AmplifyScience

K-5 Field Trip Suggestions in NYC			
Time of year	**Grade**	**Unit**	**Field Trip Suggestion**
Fall	K	Needs of Plants and Animals	Visit Local Community Urban Farms (Harlem Grown, Battery Park, Randall's Island) to explore how the growing spaces were planned, as well as the specific needs of various plant and animal species.
Winter	K	Pushes and Pulls	Visit Modern Pinball NYC to "observe engaging demonstrations of open pinball machines complete with magnets, electromagnets, switches, linkage, pulleys, gears, target banks, motors and semiconductors."
Spring	K	Sunlight and Weather	Visit Brooklyn Bridge Park where students can participate in the Weather on the Water Program; they will "Use the park's waterfront location to explore attributes of weather. Students use simple weather tools, scavenger hunts, and interactive activities to help understand weather patterns and the water cycle."
Fall	1	Animal and Plant Defenses	Visit Lower East Side Ecology Center "students can view and touch animal specimens...to learn about the different resources in animal's environments and their survival requirements." Take students to the NYC Aquarium or CP/Bronx Zoo to observe animals in their habitats and identify structures for defense.
Winter	1	Light and Sound	Take students to a theater production for a first-hand experience with lighting and sound and how they impact a show. Meet with audio engineers and lighting designers (NYU).
Fall	2	Plant and Animal Relationships	Visit NYBG- "Students become world explorers as they engage in plant investigations...observing and collecting information within diverse habitats, students build connections among life systems that help plants grow successfully."
Spring	2	Changing Landforms	Visit Wave Hill, students can participate in one of the many programs, while also having the opportunity to observe and discuss the Palisades.
Fall	3	Balancing Forces	Visit MTA or Transit Museum so students can "Explore New York City's different modes of transportation

			through an interactive virtual tour and activities, and learn all about community workers and the importance of public transportation"
Winter	3	Inheritance and Traits	Central Park; students can observe, collect information, and discuss the traits of various populations: pigeons, butterflies, squirrels, as well as plant populations. Possibly connect with Natural Classroom Programs
Winter	3	Environments and Survival	Visit CooperHewitt where students can explore, observe, and discuss nature inspired designs. Connect with a robotics laboratory, or Makerspace NYC for interactive experiences that can be customized for specific classes.
Fall	4	Energy Conversion	Arrange a visit to a "power station" or other facility with ConEdison so that students can observe electrical infrastructure and discuss the parallels between their project in "Ergstown" with NYC.
Winter	4	Vision and Light	Visit New York Museum of Illusion where students can explore the relationship between vision, light, art and science.
Winter	4	Earth's Features	Visit AMNH and focus students on the geology and paleontology programs; Arrange to have students participate in one of the NYC Parks Natural Classroom Programs with geology connections.
Spring	4	Waves, Energy, Information	Visit NYC Aquarium where students can observe, collect information, and discuss animal communication.
Fall	5	Patterns of Earth and Sky	Visit Intrepid STEM programs where students will have a "guided experience related to the theme of sea, air or space, followed by free exploration time." This can also be coupled with the Intrepid Virtual program "our place in space."
Winter	5	Modeling Matter	Visit NYU Food Lab, or similar facility, so that students can see "food scientists" at work.
Winter	5	The Earth System	Visit a water treatment facility in their role as water resources engineers.
Spring	5	Ecosystem Restoration	Participate in programs offered by Brooklyn Bridge Park or Billion Oyster Project so students can gain practical experience with local ecosystem restoration projects.

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6-8 School Field Trip Suggestions in NYC			
Time of year	**Grade**	**Unit**	**Field Trip Suggestion**
Fall	6	Thermal Energy	Visit a glass making studio such as Urban Glass or Brooklyn Glass, where students can observe, ask questions, and discuss the role of thermal energy in glass making.
Winter	6	Weather Patterns	Arrange a visit to a local news station so students can observe and discuss weather forecasting and production.
Winter	6	Ocean, Atmosphere, and Climate	Visit Liberty Science Center so students can observe the Weston Family Lab for Earth and Space Exploration with a "suspended globe developed by NOAA (National Oceanic and Atmospheric Administration)..." Including, "images and animations based on authentic data uploaded directly from NOAA and NASA. Also consider visiting The Climate Museum Note Grade 6 students take on the role of climatologists in the last two units
Spring	6	Populations and Resources	Arrange for students to participate in NYC Parks Natural Classroom Programs with Ecosystem Highlights which "gives students a first-hand learning experience with a local... ecosystem." Topics include: Plant and animal communities Relationships and food webs human impact. See Brooklyn Bridge Park or Billion Oyster Project for additional options.
Fall	7	Metabolism	Visit the Liberty Science Center where students can participate in one of the offered programs such as Mystery at the Hotel Philadelphia to "Conduct an investigation, collect and analyze evidence to identify a pathogen, and solve a deadly mystery based on a real-world disease outbreak." Chemical Reactions connections available here as well.
Winter	7	Plate Motion EI	Visit Lamont-Doherty Earth Observatory students can participate in Sounds of Seismology: "Students will explore what these seismic sounds mean and the information they contain for scientists."
Spring	7	Rock Transformation	Visit AMNH with a focus on New York City Geology, which can be coupled with the exploration of other areas that allow students to observe geological features. Visit Noguchi providing students "Learn about Noguchi's

			creative process and the awareness he brought to his material choices."
Spring	7	Earth's Changing Climate EI (Connect with Grade 6 ECC unit)	Visit the Museum of the City of New York so students can gain a deeper understanding of civil engineering through a historic view of the development of NYC. Connect with City Growers Programs to arrange an opportunity for students to observe, collect information, and discuss rooftop gardens in relation to climate change.
Fall	8	Earth, Moon, and Sun	Arrange a trip to a Science periodical publishing company so students can observe processes and collaboration leading to the development and dissemination of scientific information.
Fall	8	F&M and Force and Motion EI	Connect with Columbia Engineering Outreach for possible practical engineering experiences for students.
Winter	8	Light Waves	Arrange a visit with CUNY Institute for Ultrafast Spectroscopy and Lasers so students can observe working scientists. Also connect with a facility such as The Tisch Cancer Institute for possible visit and/or collaboration opportunities.
Spring	8	Natural Selection	Visit NYSCI Evolution and Health Connection students can experience "this hands-on science exhibit explores the role of evolution in health, illness, prevention and treatment." Also explore the many offered connections at AMNH. Visit DNA Learning Center location, students can participate in one of the many lab opportunities offered.

Additional suggestions to consider

- Using the Standards and Goals (Trajectory of the Unit) look for opportunities to align field trips across grade levels. Plan *inter-grade level* field trips to highlight connections of units across grade levels (3-D learning), and to provide opportunities for students to interact, share findings and collaborate in additional investigations. For example, Students in grade 7 involved in the Rock Transformation unit as student geologists, could visit the same location as grade 4 students involved in the Earth's Features unit also working as geologists.
- Seek out guest speakers for every unit- correlated with student role

- Maximize partnerships with local businesses, cultural agencies,universities,research facilities, clinics- seek opportunities for students to participate or observe researchers/practitioners in action.
- Recommend connecting field trips with 6-8 core unit science seminars (or engineering internship units) and K-5 secondary phenomena.
- Emphasize the real world and everyday life connections and interdisciplinary design of the Amplify units when possible.
- Students can be encouraged to continue to take on the same science and engineering role they play within the units during the field trips.