

**Talcott Mountain Science Center**

**Topic** Science & Magic

**Home School Science**

**Instructor** John Pellino

**Home Links**

**Date** Nov 10, 2023

**Here's some information about the activities your student did with us. Links at the bottom will help you explore further. Enjoy!**

### **What did we do (content, skills, data collection)?**

We spent the day on levitation!

We saw how to use friction, magnetism, kinetic energy, gyroscopic effect and superconductivity to defy gravity.

We learned and practiced a combination of sleight and misdirection to make ourselves "levitate".

### **How did we do it (materials & methods)?**

We used magnets to show levitation of "like" magnetic poles (north-north or s-s), and used gyroscopes (even a bicycle wheel) to see how gyroscopes resist falling over.

We used the information about pendulums to learn how to balance items (the taller the better, all the way up to a 10-ft pole)!

We demo'd friction rings that can stay on the side of a larger ring and used a basketball and squash ball to show conservation of energy.

We used a superconductor disc to see the Meissner effect.

We practiced a practical levitation - feet off the floor - "trick".

### **Where can we find out more?**

Links:

Meissner effect: <https://www.youtube.com/watch?v=HRLvVkkq5GE>

Double ball physics: [https://www.youtube.com/watch?v=2UHS883\\_P60](https://www.youtube.com/watch?v=2UHS883_P60)