

Hall of Physics and Math

Show famous experiments

Classical Physics

0. Air table collisions similar to this video, my feeling is not to make this mathematical but observe light objects and heavy interact.

<https://www.bing.com/videos/search?q=air+table+physics+momentum&FORM=HDRSC3#view=detail&mid=B2C4F3DBF6FE54265F68B2C4F3DBF6FE54265F68>

Or

<https://www.bing.com/videos/search?q=air+table+physics+momentum&FORM=HDRSC3#view=detail&mid=BFCEEC4E365E0CA07181BFCEEC4E365E0CA07181>

1. Ball is thrown in a parabola . math video showing the calculation of same. Ball is shot by person

2. Special Relativity Display featuring Einstein thought experiment. Moving Train with two viewpoints of events . show math for Time dilation and space contraction

3. General relativity . simple idea that person falling in elevator does not know he's accelerating.

4. Speed of light – visitor presses button and measure the speed of light as in a youtube video <https://www.youtube.com/watch?v=H9kZTm4Xm-8>

5 two slit experiment showing light as a wave. Use wave tank to show similar for water waves.

6. experiment showing light as a particle

6 Quantum experiment – Schrodinger's cat

Many more

One page handouts on each experiment showing assumptions and calculations