Ideas Energy Force Design lab

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| **Independent** (Manipulated) | **Dependent** (Measured) |
| Height of ramp | Time to roll down the ramp from rest |
| Length of ramp | Time to roll down the ramp from rest |
| Amount of water in water bottle | Time to roll down the ramp from rest |
| Number of coffee filters | Time to fall a certain distance  Terminal velocity measured by rangefinder |
| Length of string | Period of a simple pendulum |
| Mass | Period of a mass on a spring |
| Mass | Force of friction |
| Mass | Length of elongation of a spring  Distance of deflection of a cantilevered ruler |
| Position of pivot | Period of a physical pendulum.  Period of a simulated physical pendulum |
| Drop height of a ping pong ball | Time it takes to bounce 5 times |
| Length of cantilevered ruler | Period of vibration |
| Amplitude of swing | Period of a simple pendulum |
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