Phet Force and Motion Lab

<http://phet.colorado.edu/sims/html/forces-and-motion-basics/latest/forces-and-motion-basics_en.html>

Click on the link and then click simulation. Open the file that downloaded.

* Click on the acceleration tab at the top of the simulation
* Click the forces, masses, speed, and acceleration boxes so they are checked
* Slide the friction to none.
* Drag a box onto the track.
* Use the slider under the frozen track to push the box.

Use the simulation to answer each of the questions below (Use complete sentences to answer each question:

1. How do you make the box speed up? To make the box speed up you need to have no weight on the box so it is very light.
2. How do you make the box move at a constant speed? You would need to change the ground to ice so the box can move at a constant speed.
3. Once the box is moving how do you make it stop? To make it stop you would have put a force on the right side of the box and push it until it stops. Or you could make it hard ground and then it would stop.
4. Once the box is moving how do you make it change direction? You have to go on a different side and push with all your force till it goes the other way.
5. Describe the motion the box undergoes when you make it change direction. When the box changes direction on ice it doesn’t get damaged or anything but if the ground is hard then it gets damaged.
6. Any change in motion is called acceleration. When does the box accelerate? The box accelerates when force is applied on it and then it starts moving slow then fast.