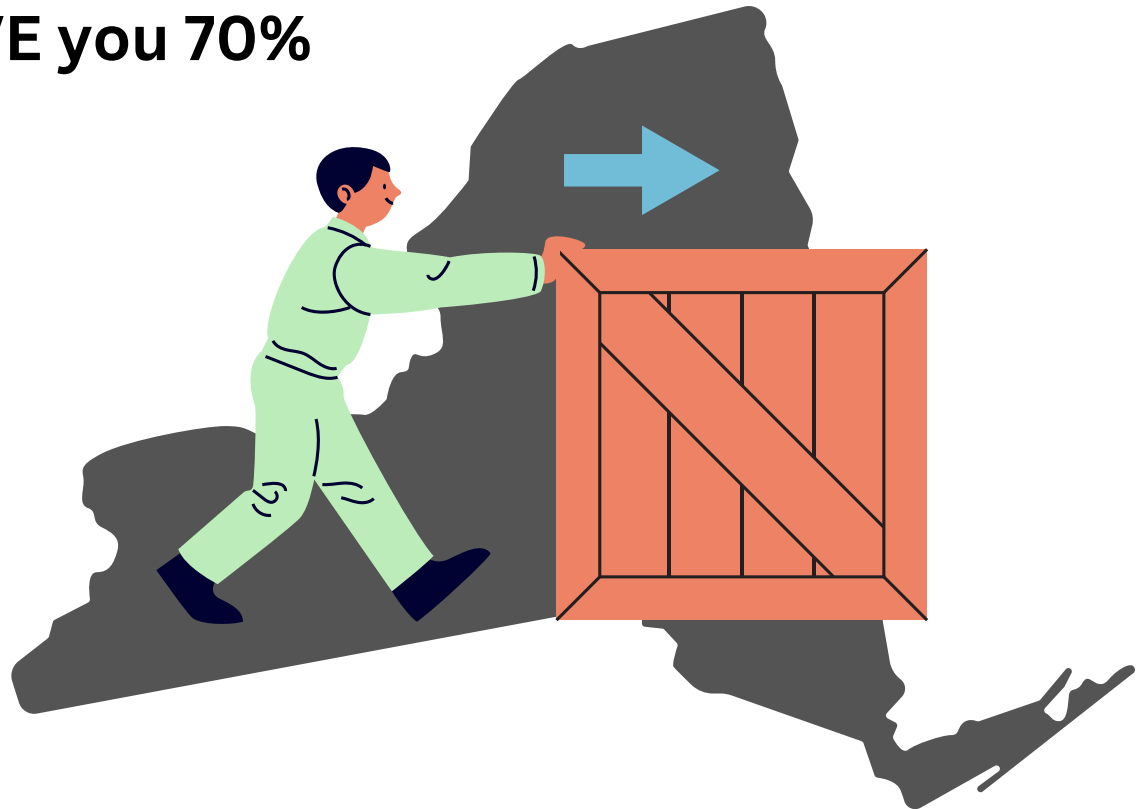


New York State P-12 Science Learning Standards (NYSSLS)

MS. Forces and Interactions

- ✓ Complete Standard for New York Middle School - Forces and Interactions Standard
- ✓ MS-PS2-1, PS2-2, PS2-3, PS2-4, PS2-5
- ✓ The Bundle will SAVE you 70%



UPGRADE to the Bundle



This Bundle:

- Get immediate access to my **COMPLETE** New York State Middle School Curriculum
- Every standard covered at a **HUGE DISCOUNT**

New York Middle School Science Curriculum

New York State P-12 Science Learning Standards (NYSSLS)

- ✓ Standards are directly aligned to New York State Middle School Science Standards according to the New York State Education Department
- ✓ The Bundle will SAVE you 80%



Click here to have a look

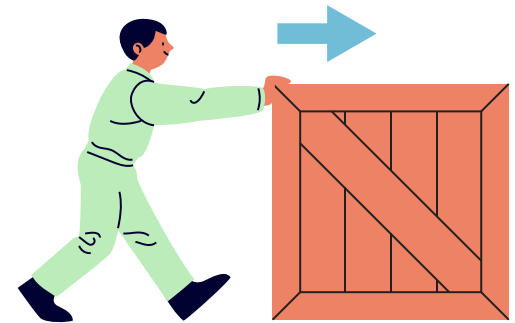
Resources Included

MS-PS2-1

- Newtons Laws of Motion – Lesson
- Newton's Laws Identification Worksheet
- Newton's Third Law and Colliding Objects - Activity
- Crash Course Video Worksheet Newtons Laws
- Isaac Newton - Reading

MS-PS2-2

- Newtons Laws of Motion – Lesson
- Newton's Second Law Student-Led Lab
- Newton's Laws Identification Worksheet
- Newtons Laws of Motion Word Search and Scramble Activity
- The Newtonian Adventures - Story Prompt



MS-PS2-3

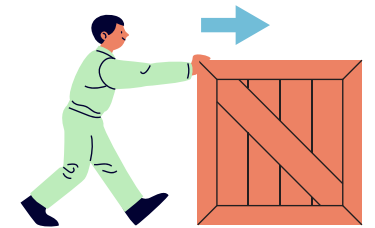
- Magnets and Electromagnets - Lesson
- Motors and Generators – Lesson
- Magnets and Electromagnets - Reading
- Electricity and Magnetism Word Search and Scramble Activity



Resources Included

MS-PS2-4

- Gravitational Interactions - Mass and Distance – Lesson
- Crash Course Video Worksheet Compilation - GRAVITY
- Crash Course Video Worksheet - The Gravity of the Situation
- Orbit Rope Model Activity



MS-PS2-5

- Magnets and Electromagnets – Lesson
- Static Electricity - Lesson
- Magnets and Electromagnets - Reading
- Effects of Everyday Forces - Reading
- Forces at a Distance – 4 Student-Led Activities
- ElectroQuest- The Spark of Discovery - Story Prompt
- Bill Nye – Static Electricity Video Worksheet
- Static Electricity Word Search and Scramble – Activity
- Static Electricity - Lab Station Activity



NGSS MS-PS2-1

Curriculum Bundle

Newton's Third Law & Collisions

- ✓ 1 Lesson and 4 Activities
- ✓ Everything You Need to Teach NGSS MS-PS2-1



NGSS MS-PS2-3

Curriculum Bundle

Electric and Magnetic Forces

- ✓ 2 Lessons, 2 Activities
- ✓ Everything You Need to Teach NGSS MS-PS2-3



NGSS MS-PS2-4

Curriculum Bundle

Gravitational Attraction Explained Mass and Distance

- ✓ 1 Lesson, 3 Activities
- ✓ Everything You Need to Teach NGSS MS-PS2-4

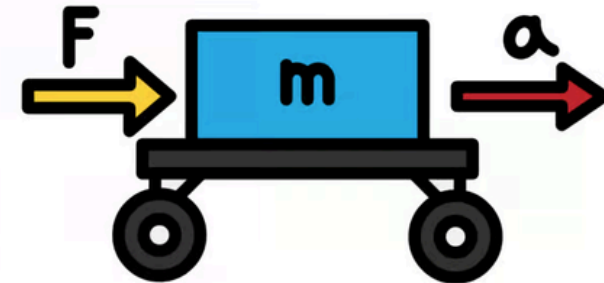


NGSS MS-PS2-2

Curriculum Bundle

Forces and Motion: Newton's First and Second Laws

- ✓ 1 Lesson and 4 Activities
- ✓ Everything You Need to Teach NGSS MS-PS2-2

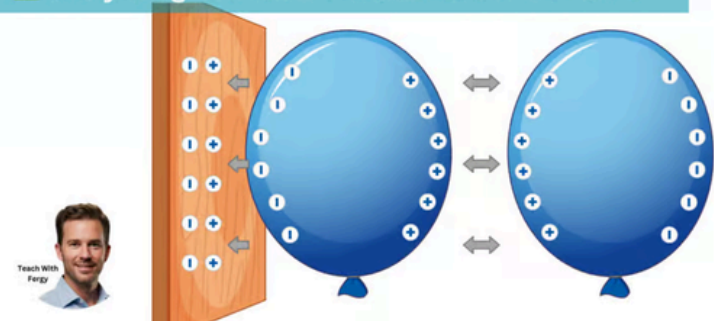


NGSS MS-PS2-5

Curriculum Bundle

Force at a Distance: Magnetic & Electric Fields

- ✓ 2 Lessons, 7 Activities
- ✓ Everything You Need to Teach NGSS MS-PS2-5



Everything You Need to Teach Middle School Forces and Interactions in New York State using NYSSLS

Complete Lessons

Newton's 3 Laws of Motion
Lesson MS-PS2-1 & MSPS2-2

Included in your Lesson:

- Forces and Net Force
- Newton's First Law
- Newton's Second Law
- Newton's Third Law
- Multiple Applications for Each Law
- Student Worksheet

Middle School



Reading Comprehension
Passage and Questions

The Effects of Everyday Forces

6th, 7th, and 8th Grade Science

- ✓ No Prep, Ready-to-Use Resource in Google and Office Format
- ✓ Includes Comprehension and Extension Questions



Magnets and Electromagnets

Included in your Lesson:

- Magnets and their Uses
- Magnetism and Magnetic Fields
- Law of Magnetic Poles
- Permanent vs. Temporary Magnets
- Earth's Magnetic Field
- Northern and Southern Lights
- How a Compass Works
- Electromagnets

Middle School



Gravitational Interactions
Mass & Distance Lesson

✓ **Comprehensive Content Overview** – Cover what gravity is, the relationship between gravity and mass as well as gravity and distance, the moon and tides, and gravity's role in the solar system.

✓ **Student-Friendly Format** – Clear visuals and comparisons support understanding of complex concepts.



Engaging Activities

Electricity and Magnetism Word Search and Scramble

THREE Activities in One!

Basic 25-Term Word Search

25 Scrambled Words Word Search
Students then unscramble and define each

Word Scramble and Define Activity

TWF



Magnets and Electromagnets
- Scientific Reading
Comprehension Article

Improve your students **Scientific Literacy and Analysis Skills**, use as an **Emergency Substitute Plan** or create **Applicability** in your classroom



Newton's Second Law
Student-Led Lab

NGSS MS-PS2-2
Students design and carry-out an experiment to test Newton's Second Law of Motion

NGSS MS-PS2-2

TWF



The Standard is Explained and the Resources it Incorporates are Outlined

MS. Forces and Interactions – New York State – Middle School

MS PS2-1: Apply Newton's Third Law to design a solution to a problem involving the motion of two colliding objects.

Examples of practical problems could include the impact of collisions between two cars, between a car and stationary objects, and between a meteor and a space vehicle. *Assessment Boundary:* Assessment is limited to vertical or horizontal interactions in one dimension.

Resources:

- Newton's Laws of Motion – Lesson
- Newton's Laws Identification Worksheet
- Newton's Third Law and Colliding Objects - Activity
- Crash Course Video Worksheet Newton's Laws
- Isaac Newton - Reading

MS PS2-2: 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.

Emphasis is on balanced (Newton's First Law) and unbalanced forces in a system, qualitative comparisons of forces, mass and changes in motion (Newton's Second Law), frame of reference, and specification of units. *Assessment Boundary:* Assessment is limited to forces and changes in motion in one-dimension in an inertial reference frame and to change in one variable at a time. Assessment does not include the use of trigonometry.

Resources:

- Newton's Laws of Motion – Lesson
- Newton's Second Law Student-Led Lab
- Newton's Laws Identification Worksheet
- Newton's Laws of Motion Word Search and Scramble Activity
- The Newtonian Adventures - Story Prompt

MS PS2-3: Ask questions about data to determine the factors that affect the strength of electric and magnetic forces.

Examples of devices that use electric and magnetic forces could include electromagnets, electric motors, or generators. Examples of data could include the effect of the number of turns of wire on the strength of an electromagnet, or the effect of increasing the number or strength of magnets on the speed of an electric motor. *Assessment Boundary:* Assessment about questions that require quantitative answers is limited to proportional reasoning and algebraic thinking.

Resources:

- Magnets and Electromagnets – Lesson
- Motors and Generators – Lesson
- Magnets and Electromagnets - Reading
- Electricity and Magnetism Word Search and Scramble Activity

MS PS2-4: Construct and present arguments using evidence to support the claim that gravitational interactions are attractive and depend on the masses of interacting objects.

Examples of evidence for arguments could include data generated from simulations or digital tools; and charts displaying mass, strength of interaction, distance from the Sun, and orbital periods of objects within the solar system. *Assessment Boundary:* Assessment does not include Newton's Law of Gravitation or Kepler's Laws.

Resources:

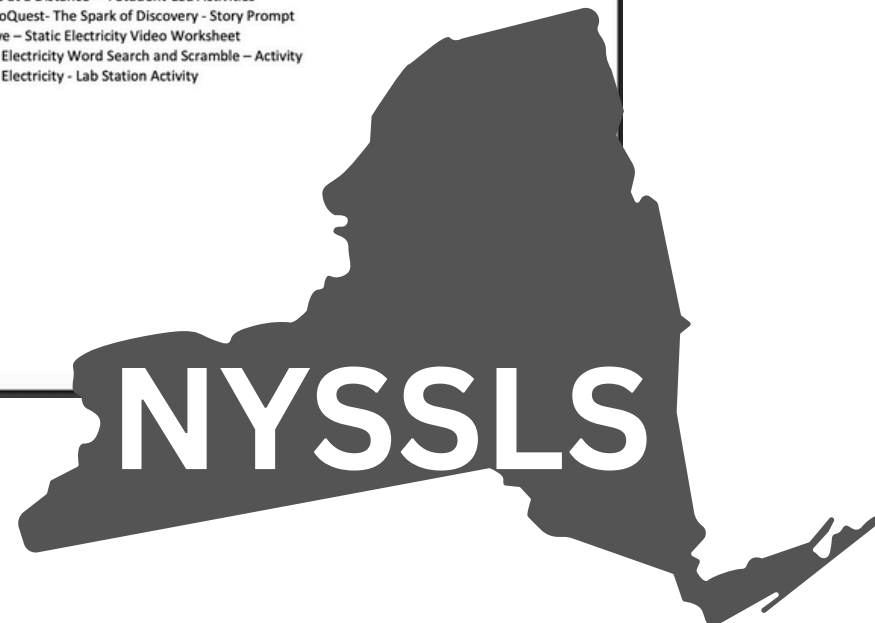
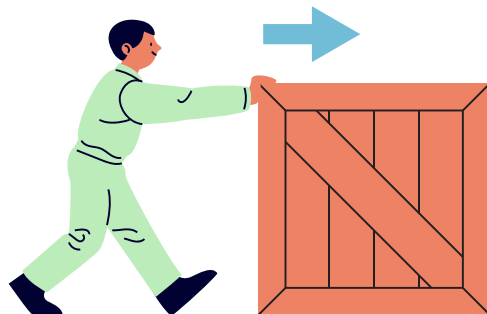
- Gravitational Interactions - Mass and Distance – Lesson
- Orbit Rope Model Activity
- Crash Course Video Worksheet Compilation - GRAVITY
- Crash Course Video Worksheet - The Gravity of the Situation

MS PS2-5: 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.

Examples of this phenomenon could include the interactions of magnets, electrically-charged strips of tape, and electrically-charged pith balls. Examples of investigations could include first-hand experiences or simulations. *Assessment Boundary:* Assessment is limited to electric and magnetic fields and limited to qualitative evidence for the existence of fields.

Resources:

- Magnets and Electromagnets – Lesson
- Static Electricity - Lesson
- Magnets and Electromagnets - Reading
- Effects of Everyday Forces - Reading
- Forces at a Distance – 4 Student-Led Activities
- ElectroQuest- The Spark of Discovery - Story Prompt
- Bill Nye – Static Electricity Video Worksheet
- Static Electricity Word Search and Scramble – Activity
- Static Electricity - Lab Station Activity



Who is this Bundle for?

- Teachers who teach middle school science in **New York State** and use **NYSSLS**
- Teachers who want multiple resources at their fingertips including lessons and a variety of activities, in order to meet the standard
- Teachers who don't have time to develop their own resources or organize what to teach and when

