Grade level: 4th grade
Seed Standard: 4.2 Energy transfer

This demonstration teaches about energy transfer. Specifically about how energy is transferred from potential to kinetic energy. In the video we let a marble roll down a ruler and collide with another marble. We used textbooks to elevate one side of the ruler. With more textbooks we can increase the potential energy, therefore increasing the kinetic energy when it transfers.

Supplies:

- Textbooks (3-5), or something to elevate the ruler
- A ruler, the normal plastic rulers work great because they have the little divot down the middle that the marble can roll down.
- 2 marbles

Instructions:

1. Place 1 textbook on the table
2. Lean the ruler on the side of the textbook
3. Place a marble at the base of the ruler
4. Place the 2nd marble at the top of the ruler
5. Release the 2nd marble so that it rolls down the ruler. Colliding with the first marble.
6. Place another textbook on top of the first textbook
7. Repeat steps 2-6 until finished.

There are no significant safety precautions.

Citations:
All images were obtained from Pixabay.com
The background music was obtained from FreePD.com

Lucas, J. (2014, June 12). What Is Kinetic Energy? Retrieved October 07, 2020, from https://www.livescience.com/46278-kinetic-energy.html

Brainard, J. (2020, May 18). Potential Energy. Retrieved October 07, 2020, from https://www.ck12.org/physics/potential-energy/lesson/Potential-Energy-MS-PS/?referrer=concept_details