



BROWNELL TALBOT

Sixth Grade Prioritized Science Standards

The prioritized standards listed align with the NGSS (Next Generation Science Standards) Performance Expectations. The NGSS also includes a set of Science and Engineering Practices for grades kindergarten through 12. A practice of science is to ask and refine questions that lead to descriptions and explanations of how the natural and designed world(s) work and which can be empirically tested. Engineering questions clarify problems to determine criteria for successful solutions and identify constraints to solve problems about the designed world. Both scientists and engineers also ask questions to clarify ideas.

(see the link at the bottom for detailed descriptions of those condensed practices, grades K-12)

EARTH SCIENCE		
Earth's Place in the Universe	Universe & Its Stars	Develop and use a model of the Earth-sun-moon system to describe the cyclic patterns of lunar phases, eclipses of the sun and moon, and seasons. (MS-ESS1-1) Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system. (MS-ESS1-2)
	Earth & the Solar System	Analyze and interpret data to determine scale properties of objects in the solar system. (MS-ESS1-3)
PHYSICAL SCIENCE		
Matter & Its Interactions	Structure & Properties	Develop models to describe the atomic composition of simple molecules and extended structures. (MS-PS1-1) Analyze and interpret data on the properties of substances before and after the substances interact to determine if a chemical reaction has occurred. (MS-PS1-2) Gather and make sense of information to describe that synthetic materials come from natural resources and impact society. (MS-PS1-3) Develop a model that predicts and describes changes in particle motion, temperature, and state of a pure substance when thermal energy is added or removed. (MS-PS1-4)
	Chemical Reactions	Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved. (MS-PS1-5) Undertake a design project to construct, test, and modify a device that either releases or absorbs thermal energy by chemical processes. (MS-PS1-6)
Motion & Stability	Forces & Motion	Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects. (MS-PS2-1) Plan an investigation to provide evidence that the change in an object's motion depends on the sum of the forces on the object and the mass of the object. (MS-PS2-2)
	Types of Interactions	Ask questions about data to determine the factors that affect the strength of electric and magnetic forces. (MS-PS2-3) Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects. (MS-PS2-4) Conduct an investigation and evaluate the experimental design to provide evidence that fields exist between objects exerting forces on each other even though the objects are not in contact. (MS-PS2-5)