



WELCOME PARENTS TO CURRICULUM NIGHT!



SCIENCE

PRESENTED BY:
STEPHANEE LONG
(SCIENCE/TECH)
ERIC MONTE
(PHYSICAL EDUCATION)

BIO BLURBS



Mrs. Long

- Married for 11 years this summer and we celebrated our anniversary in Montana
- Dog (Bowden), Cat (Queen), Bunny (Marshmallow)
- Master's in Reading from USF
- My 13th Year Teaching

Mr. Monte

- Former Ski Instructor
- Dog (Robbie)
- Bike Everyday from Queens
- After-School/Summer Camp Director
- Master's in PE (Bklyn Clg)





CURRICULUM OVERVIEW



- **Science and Technology:** Students in grades K-5 will visit our science room once or twice a week where they will engage in hands-on, inquiry based learning. In our science classes, students will explore physical, earth, and life sciences following our new NYC Science Scope and Sequence 2018 handbook. In addition, technology instruction (including computer coding) will be provided to students in grades K-5.
- **Physical Education:** Newly designed, NYC's scope and sequence for PE will be the road map for PE this year. The scope and sequence is based on Physical Best and the SHAPE national standards, but is specifically designed with NYC's public school students in mind. All students will have PE once a week and will engage in activities that focus on motor skill development, cooperation, and understanding movement concepts. The goal of PE is to give students tools needed to make physical activity a permanent part of their lives. 4th and 5th grades will participate in non-evaluative Fitnessgram assessments in October, December, and April.

P.E. PACING CALENDAR

	K-2	3-5
September	Routines: Establish procedures, communication, initial assessment, team building, taking turns, sportsmanship	Routines: Establish procedures, communication, initial assessment, team building, sportsmanship
September October	Pathways Locomotors: Movement concepts, spacial-awareness, routines.	Fitness: Health related fitness principles, PACER, fitness stations, fitness plans
October December	Throwing: Skill development, underhand, overhand, stations, cooperative games	Throwing: Skill application, team games, cooperative games, stations
January	Striking: Stations using implements, racquets, hands, bats, bowling.	Volleyball: Stations, intro to skills, modified game
February	Basketball: Dribbling, passing, shooting, cooperative games	Basketball: Dribbling, passing, shooting, cooperative games, skill application
March	Soccer: Dribbling, shooting, spacial awareness	Soccer: Dribbling, passing, shooting, cooperative games, skill application
April	Tag Games: Cardiovascular endurance, intro to PACER, cooperation	Racquet Sports: Introduction, stations, 2v2 play
May	Field Day: Field day prep	Field Day: Field day prep
June	Lifetime Games: Parachute games, horseshoe, ringtoss, frisbee, cornhole, summer games	Lifetime Games: Horseshoe, ring toss, frisbee, cornhole, summer games

NYC DOE K-2 LOCOMOTOR SKILLS OUTCOMES

THE K-5 SCOPE AND SEQUENCE PRIORITIZES A SKILLS-BASED APPROACH TO PHYSICAL EDUCATION

Skills & Concepts	Walking, Hopping, Galloping, Running, Sliding, Skipping, & Leaping NS 1 SS 1	Jogging & Running NS 1 SS 1	Jumping (Horizontal & Vertical) NS 1 SS 1	Space NS 2 SS 1
K	Performs locomotor skills: walking, hopping, galloping, running, sliding and skipping while maintaining dynamic balance	Runs in a large space avoiding collision with others	Performs vertical and horizontal jumping and landing actions from a stationary position with dynamic balance Explores traveling a short distance while jumping horizontally and landing with dynamic balance	Differentiates between movement in personal and general space
1	Walks, hops, gallops, runs and slides using a mature pattern	Runs with control at a variety of speeds	Demonstrates two of the five critical elements for jumping and landing in a horizontal plane using two-foot take-offs and landings Demonstrates two of the five critical elements for jumping and landing in a vertical plane Jumps over low obstacles landing with bent knees	Moves in personal and general space in response to designated beats or rhythms
2	Skips using mature pattern Combines movement concepts (direction and levels) while performing locomotor movement as directed by teacher	Runs with a mature pattern Travels showing differentiation between jogging and running Adjusts speed of running to avoid collision; stops on command	Demonstrates four of the five critical elements for jumping and landing in a horizontal plane using a variety of one- and two-foot take-offs and landings Demonstrates four of the five critical elements for jumping and landing in a vertical plane	Combines locomotor skills in general space to perform teacher designed sequence to a rhythm

SCOPE AND SEQUENCE FOR PE

Google NYC Scope and
Sequence for PE if link
doesn't work (they're still
editing it!)



**SNEAKERS ARE
GOLDEN!**

SCIENCE CURRICULUM TIMELINE K-5

PK–8 Curricula Implementation Timeline *(Based on 36 weeks of instruction)*

	SEPT	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN		
Pre-K	Welcome to Pre-K (4 weeks)	My Five Senses (4 weeks)	All About Us (4 weeks)	Where We Live (4 weeks)	Transportation (4 weeks)	Light (4 weeks)	Water (4 weeks)	Plants (4 weeks)	Babies (4 weeks)	Transformation (4 weeks)		
Kindergarten	Weather Study											
	Solids and Liquids (9 weeks)		Push Me, Pull Me (9 weeks)		Our Environment (9 weeks)		Our Weather (9 weeks)					
Grade 1	Exploring Light and Solar Patterns (12 weeks)			Light, Sound and Waves (12 weeks)			Structures and Behaviors in Living Things (12 weeks)					
Grade 2	Properties and Patterns of Water (12 weeks)			The Changes to Land Over Time (12 weeks)			Plant and Animal Interactions (12 weeks)					
Grade 3	Inheritance and Variation (9 weeks)		Interdependence (9 weeks)		Change Over Time (9 weeks)		Interacting Forces (9 weeks)					
Grade 4	The Structure and Functions of Organisms (7 weeks)		Transfer of Energy and Information (8 weeks)		Energy, Motion, and Collisions (7 weeks)		Changes on Earth's Surface (6 weeks)		Impacts of Natural Processes (8 weeks)			
Grade 5	Physical and Chemical Changes (9 weeks)		Matter and Energy in Eco-Systems (9 weeks)		Earth's Systems Science (9 weeks)		Stars and the Solar System (9 weeks)					
Grade 6	Electricity and Magnetism (6 weeks)		Engineering, and Energy Transformations (8 weeks)		Ecosystems (9 weeks)		Investigating Weather and Climate (8 weeks)		Human Impact on Earth's Climate (5 weeks)			
Grade 7	Structures and Properties of Matter (8 weeks)		Changing Properties of Matter and Energy (10 weeks)		Structures of Life (6 weeks)		Geology (7 weeks)		Minimizing Human Impact Through Engineering Design (5 weeks)			
Grade 8	Energy, Forces and Motion (8 weeks)		Earth's Place in the Universe (6 weeks)		Growth, Development, and Reproduction of Organisms (6 weeks)		Evolution, Natural Selection, and Adaptations (8 weeks)		Evolution of Technology in Science (8 weeks)			

SCIENCE PACING CALENDAR KINDERGARTEN

YEAR-LONG UNIT: WEATHER STUDY (YEAR-LONG)	UNIT 1: SOLIDS AND LIQUIDS (9 WEEKS)	UNIT 2: PUSH ME, PULL ME (9 WEEKS)	UNIT 3: OUR ENVIRONMENT (9 WEEKS)	UNIT 4: OUR WEATHER (9 WEEKS)
K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time. ▲	K-PS1-1. Plan and conduct an investigation to test the claim that different kinds of matter exist as either solid or liquid, depending on temperature.	K-PS2-1. Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object. K-PS2-2. Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull. *	K-LS1-1. Use observations to describe patterns of what plants and animals (including humans) need to survive. K-ESS2-2. Construct an argument supported by evidence for how plants and animals (including humans) can change the environment to meet their needs. K-ESS3-1. Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. K-ESS3-3. Communicate solutions that will reduce the impact of humans on living organisms and nonliving things in the local environment. *	K-ESS2-1. Use and share observations of local weather conditions to describe patterns over time. ▲ K-ESS3-2. Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather. * K-PS3-2. Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area. *

SCIENCE PACING CALENDAR 1ST GRADE

UNIT 1: EXPLORING LIGHT AND SOLAR PATTERNS (12 WEEKS)	UNIT 2: LIGHT, SOUND, AND WAVES (12 WEEKS)	UNIT 3: STRUCTURES AND BEHAVIORS IN LIVING THINGS (12 WEEKS)
<p>1-PS4-2. Make observations (firsthand or from media) to construct an evidence-based account that objects can be seen only when illuminated. ▲</p> <p>1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.</p> <p>1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year.</p>	<p>1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.</p> <p>1-PS4-2. Make observations (firsthand or from media) to construct an evidence-based account that objects can be seen only when illuminated. ▲</p> <p>1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.*</p> <p>1-ESS1-1. Use observations of the Sun, moon, and stars to describe patterns that can be predicted.</p> <p>1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year. ▲</p>	<p>1-LS1-1. Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs. *</p> <p>1-LS1-2. Read texts and use media to determine patterns in behavior of parents and offspring that help offspring survive.</p> <p>1-LS3-1. Make observations to construct an evidence- based account that young plants and animals are like, but not exactly like, their parents.</p> <p>1-ESS1-2. Make observations at different times of year to relate the amount of daylight to the time of year. ▲</p>

SCIENCE PACING CALENDAR 2ND GRADE

UNIT 1: PROPERTIES AND PATTERNS OF WATER (12 WEEKS)	UNIT 2: THE CHANGES TO LAND OVER TIME (12 WEEKS)	UNIT 3: PLANT AND ANIMAL INTERACTIONS (12 WEEKS)
<p>2-PS1-1. Plan and conduct an investigation to describe and classify different kinds of materials by their observable properties.</p> <p>2-PS1-4. Construct an argument with evidence that some changes caused by heating or cooling can be reversed and some cannot.</p> <p>2-LS4-1. Make observations of plants and animals to compare the diversity of life in different habitats.</p> <p>2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area. ▲</p> <p>2-ESS2-3. Obtain information to identify where water is found on Earth and that it can be solid or liquid.</p>	<p>2-PS1-2. Analyze data obtained from testing different materials to determine which materials have the properties that are best suited for an intended purpose. *</p> <p>2-PS1-3. Make observations to construct an evidence- based account of how an object made of a small set of pieces can be disassembled and made into a new object.</p> <p>2-ESS1-1. Use information from several sources to provide evidence that Earth events can occur quickly or slowly.</p> <p>2-ESS2-1. Compare multiple solutions designed to slow or prevent wind or water from changing the shape of the land. *</p> <p>2-ESS2-2. Develop a model to represent the shapes and kinds of land and bodies of water in an area. ▲</p>	<p>2-LS2-1. Plan and conduct an investigation to determine if plants need sunlight and water to grow.</p> <p>2-LS2-2. Develop a simple model that illustrates how plants and animals depend on each other for survival. *</p>

SCIENCE PACING CALENDAR 3RD GRADE

UNIT 1: INHERITANCE AND VARIATION (9 WEEKS)	UNIT 2: INTERDEPENDENCE (9 WEEKS)	UNIT 3: CHANGE OVER TIME (9 WEEKS)	UNIT 4: INTERACTING FORCES (9 WEEKS)
<p>3-LS1-1. Develop models to describe that organisms have unique and diverse life cycles but all have in common birth, growth, reproduction, and death.</p> <p>3-LS2-1. Construct an argument that some animals form groups that help members survive. ▲</p> <p>3-LS3-1. Analyze and interpret data to provide evidence that plants and animals have traits inherited from parents and that variation of these traits exists in a group of similar organisms.</p> <p>3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment.</p> <p>3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. ▲</p>	<p>3-LS2-1. Construct an argument that some animals form groups that help members survive. ▲</p> <p>3-LS4-2. Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.</p> <p>3-LS4-3. Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.</p> <p>3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. ▲</p> <p>3-ESS3-1. Make a claim about the merit of a design solution that reduces the impacts of a weather-related hazard. *</p>	<p>3-LS4-1. Analyze and interpret data from fossils to provide evidence of the organisms and the environments in which they lived long ago.</p> <p>3-LS4-4. Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change. *</p> <p>3-ESS2-1. Represent data in tables and graphical displays to describe typical weather conditions expected during a particular season. ▲</p> <p>3-ESS2-2. Obtain and combine information to describe climates in different regions of the world.</p> <p>3-ESS2-3. Plan and conduct an investigation to determine the connections between weather and water processes in Earth systems.</p>	<p>3-PS2-1. Plan and conduct an investigation to provide evidence of the effects of balanced and unbalanced forces on the motion of an object.</p> <p>3-PS2-2. Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion.</p> <p>3-PS2-3. Ask questions to determine cause and effect relationships of electric or magnetic interactions between two objects not in contact with each other.</p> <p>3-PS2-4. Define a simple design problem that can be solved by applying scientific ideas about magnets. *</p>

SCIENCE PACING CALENDAR 4TH GRADE

UNIT 1: THE STRUCTURE AND FUNCTIONS OF ORGANISMS (7 WEEKS)	UNIT 2: TRANSFER OF ENERGY AND INFORMATION (8 WEEKS)	UNIT 3: ENERGY, MOTION, AND COLLISIONS (7 WEEKS)	UNIT 4: CHANGES ON EARTH'S SURFACE (6 WEEKS)	UNIT 5: IMPACTS OF NATURAL PROCESSES (8 WEEKS)
<p>4-PS4-2. Develop a model to describe that light reflecting from objects and entering the eye allows objects to be seen.</p> <p>4-LS1-1. Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.</p> <p>4-LS1-2. Use a model to describe that animals receive different types of information through their senses, process the information in their brain, and respond to the information in different ways.</p>	<p>4-PS3-2. Make observations to provide evidence that energy is conserved as it is transferred and/or converted from one form to another.</p> <p>4-PS3-4. Apply scientific ideas to design, test, and refine a device that converts energy from one form to another. *</p> <p>4-PS4-3. Generate and compare multiple solutions that use patterns to transfer information. *</p>	<p>4-PS3-1. Use evidence to construct an explanation relating the speed of an object to the energy of that object.</p> <p>4-PS3-3. Ask questions and predict outcomes about the changes in energy that occur when objects collide.</p>	<p>4-PS4-1. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. ▲</p> <p>4-ESS1-1. Identify evidence from patterns in rock formations and fossils in rock layers to support an explanation for changes in a landscape over time.</p> <p>4-ESS2-1. Make observations and/or measurements to provide evidence of the effects of weathering or the rate of erosion by water, ice, wind, or vegetation.</p>	<p>4-PS4-1. Develop a model of waves to describe patterns in terms of amplitude and wavelength and that waves can cause objects to move. ▲</p> <p>4-ESS2-2. Analyze and interpret data from maps to describe patterns of Earth's features.</p> <p>4-ESS3-1. Obtain and combine information to describe that energy and fuels are derived from natural resources and their uses affect the environment.</p> <p>4-ESS3-2. Generate and compare multiple solutions to reduce the impacts of natural Earth processes on humans. *</p>

SCIENCE PACING CALENDAR 5TH GRADE

UNIT 1: PHYSICAL AND CHEMICAL CHANGES (9 WEEKS)	UNIT 2: MATTER AND ENERGY IN ECOSYSTEMS (9 WEEKS)	UNIT 3: EARTH SYSTEMS SCIENCE (9 WEEKS)	UNIT 4: STARS AND THE SOLAR SYSTEM (9 WEEKS)
<p>5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen. ▲</p> <p>5-PS1-2. Measure and graph quantities to provide evidence that regardless of the type of change that occurs when heating, cooling, or mixing substances the total amount of matter is conserved.</p> <p>5-PS1-3. Make observations and measurements to identify materials based on their properties.</p> <p>5-PS1-4. Conduct an investigation to determine whether the mixing of two or more substances results in new substances.</p>	<p>5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen. ▲</p> <p>5-PS3-1. Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the Sun.</p> <p>5-LS1-1. Support an argument that plants get the materials they need for growth chiefly from air and water.</p> <p>5-LS2-1. Develop a model to describe the movement of matter among plants (producers), animals (consumers), decomposers, and the environment.</p>	<p>5-PS1-1. Develop a model to describe that matter is made of particles too small to be seen. ▲</p> <p>5-PS2-1. Support an argument that the gravitational force exerted by Earth on objects is directed down.</p> <p>5-ESS2-1. Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.</p> <p>5-ESS2-2. Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.</p> <p>5-ESS3-1. Obtain and combine information about ways individual communities use science ideas to protect Earth's resources and environment.</p>	<p>5-ESS1-1. Support an argument that differences in the apparent brightness of the Sun compared to other stars is due to their relative distances from Earth.</p> <p>5-ESS1-2. Represent data in graphical displays to reveal patterns of daily changes in length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky.</p>



PARENT ENGAGEMENT



The DOE has provided all teachers with time every Tuesday afternoon between 2:40-3:20 to engage with families to strengthen the home/school connection to support our children. Families can request face-to face meetings or telephone conversations with any of their child's teachers or service providers by contacting the teacher and making an appointment. As you know our teachers are not limited to these times to communicate with families but if you have a concern that may require an extended conversation or meeting, please make use of this opportunity.



Communication

Science Prep Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
Period 2 (9:40-10:30)	Period 6 (1:00-1:50)	Period 1 (8:50-9:40)	Period 6 (1:00-1:50)	Period 1 (8:50-9:40)

P.E. Prep Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
Period 1 (8:50-9:40)	Period 7 (1:50-2:40)	Period 4 (11:20-12:10)	Period 7 (1:50-2:40)	Period 1 (8:50-9:40)

Emails: EMonte@PS39.org
SLong@PS39.org



QUESTIONS?

Reminders:

- Welcome Dinner on Sept. 21st from 4:30-7pm
 - First PA Meeting on Sept. 26th at 7:00pm

**Thank you so much for making this
the best school year ever!**



This PowerPoint will be available online for future reference.

