Appendix to Virtual labs and simulations: Where to find them and tips to make them work

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Vectors / Measurement

http://ophysics.com/k11.html

http://ophysics.com/k3b.html

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=415

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=385

Kinematics and Projectile Motion

http://physics.bu.edu/~duffy/HTML5/Galileos_ramp.html

http://physics.bu.edu/~duffy/HTML5/projectile1.html

http://ophysics.com/k6.html

http://www.thephysicsaviary.com/Physics/Programs/Labs/GraphingOfMotionLab/

https://phet.colorado.edu/en/simulation/projectile-motion

Newton's Laws

http://www.thephysicsaviary.com/Physics/Programs/Labs/NewtonsLawLab/

https://www.vascak.cz/data/android/physicsatschool/template.php?s=mech_rovnobeznik&l=en

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=523

http://www.thephysicsaviary.com/Physics/Programs/Labs/ForcesOnInclineLab/

https://phet.colorado.edu/en/simulation/forces-and-motion-basics

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=653

http://www.thephysicsaviary.com/Physics/Programs/Labs/AtwoodLab/

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=650

http://www.thephysicsaviary.com/Physics/Programs/Labs/StoppingDistanceVersionTwo/

http://www.thephysicsaviary.com/Physics/Programs/Labs/SpeedAtLocationOnRamp/

https://www.walter-fendt.de/html5/phen/acceleration_en.htm

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=604

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=403

Centripetal Force

www.vascak.cz/data/android/physicsatschool/template.php?s=kv_pohyb_po_kruznici&l=en

www.physicsclassroom.com/Physics-Interactives/Circular-and-Satellite-Motion/Race-Track

https://sciencesims.com/sims/force-motion/

http://ophysics.com/f4.html

http://physics.bu.edu/~duffy/HTML5/circular_disk_turntable.html

Kepler's Laws and Gravitation

https://www.simbucket.com/satellite/

http://physics.weber.edu/schroeder/software/NewtonsCannon.html

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=586

https://www.walter-fendt.de/html5/phen/keplerlaw1_en.htm

https://www.walter-fendt.de/html5/phen/keplerlaw2_en.htm

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=636

Energy Conservation

http://www.thephysicsaviary.com/Physics/Programs/Labs/EnergyTransformationLab/

https://phet.colorado.edu/en/simulation/energy-skate-park-basics

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=405

Momentum and Collisions

http://ophysics.com/e2.html

http://www.thephysicsaviary.com/Physics/Programs/Labs/ImpulseLab/

https://www.myphysicslab.com/engine2D/newtons-cradle-en.html

http://ophysics.com/e3.html

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=361

Torque and Center of Mass

https://www.vascak.cz/data/android/physicsatschool/template.php?s=mech_stabilita&l=en

http://ngsir.netfirms.com/j/Eng/momentBalance/momentBalance_js.html

https://www.physicsclassroom.com/Physics-Interactives/Balance-and-Rotation/COM-Builder

https://www.walter-fendt.de/html5/phen/lever_en.htm

https://www.physicsclassroom.com/Physics-Interactives/Balance-and-Rotation/Balance-Beam

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=606

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=646

Rotational Dynamics

http://ophysics.com/r9.html

http://ophysics.com/r8.html

http://ophysics.com/r2.html

http://physics.bu.edu/~duffy/HTML5/energy_ramp_roll.html

http://www.thephysicsaviary.com/Physics/Programs/Labs/DiskDownIncline/

http://ophysics.com/r7.html

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=587

http://physics.bu.edu/~duffy/HTML5/jumping_on_merrygoround.html

http://www.thephysicsaviary.com/Physics/Programs/Labs/UnwindingCableLab/

Springs and Simple Harmonic Motion

http://phet.colorado.edu/sims/html/masses-and-springs/latest/masses-and-springs_en.html

http://physics.bu.edu/~duffy/HTML5/mass_on_spring_damped.html

https://www.walter-fendt.de/html5/phen/resonance_en.htm

https://www.walter-fendt.de/html5/phen/coupledpendula_en.htm

https://phet.colorado.edu/en/simulation/pendulum-lab

Mechanical Waves

https://academo.org/demos/wave-interference-beat-frequency/

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=584

https://www.walter-fendt.de/html5/phen/resonance_en.htm

http://ophysics.com/w2.html

http://ophysics.com/w8.html

http://ds.iris.edu/seismon/swaves/index.php

http://physics.weber.edu/schroeder/software/WaveBuilder.html

http://physics.bu.edu/~duffy/HTML5/doppler.html

http://ophysics.com/w6.html

http://ophysics.com/w11.html

http://ngsir.netfirms.com/j/Eng/resonanceString/resonanceString_js.htm

http://physics.bu.edu/~duffy/HTML5/speed_of_sound.html

http://ngsir.netfirms.com/j/Eng/timbre/timbre_js.html

https://phet.colorado.edu/sims/html/wave-on-a-string/latest/wave-on-a-string_en.html

http://phy.hk/wiki/j/Eng/lissajous/lissajous_js.htm

Fluids

http://www.thephysicsaviary.com/Physics/Programs/Labs/PascalsPrincipleLab/

http://www.thephysicsaviary.com/Physics/singlepage.php?ID=19

Archimedes' Law: The Gold Crown Mystery

https://www.walter-fendt.de/html5/phen/buoyantforce_en.htm

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=629

http://www.thephysicsaviary.com/Physics/Programs/Labs/FlowRateFromBeverageDispenserLab

Heat, Gas Laws, Thermodynamics

https://teachchemistry.org/classroom-resources/the-gas-laws-simulation

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=557

http://www.thephysicsaviary.com/Physics/Programs/Labs/MechanicalEquivalentOfHeatLab/

http://physics.bu.edu/~duffy/HTML5/ideal_gas.html

http://physics.bu.edu/~duffy/HTML5/diffusion.html

https://ch301.cm.utexas.edu/simulations/js/idealgaslaw/

http://physics.bu.edu/~duffy/HTML5/PV_diagram.html

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=1094

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=388

Light, Electromagnetic Waves, and Color

https://www.physicsclassroom.com/Physics-Interactives/Light-and-Color/RGB-Color-Addition

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=622

https://www.physicsclassroom.com/Physics-Interactives/Light-and-Color/Stage-Lighting

http://ophysics.com/l1.html

http://ophysics.com/l2.html

http://ophysics.com/l3.html

http://physics.bu.edu/~duffy/HTML5/polarized_light_filter.html

http://physics.bu.edu/~duffy/HTML5/Newtons_rings.html

Geometric Optics and Refraction

https://www.physicsclassroom.com/Physics-Interactives/Refraction-and-Lenses/Optics-Bench/Optics-Bench-Refraction-Interactive

https://www.physicsclassroom.com/Physics-Interactives/Refraction-and-Lenses/Refraction/Refraction-Interactive

https://www.physicsclassroom.com/Physics-Interactives/Refraction-and-Lenses/Least-Time-Principle/Least-Time-Principle-Interactive

http://physics.bu.edu/~duffy/HTML5/refraction_time.html

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=552

http://ngsir.netfirms.com/j/Eng/refraction/refraction_js.html

Diffraction

https://phet.colorado.edu/en/simulation/wave-interference

https://www.physicsclassroom.com/Physics-Interactives/Light-and-Color/Youngs-Experiment

https://www.walter-fendt.de/html5/phen/doubleslit_en.htm

http://ophysics.com/l5b.html

https://www.walter-fendt.de/html5/phen/singleslit_en.htm

Static Electricity

https://lab.concord.org/embeddable.html#interactives/interactions/chargeballs.json

http://physics.bu.edu/~duffy/HTML5/electroscope_charged_rod.html

https://lab.concord.org/embeddable.html#interactives/interactions/electricPE.json

http://physics.bu.edu/~duffy/HTML5/EField.html

http://physics.bu.edu/~duffy/HTML5/charge_in_EField.html

http://physics.bu.edu/~duffy/HTML5/field_and_string.html

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=459

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=632

https://www.physicsclassroom.com/Physics-Interactives/Static-Electricity/Put-the-Charge-in-the-Goal/Put-the-Charge-in-the-Goal-Interactive

https://phet.colorado.edu/en/simulation/balloons-and-static-electricity

https://phet.colorado.edu/en/simulation/charges-and-fields

https://phet.colorado.edu/en/simulation/john-travoltage

http://www.thephysicsaviary.com/Physics/Programs/Labs/ThompsonetomLab/

http://ophysics.com/em5.html

https://www.physicsclassroom.com/Physics-Interactives/Static-Electricity/Electric-Field-Lines/Electric-Field-Lines-Interactive

Electric Circuits

https://universeandmore.com/crackthecircuit/

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=398

http://www.thephysicsaviary.com/Physics/Programs/Labs/CoulombsLawLab/

www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=638

https://phet.colorado.edu/en/simulation/circuit-construction-kit-dc

Magnetism and Electromagnetism

https://www.walter-fendt.de/html5/phen/magneticfieldwire_en.htm

http://www.thephysicsaviary.com/Physics/Programs/Labs/FieldFromWire/

https://www.vascak.cz/data/android/physicsatschool/template.php?s=elplyn_magnet_elektron&l=en

http://physics.bu.edu/~duffy/HTML5/BField.html

https://phet.colorado.edu/en/simulation/legacy/magnets-and-electromagnets

https://www.physicsclassroom.com/Physics-Interactives/Magnetism/Magnetic-Field/Magnetic-Field-Interactive

http://physics.bu.edu/~duffy/HTML5/charge_in_field.html

http://physics.bu.edu/~duffy/HTML5/threeD_magnetism.html

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=631

https://www.vascak.cz/data/android/physicsatschool/template.php?s=mag_wehnelt&l=en

Modern Physics

https://www.compadre.org/osp/EJSS/4176/197.htm

http://physics.bu.edu/~duffy/HTML5/brownian_motion.html

http://physics.bu.edu/~duffy/HTML5/blackbody_radiation.html

http://physics.bu.edu/~duffy/HTML5/halflife.html

http://physics.bu.edu/~duffy/HTML5/emission_spectra.html

https://www.walter-fendt.de/html5/phen/bohrmodel_en.htm

http://www.thephysicsaviary.com/Physics/Programs/Labs/PhotoelectricEffect/

https://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=491

http://www.thephysicsaviary.com/Physics/Programs/Labs/RadiationDetectionLab/

http://www.thephysicsaviary.com/Physics/Programs/Labs/RadioactiveShieldingLab/

https://www.refsmmat.com/jsphys/relativity/relativity.html

https://sciencesims.com/sims/bohr-model/

https://phet.colorado.edu/en/simulation/photoelectric

https://phet.colorado.edu/en/simulation/blackbody-spectrum