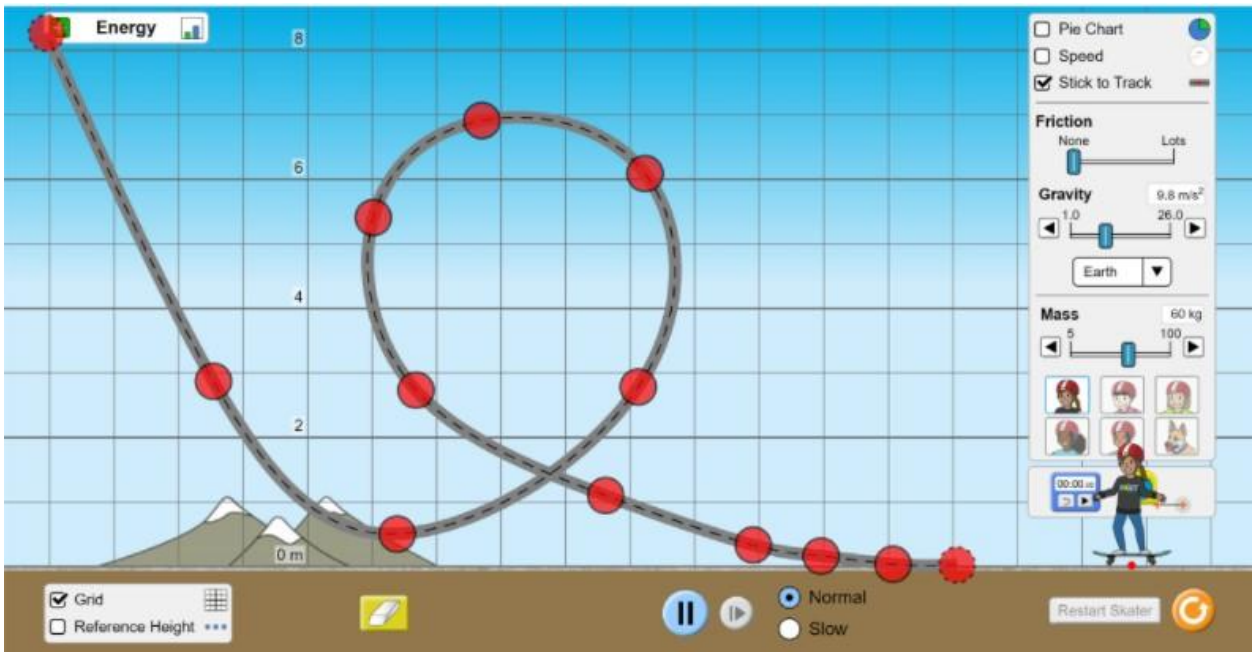
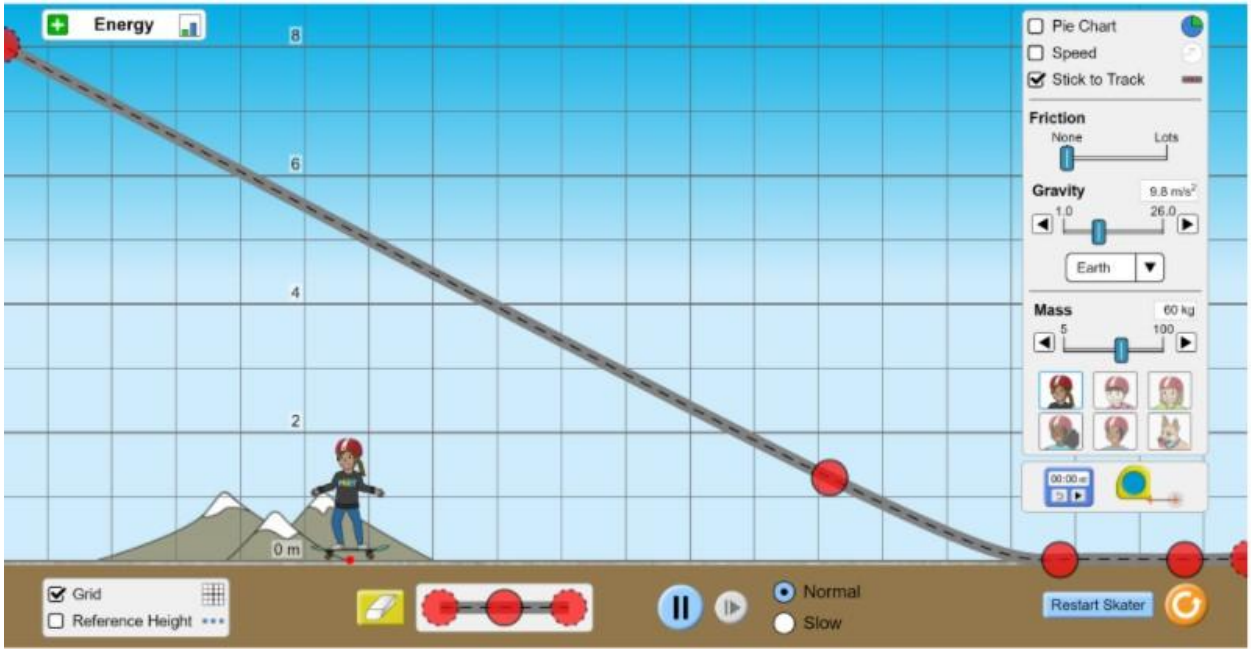
Jason Vu
Dr. Gill
Physics 31 Lab
Prelab 7

1.





2. With the default mass of 75 kg and spring constant of 1000 N/m, while pulling back the spring 1 m, it takes Trevor around 9.26 seconds to travel the 18 m marked on the screen. While pulling back the string 3 m with the same mass and spring constant conditions, it takes less time for Trevor to travel the same length, around 2.72 seconds, which means Trevor's velocity increases when the spring is compressed more. With the mass of 125 kg and a spring constant of 1000 N/m, while pulling back the string 3 m, Trevor takes around 3.72 seconds, so increasing the mass increases the time it takes and thus decreases Trevor's velocity. With a mass of 125 kg and a spring constant of 200 N/m, while pulling back the string 3 m. Trevor takes around 2.68 seconds, so increasing the spring constant decreases the time it takes and thus increases Trevor's velocity.