

Chairs on Wheels

Instructor's Handout

1 Educational Objectives

By participating in this activity, students will begin to internalize the concepts behind Newton's Third Law, which are often hard for student's to understand initially.

2 Materials

- 2 chairs, one with wheels, preferably both;

3 Instructions

- Get 2 chairs. At least one of them has to have wheels underneath them.
- Get 2 students to sit on the chairs and face each other.
- The students should extend their arms straight forward and place their hands upright so that their palms coincide.
- Make sure that the palms are touching.
- One student (the student has to be on wheels) should push against the palm of the other.
- If both chairs have wheels, notice that both students move away from each other even though only one student pushed.
- If one chair has wheels, notice that the student that pushed is the one who is moving away (provided that the student that pushed is on the chair with wheels.)
- Newton's 3rd Law says that when one body exerts a force on another one, then the body exerting the force will experience a force equal and opposite to the force exerted.