:

- ▶ Divide the students into teams of two.
- ▶ Each team takes a turn at the wheelbarrow: One person sits in the wheelbarrow, holding the model airplane “straight and level,” and the other person takes the handles (control yoke) of the wheelbarrow to manipulate it.
- ▶ As the person in the wheelbarrow banks the airplane left and right, the person at the “controls” of the wheelbarrow tips that person (gently) left and right. This simulates turning the control wheel or stick in the airplane into left and right banks, and gives the person in the wheelbarrow a similar sensation as they would feel in the airplane when the control wheel actuates the ailerons on the wings.
- ▶ As the person in the wheelbarrow pitches the airplane nose up and nose down, the person at the controls also pitches the wheelbarrow back and forward (never coming close to dumping the passenger inside!). This simulates the feeling when a pilot pushes forward or pulls back on the yoke, activating the elevator on the rear of the airplane.
- ▶ As the person in the wheelbarrow yaws the airplane, turning the nose left and right, the person at the controls spins the static wheel-

barrow left and right on its front wheel. Again, this simulates what it feels like to yaw (turn the airplane on its vertical axis) the airplane with the rudder pedals inside the cockpit.

- ▶ In order to make a “coordinated turn” the pilot must use bank to start the turn and yaw to align the airplane’s fuselage with the direction of the turn.
- ▶ Demonstrate how it would feel for these control inputs to work together, using the model airplane (by the person in the wheelbarrow) and the wheelbarrow itself (by the person at the controls.)

Note: Adapted from “Women/Leaders Take Flight” seminar, presented by Linda Castner.

NOTE:

If you cannot find a wheelbarrow—or school policy won’t allow students to climb into one—find a shallow cardboard shirt or gift box and place a doll or action figure in the open box. Students can manipulate the box like the wheelbarrow to see how the controls might work.

