

Newtonian Mechanics Learning Targets

Students will be able to understand, explain, discuss and apply Newton's Laws.

Student Targets

1. I can draw a free body diagram.
2. I can identify the Law of Inertia (Newton's 1st Law) to various everyday situations.
3. I can add force vectors graphically to find net force.
4. I can distinguish the difference between mass from weight.
5. I can recognize net force as the sum of the forces and not a force in itself.
6. I can calculate the net force based on the forces acting on an object in one dimension.
7. I can determine if an object will accelerate depending on the net force acting on it.
8. I can solve puzzles using Newton's 2nd Law. (* including connected objects and objects on inclined planes.)
9. I can identify action-reaction force pairs (Newton's 3rd Law) and the fact that they act on two separate bodies.
10. I can identify the factors that create friction, and how friction will affect an object's motion. (* I can additionally calculate the magnitudes of static and kinetic friction with appropriate friction equations.)

* Pre-AP Physics target