

Self feeding Escalator

materials: Battery motor speed controller screwdrivers, marble shaft cardboard, old smoke detector, broken toy.
Extra materials: hot glue gun and cutter, and scissors, and LED light

How is this science related?

This uses gravity energy and battery energy also recharging

experiment 1: Does the motor work connect motor to the battery and see if it works

experiment 2: Battery voltage using multi meter 7.7 volt

I measured the pieces using a measuring tape

I cut the pieces using a cutter

I glued the pieces using the hot glue

Hypothesis: will having 2 power sources make the escalator faster?

Problems: First the motor was making the escalator slower so I bought a better one. Second the belt wasn't working I tried 4 whole times and finally the 5th one worked. Finally third when I turned on the motor 30 mins later the hot glue I used to stick the motor on melted so I put super glue instead

Why did I choose this project? I chose it because
I really love escalators and how they work
and how electricity works

Experiment #1: I used a 6 volt battery
and used a 9 min timer and the ball went up
9 times

Experiment #2: I used a 9 volt battery
this time it went 15 times

$9V:15 \text{ cycle} \geq 6V:9 \text{ cycle}$

Final touch: I thought my escalator was missing
something. The light looked dim. So I decided to add
some LED lights.