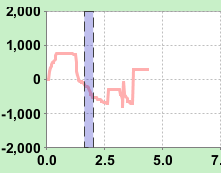
**Tips for controls:**

* Use the controls on the bottom to **Pause, Step**, or **Playback** the motion. ****
* The vertical grey line in the graphs is grabbable in **Playback** mode. It is useful to relate the object's motion to the graphs.

**Important modeling notes / simplifications:**

* Thermal Energy - the surface will heat up due to work done by friction. The friction coefficients *do not change* when the surface heats up.
* Using the "Clear Heat" button will remove the thermal energy. While the surface is wet (blue) the coefficients of friction are lowered until the surface is dry again (brown).
* If you want to explore how friction coefficient and mass effect friction forces, use the Friction Tab in the sim [Force and Motion](http://phet.colorado.edu/en/simulation/forces-and-motion)

**Insights into student use / thinking:**

* **This sim had many problems, so we revised it; the new sim is** [Ramp-Force and Motion](http://phet.colorado.edu/en/simulation/ramp-forces-and-motion).

**Suggestions for sim use:**

* We designed the motion sims to be used in the following order: [Moving Man](http://phet.colorado.edu/en/simulation/moving-man), [Forces & Motion](http://phet.colorado.edu/en/simulation/forces-and-motion), then [Ramp-Force and Motion](http://phet.colorado.edu/en/simulation/ramp-forces-and-motion). (The sim called “The Ramp” is an older version, but contains energy graphs. We plan to write an energy sim to reach the learning goals)
* Two related sims are [Ladybug Revolution](http://phet.colorado.edu/en/simulation/rotation) and [Ladybug Motion 2D](http://phet.colorado.edu/en/simulation/ladybug-motion-2d)
* For tips on using PhET sims with your students see: [**Guidelines for Inquiry Contributions**](http://phet.colorado.edu/teacher_ideas/contribution-guidelines.php)and [**Using PhET Sims**](http://phet.colorado.edu/teacher_ideas/classroom-use.php)
* 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**](http://phet.colorado.edu/phet-dist/publications/Teaching_physics_using_PhET_TPT.pdf)
* For activities and lesson plans written by the PhET team and other teachers, see: [**Teacher Ideas & Activities**](http://phet.colorado.edu/teacher_ideas/index.php)