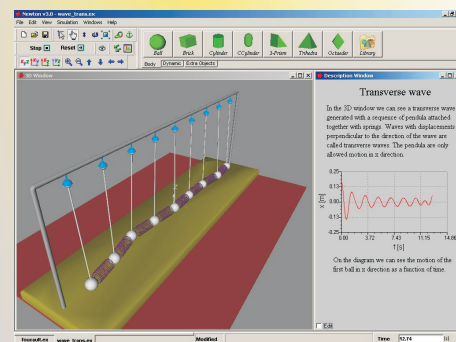
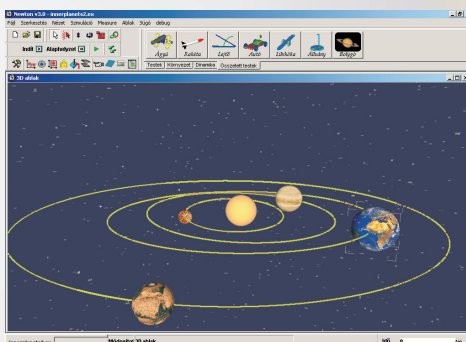
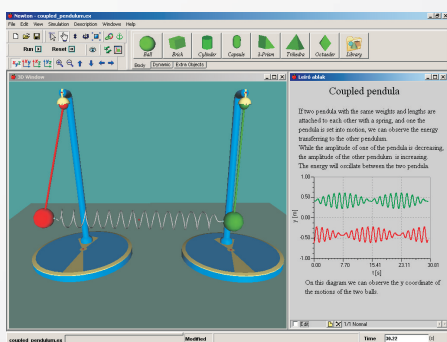


# NEWTON

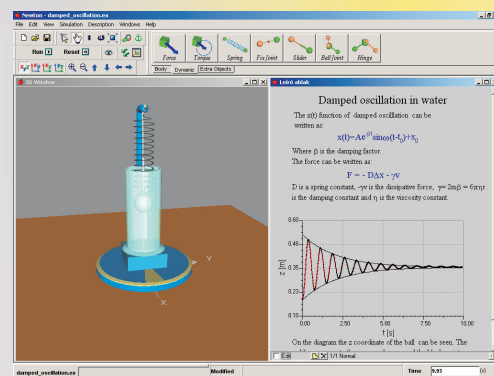
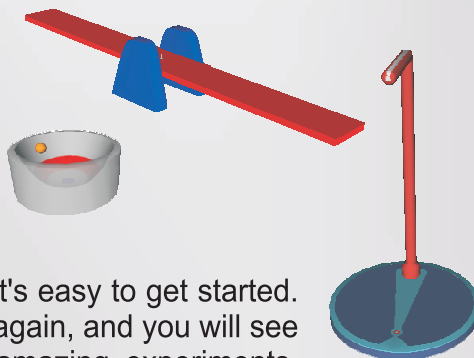
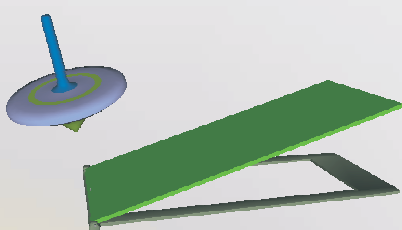


## 3D Multimedia Lab for Exploring Physics

The virtual world of Newton v3.0 provides a completely new way of learning physics the exploration of kinematics and dynamics on a computer in 3D. The virtual world of Newton is ruled by the simulated laws of physics, allowing you to build, manipulate and investigate your experiments interactively, without the limitations of physical models.



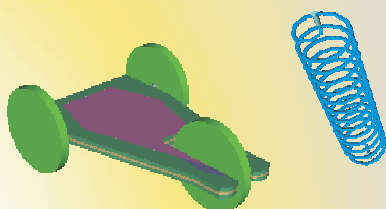
When creating an experiment in Newton, you can select from a wide range of real world or abstract objects, from the simplest geometrical bodies (brick, sphere, etc.), complex instruments (stands, slope, car, etc.), and constraints (many types of joints and springs). You can adjust their physical parameters (mass, elasticity, friction, etc.); assign to them forces, torques or velocity; and make relationships subject to constraints. You can add virtually any object to Newton using a VRML editor; you may also export your experiments in VRML format.



With the example files included, it's easy to get started. You can alter them and simulate again, and you will see that it's quite simple to create amazing experiments.

When running a simulation, the bodies start moving, guided by the acting constraints; are rotated by torques; and collide with each other as in a movie. Actually, you can set up one or more "cameras" and capture their views of the experiment, storing them in an AVI file.

You can also add descriptions to your examples, with explanatory texts, images, and formulas. Using diagrams, it's easy to measure and evaluate the results of your experiments. Several user-defined curves can be displayed on the same diagram, so it's easy to compare the measured data with the results derived from theoretical calculations.



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