


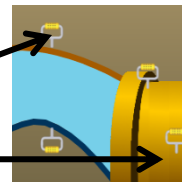
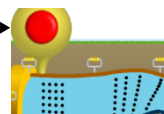
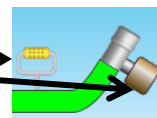
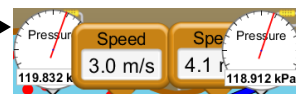


Tips for controls:

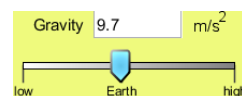
- Try all the different tabs at the top of the simulation. The tabs are designed to help teachers scaffold lessons or make lessons age appropriate by using only some tabs.
- **Reset All** resets only the tab that you are presently using.
- The **Pressure** tab is also available as a single sim called [Under Pressure](#)
- The **Grid** option is provided to help students see relative fluid height easily.
- The masses can only be set on the left column of water.
- Multiple tools can be used to make comparisons.
- You can **Pause**  the sim and then use **Step**  to incrementally analyze.
- The hose on the **Water Tower** tab has 2 controls. The handle moves the hose vertically and the gold knob rotates the nozzle.
- The red button tool allows students to make qualitative observations. Turning off the **Dots**  may be helpful.
- The handles on the **Flow** tab let you change the shape/height of the water tube and end pipes.

**Important modeling notes / simplifications:**

- The **Pressure** tab shows a thin slice of an underground basin with fluid in it. We used an underground situation where the top of the basin is at sea level
- The sensors are very sensitive, so you may expect some variations in answers.
- The **Flow** tab assumes that there is a “pressure head” at ground level.

Insights into student use / thinking:

- Because the Gravity slider has few tick marks, it is easy for a student to think they have set the meter back to Earth but not have exactly 9.8 m/s^2 . For example: Exact values between 1.0 and 20.0 can be typed in the white readout box.

**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](#)
- Related sims: [Under Pressure](#), [Density](#), [Buoyancy](#)