

Tips for controls:

- The sim is like looking down on an air hockey table. Instead of hitting the puck, this sim makes it move by using charged bodies like the charged balloons.
- Use the *Practice* mode for testing their ideas about how charge affects motion.
- The difference between *Clear* (everything is zeroed) and *Reset* (the puck is brought back to starting point with same charges).
- The *Trace* tool is helpful to make reasoning about what affects the charges have.
- The puck is negative by default, but there is a *Puck is Positive* option.
- The *Antialias* feature is just a programming tool; if you turn it on the resolution is better, but the program runs more slowly (less realistic).
- You may want to demonstrate how using multiple charges can be used to make a goal.

**Important modeling notes / simplifications:**

Static electricity and inertia are the only things affecting the pucks motion

Suggestions for sim use:

- For tips on using PhET sims with your students see: [Guidelines for Inquiry Contributions](#) and [Using PhET Sims](#)
- The simulations have been used successfully with homework, lectures, in-class activities, or lab activities. Use them for introduction to concepts, learning new concepts, reinforcement of concepts, as visual aids for interactive demonstrations, or with in-class clicker questions. To read more, see [Teaching Physics using PhET Simulations](#)
- For activities and lesson plans written by the PhET team and other teachers, see: [Teacher Ideas & Activities](#)
- Gold Star Activities: