# URBAN ADVANTAGE COURSE CATALOG

## 2026-2027



American Museum of Natural History

Bronx Zoo
A Wildlife Conservation Society Park

Brooklyn Botanic Garden

NYBG New York Botanical Garden

New York Aquarium
A Wildlife Conservation Society Park

nysci New York Hall of Science

Queens Botanical Garden

Zoo Staten Island

NYC Public Schools

The Council of the City of New York

NYC Office of the Mayor

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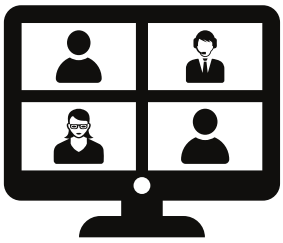
# Course Formats & Definitions

All Urban Advantage Professional Learning will be held in the below formats or a combination of any of the below formats. We hope these formats will provide you with options that suit your learning preferences and schedule. In the course descriptions you will see the following terms used:



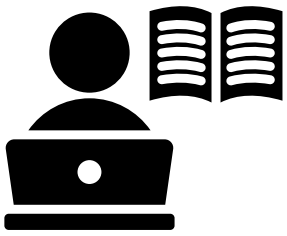
## In-Person

Courses with this format require physically present attendance at one or more of our host institution(s) and/or location(s).



## Synchronous (Sync)

Courses with this format require the use of an electronic device to attend one or more live session(s) via the videoconferencing platform Zoom.



## Asynchronous (Async)

Courses with this format require the use of an electronic device for self-paced work to be submitted via the online learning platform Moodle through our myUA portal, or other digital platforms.

Note: For Synchronous and Asynchronous courses, we recommend using a computer rather than a phone due to compatibility issues of other applications we may use.

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# Host Institutions & Abbreviations

All Urban Advantage Professional Learning will be hosted by the institutions or a combination of institutions below. We hope these locations will provide you with options that suit your learning preferences and schedule. In the course descriptions you will see the following institutions used:

## AMNH
American Museum of Natural History

## BBG
Brooklyn Botanic Garden

## BXZ
Bronx Zoo

## NYA
New York Aquarium

## NYBG
New York Botanical Garden

## NYSCI
New York Hall of Science

## QBG
Queens Botanical Garden

## SIZ
Staten Island Zoo

# Elementary Year 1

## Course Goals

## Foundational Concepts

Be introduced to goal-oriented discourse moves from Ambitious Science Teaching and articulate how these connect to the Science and Engineering Practices.

## Exploration of Pedagogy

Understand that scientific explanations are created through iterative processes and are based on personal experience and the use of evidence.

Identify opportunities for students to revise initial explanations through exposure to new information.

## Application and Reflection

Apply one or more strategies to support learners with constructing and revising evidence-based explanations.

# Elementary Year 1

## Title

## Constructing and Revising Evidence-based Explanations

## Description

Participants will study changes to local animal populations, through personal connections, first-hand experiences, hands-on investigations and text resources, to build and revise a scientific explanation. Participants will learn literacy strategies to help deepen students' understanding of science content and inquiry. Participants will reflect on their practice and modify argumentation tools (CER framework, KLEWS) for their classroom. They will identify opportunities for students to revise initial explanations through exposure to new information.

*This course is offered at three institutions.

**Institution** NYBG

**Format**  In-Person

| Dates | Times |
|---|---|
| Sunday, 10/18/26 | 9:00 AM - 3:00 PM |
| Sunday, 10/25/26 | 9:00 AM - 3:00 PM |
| Sunday, 11/15/26 | 9:00 AM - 3:00 PM |
| Sunday, 11/22/26 | 9:00 AM - 3:00 PM |

# Elementary Year 1

| | |
|---|---|
| Institution | AMNH |
| Format |  In-Person |

| In-Person Dates | Times |
|---|---|
| Wednesday, 1/20/27 | 8:30 AM - 2:30 PM |
| Tuesday, 1/26/27 | 8:30 AM - 2:30 PM |
| Tuesday, 2/9/27 | 8:30 AM - 2:30 PM |
| Thursday, 2/25/27 | 8:30 AM - 2:30 PM |

| | |
|---|---|
| Institution | NYA |
| Format |  In-Person |

| Dates | Times |
|---|---|
| Friday, 3/5/27 | 9:00 AM - 3:00 PM |
| Friday, 3/12/27 | 9:00 AM - 3:00 PM |
| Friday, 4/2/27 | 9:00 AM - 3:00 PM |
| Friday, 4/16/27 | 9:00 AM - 3:00 PM |

# Elementary Year 2

## Course Goals

## Foundational Concepts

Recognize the importance of eliciting student ideas and honoring identities when shaping instruction.

## Exploration of Pedagogy

Articulate how individual and collective sense-making helps strengthen students' understanding of relationships between ideas, representations, or explanations.

Recognize that scientific modeling is one way that scientists and students represent changes in systems to solve real-world issues.

## Application and Reflection

Apply one or more scaffolds to support learners with revising initial models or explanations as they are exposed to new sources of information.

# Elementary Year 2

## Title

## Supporting Ongoing Changes in Thinking

### Description

Participants will learn how collective sense-making helps strengthen our understanding of phenomena we can observe in the world around us and recognize that there are multiple ways that scientists and students can help change real-world issues. Teachers will explore the impacts of erosion through investigations that highlight real world solutions to a globally shared problem. Participants will reflect on their practice through metacognition and create tools for students to engage in reflective practice in their classroom.

*This course is offered at two institutions.

**Format**  Async  Sync  In-Person

**Institution** NYSCI

| Dates | Times | Format |
|---|---|---|
| Thursday, 12/3/26 | 9:00 AM - 3:00 PM | In-Person |
| Thursday, 1/14/27 | 4:00 PM - 5:30 PM | Sync |
| Thursday, 2/4/27 | 4:00 PM - 5:30 PM | Sync |
| Thursday, 2/25/27 | 9:00 AM - 3:00 PM | In-Person |

*Async work will be completed throughout the duration of the course.

# Elementary Year 2

## Institution NYSCI

| Dates | Times | Format |
|---|---|---|
| Saturday, 12/5/26 | 9:00 AM - 3:00 PM | In-Person |
| Saturday, 1/23/27 | 9:00 AM - 10:30 AM | Sync |
| Saturday, 2/6/27 | 9:00 AM - 10:30 AM | Sync |
| Saturday, 2/27/27 | 9:00 AM - 3:00 PM | In-Person |

*Async work will be completed throughout the duration of the course.

## Institution AMNH

| Dates | Times | Format |
|---|---|---|
| Wednesday, 2/10/27 | 8:30 AM - 2:30 PM | In-Person |
| Tuesday, 2/23/27 | 4:00 PM - 5:30 PM | Sync |
| Wednesday, 3/10/27 | 4:00 AM - 5:30 PM | Sync |
| Tuesday, 3/23/27 | 8:30 AM - 2:30 PM | In-Person |

*Async work will be completed throughout the duration of the course.

# Elementary Year 3

## Course Goals

## Foundational Concepts

Understand how data can help scientists and students better understand the world.

## Exploration of Pedagogy

Recognize the importance of students using and analyzing data to make and justify claims.

Articulate the role engaging in argument plays in helping scientists and students clarify claims and explanations.

## Application and Reflection

Apply scaffolds to incorporate data analysis to support students in evaluating and communicating scientific concepts.

Format  Async  Sync  In-Person

# Elementary Year 3

## Title

## Making and Justifying Claims in a Science Community

## Description

Learn how scientists use evidence to make connections, recognize patterns, and develop and revise explanations about the natural world. By using UA institutional exhibitions and various types of data gathered from visualizations, infographics, pictures, and graphs, you will gain a deeper understanding of how the behavior, life cycle, and migration of Monarch Butterflies tell a story about human impact. Teachers will engage in a cycle of reflective practices around the class and PL work.

*This course is offered at two institutions.

**Format**  Async  Sync  In-Person

**Institution** BBG

| Dates | Time | Format |
|---|---|---|
| Friday, 10/16/26 | 9:00 AM - 3:00 PM | In-Person |
| Friday, 11/13/26 | 9:00 AM - 3:00 PM | In-Person |
| Friday, 12/11/26 | 9:00 AM - 3:00 PM | In-Person |
| Friday, 1/15/27 | 4:00 PM - 5:30 PM | Sync |

*Async work will be completed throughout the duration of the course.

CANCELLED

# Elementary Year 3

## Institution AMNH

| Dates | Times | Format |
|---|---|---|
| Wednesday, 11/18/26 | 8:00 AM - 2:30 PM | In-Person |
| Wednesday, 12/02/26 | 8:00 AM - 2:30 PM | In-Person |
| Tuesday, 12/15/26 | 8:00 AM - 2:30 PM | In-Person |
| Wednesday, 1/13/27 | 8:00 PM - 2:30 PM | Sync |

*Async work will be completed throughout the duration of the course.

## Institution BBG

| Dates | Times | Format |
|---|---|---|
| Saturday, 3/6/27 | 9:00 AM - 3:00 PM | In-Person |
| Saturday, 3/20/27 | 9:00 AM - 3:00 PM | In-Person |
| Saturday, 4/3/27 | 9:00 AM - 3:00 PM | In-Person |
| Saturday, 4/17/27 | 9:00 AM - 11:30 AM | Sync |

*Async work will be completed throughout the duration of the course.

# Elementary Year 6+

## Course Goals

Year 6+ teachers are required to take the following course.

## UA Commencement Course

Participants will:

1) Reflect on growth and instructional shifts accomplished through UA course work over time
2) Identify clear next steps as science educators and leaders based on what they have learned in UA.

Vision for UA Alumni:

1) Feel confident sharing your teaching beliefs and practice with others.
2) Norm not knowing the answer with your students as they construct and revise evidence-based explanations; science is iterative!
3) Recognize the central role that talk plays in how students learn science over time, and build this into your classroom routines.
4) Integrate the unique perspectives and experiences of your students into instruction to strengthen students' ability to construct evidence-based explanations.
5) Make phenomena relatable, helping students see the "why" behind science and the critical role they play.
6) Routinize trips to our institutions to inspire learning in a way that is integrative and not additive.

# Elementary Year 6+

## Topic(s)

## UA Commencement Course

## Description

The UA Capstone is a summative experience designed to support teachers at the end of their UA tenure in reflecting on their learning, making meaning of their growth, and articulating how their UA experience will carry forward into their classrooms, leadership, and professional practice. This experience supports meaningful end-of-program reflection and an explicit transition moment for both Elementary and Middle School teachers.

Participants are required to attend one of the following sessions offered below

| | |
|---|---|
| **Institution** | AMNH |
| **Format** |  In-Person |

| In-Person Dates | Times |
|---|---|
| Saturday, 5/8/27 | 9:00 AM - 2:30 PM |
| Tuesday, 5/11/27 | 9:00 AM - 2:30 PM |
| Sunday, 5/16/27 | 9:00 AM - 2:30 PM |

# Middle School Year 1

## Course Goals

## Foundations of Phenomena and Discourse

1) Teachers will identify the sets of core practices in AST, and describe some of the ways in which the routine practices of Ambitious Science Teaching support student learning in science over time.

2) Teachers will describe how specific discourse strategies can support different learning goals throughout a learning sequence using the AST talk moves taxonomy.

3) Teachers will apply one or more AST goal-oriented discourse strategies to strengthen students' ability to connect with and begin to explain a phenomenon.

4) Teachers will apply one or more community-building strategies that set up an environment that encourages sharing and values student identity.

# Middle School Year 1

## Topic(s)

## Plant Responses

## Description

Engaging with community issues, we'll explore the phenomenon of how shading caused by increased urban development affects plant growth. Participants will work in groups to design and carry out investigations of plant growth to gather evidence that can potentially support their explanations of the phenomenon. We'll utilize many science practices including asking questions, constructing explanations, planning and carrying out investigations, and engaging in argument from evidence. We will model strategies and techniques throughout to support teachers' development of questioning skills, inquiry methods, and discourse strategies. We will utilize garden grounds for immersive field learning.

| | |
|---|---|
| Institution | BBG |
| Format |  In-Person |

| In-Person Dates | Times |
|---|---|
| Sunday, 10/18/26 | 9:00 AM - 3:30 PM |
| Sunday, 11/8/26 | 9:00 AM - 3:30 PM |
| Sunday, 11/22/26 | 9:00 AM - 3:30 PM |
| Sunday, 1/10/27 | 9:00 AM - 3:30 PM |
| Sunday, 1/24/27 | 9:00 AM - 3:30 PM |

# Middle School Year 1

## Topic(s)

## Human-Wildlife Interactions

## Description

Science stories are powerful societal narratives to teach about ecosystems, interdependence, culture, and history. Join us at the Bronx Zoo for 5 days that will deepen your understanding and implementation of ambitious science teaching (AST), phenomena-based instruction, and the use of discourse to promote equitable participation and enhance student learning in science. We will learn in the classroom and out in the zoo, visiting exhibits, engaging in hands-on activities, and working collaboratively to understand the interconnected roles of humans, other animals, plants and everything in between.

**Institution** BXZ

**Format** In-Person

| In-Person Dates | Times |
|---|---|
| Wednesday, 10/21/26 | 9:00 AM - 3:30 PM |
| Wednesday, 10/28/26 | 9:00 AM - 3:30 PM |
| Wednesday, 11/4/26 | 9:00 AM - 3:30 PM |
| Tuesday, 11/10/26 | 9:00 AM - 3:30 PM |
| Wednesday, 11/18/26 | 9:00 AM - 3:30 PM |

# Middle School Year 1

## Topic(s)

## Urbanization and Climate Change

## Description

By interweaving scientific concepts and social realities, we will create a vivid picture of Flushing, which was once sprawling marshlands and now covered with urban sprawl. How has this urbanization affected the landscape and its people, especially in the face of increasing flash floods due to climate change? As we explore the compounding effects of colonization, climate change, and urban planning, we center local connections and diverse perspectives to plan a sustainable and inclusive future. We will explore the importance of interdisciplinary perspectives in science content and actively participate in building a learning community that reflects its members.

## Institution

QBG

## Format



In-Person

| In-Person Dates | Times |
|---|---|
| Wednesday, 10/21/26 | 9:00 AM - 3:30 PM |
| Wednesday, 10/28/26 | 9:00 AM - 3:30 PM |
| Wednesday, 11/4/26 | 9:00 AM - 3:30 PM |
| Tuesday, 11/10/26 | 9:00 AM - 3:30 PM |
| Wednesday, 11/18/26 | 9:00 AM - 3:30 PM |

# Middle School Year 1

## Topic(s)

## Watershed Ecology

## Description

Participants will utilize the grounds of The New York Botanical Garden to investigate relationships between the biotic and abiotic factors that impact the ecology of the Bronx River watershed. We will hike through the forest and wade into the river (optional!) as we explore this local ecosystem and introduce teachers to data collection techniques in the field, including water quality testing, macroinvertebrate testing, and opportunities to use waders and kicknets. We will explore the past, present, and future of the Bronx River and its interactions with its surrounding ecological and human communities, with a focus on water quality factors. Teachers will engage in shared learning experiences and consider how the learning progression and strategies can be applied in their teaching practice. Teachers will also engage with research about how people learn, and ideas about culturally responsive-sustaining education in the context of learning about the natural world.

## Institution

NYBG

## Format



In-Person

| In-Person Dates | Times |
|---|---|
| Saturday, 10/24/26 | 9:00 AM - 4:00 PM |
| Saturday, 11/7/26 | 9:00 AM - 4:00 PM |
| Saturday, 11/21/26 | 9:00 AM - 4:00 PM |
| Saturday, 12/5/26 | 9:00 AM - 4:00 PM |
| Saturday, 12/12/26 | 9:00 AM - 4:00 PM |

# Middle School Year 1

## Topic(s)

## Adaptations and Animal Behavior

## Description

Have you ever wondered why the fastest Olympic swimmer couldn't beat a shark in a race? Well we have, and we want to take you on an underwater journey at the New York Aquarium to understand how animals swim and why they function the way they do. We will spend 5 days learning in our classroom and in the aquarium, visiting exhibits, engaging in hands-on activities, and working collaboratively to understand why so many animals are faster than humans, and why that matters, in order to deepen your understanding and implementation of ambitious science teaching (AST), phenomena-based instruction, and the use of discourse to promote equitable participation and enhance student learning in science.

**Institution** NYA

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Saturday, 1/9/27 | 9:00 AM - 3:30 PM |
| Saturday, 1/23/27 | 9:00 AM - 3:30 PM |
| Saturday, 1/30/27 | 9:00 AM - 3:30 PM |
| Sunday, 2/7/27 | 9:00 AM - 3:30 PM |
| Saturday, 2/27/27 | 9:00 AM - 3:30 PM |

# Middle School Year 1

## Topic(s)

## Ecosystem Interactions

## Description

Join us at the Staten Island Zoo to dive into the lives of some of the world's most misunderstood animals. Zoos feature many different species that are vital to the function of ecosystems from charismatic megafauna to creatures that inspire trepidation like cockroaches, snakes, and rats. In this course, participants will gain a deeper understanding of how wildlife adapt and thrive in urban environments, and how even the less “popular” species provide essential ecosystem services that benefit both other organisms and humans. Through hands-on modeling, observation, and investigation, we’ll explore animal adaptations, the importance of biodiversity, and the cascading effects that changes in the food web can create. Come with an open mind and leave with new strategies and techniques to bring phenomena-based learning to life in your classroom.

**Institution** SIZ

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Wednesday, 1/13/27 | 8:00 AM - 2:30 PM |
| Wednesday, 1/27/27 | 8:00 AM - 2:30 PM |
| Wednesday, 2/10/27 | 8:00 AM - 2:30 PM |
| Wednesday, 2/24/27 | 8:00 AM - 2:30 PM |
| Wednesday, 3/10/27 | 8:00 AM - 2:30 PM |

*Snow date: Thursday, 3/18/27

# Middle School Year 1

## Topic(s)

River Ecology

## Description

Participants will utilize AMNH exhibits, field sites in Central Park and a Museum created web-based teaching case about Hudson River and the introduction of the zebra mussel. Through data collection in the field and using videos and readings about the research at the Cary Institute of Ecosystem Studies, participants will explore ecosystem dynamics and the practices of science. Participants will utilize a 20-year data set via a web-based graphing tool and connect their ecosystem understandings to nature in the city by visiting the Hudson River with the Billion Oyster Project.

Our teacher goals will focus on strategies for supporting student discourse, making thinking visible, supporting ongoing changes in thinking, using scientific models and connecting to the ecosystem we live in.

**Institution** AMNH

**Format** In-Person

| In-Person Dates | Times |
|---|---|
| Sunday, 3/7/27 | 9:00 AM - 4:00 PM |
| Sunday, 3/21/27 | 9:00 AM - 4:00 PM |
| Sunday, 4/4/27 | 9:00 AM - 4:00 PM |
| Sunday, 4/18/27 | 9:00 AM - 4:00 PM |
| Sunday, 5/16/27 | 9:00 AM - 4:00 PM |

CANCELLED

# Middle School Year 2

## Course Goals

Year 2 teachers are required to take one of each of the following courses.

## Eliciting Ideas and Connections

1) Apply a routine or scaffold into a lesson that encourages students to publicly share initial models or explanations of phenomena

2) Identify opportunities for goal-oriented discourse moves to support eliciting ideas and strengthening learners' connections to prescribed phenomena

3) Recognize that scientific modeling is one way that scientists and students represent changes in systems to solve real world issues

4) Identify opportunities for strengthening modeling experiences with learners

## Curriculum Topic Study (CTS)

1) Apply formative assessment strategies as a means of surfacing and leveraging diverse student ideas / identity to adapt instruction

2) Describe how grade-band performance expectations fit within the NYSSLS K-12 progression

3) Articulate the value of student experiences and ideas as powerful resources in explaining phenomena and solving complex science issues

4) Recognize CTS as a process and set of resources that can increase opportunities for all students to learn and do science

# Middle School Year 2

## Topic(s)

River Ecology

## Description

Participants will explore strategies for eliciting student science ideas and connections through several science practices, especially "developing and using models" to generate questions and explain phenomena, using a series of online resources developed by the Museum which include short documentary interviews with scientists from the Cary Institute of Ecosystem Studies, parallel readings and real data collected embedded in an online graphing tool for ease of use. The focus phenomenon is the arrival of the zebra mussel in the Hudson River and how it will affect various parts of the ecosystem.

**Institution** AMNH

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Saturday, 12/5/26 | 9:00 AM - 3:30 PM |
| Saturday, 12/19/26 | 9:00 AM - 3:30 PM |

# Middle School Year 2

## Topic(s)

## March Mammal Madness

## Description

Learn how to bring the madness of March Mammal Madness into your classroom! By madness, we mean exciting, educational, and structured animal madness. Each year, animals from around the globe go head-to-head in simulated battles to determine the ultimate champion. Inspired by the NCAA March Madness, MMM was created by Dr. Katie Hinde as a tournament-style game backed by actual science. Using storytelling (narrated by scientists from around the US) participants learn about “interspecies interactions, ecological context, how natural selection has shaped adaptations, and conservation management of endangered species.” Learn about this educational immersion into a virtual world of animal encounters, receive tips for facilitating student engagement, and incorporating MMM into your curriculum.

## Institution

SIZ

## Format



Sync

| Sync Dates | Times |
|---|---|
| Sunday, 1/3/27 | 9:00 AM - 12:00 PM |
| Sunday, 1/10/27 | 9:00 AM - 11:30 AM |
| Sunday, 1/17/27 | 9:00 AM - 12:00 PM |
| Sunday, 1/24/27 | 9:00 AM - 11:30 AM |

# Middle School Year 2

## Topic(s)

## Designing Resilience

## Description

In this course, teachers will explore extreme weather and flooding in New York City while using models to explain phenomena and consider engineering solutions. Through collaborative learning, teachers will develop strategies for eliciting and building on student ideas while examining how student thinking can deepen understanding, strengthen instruction, and promote agency and divergent solutions.

| | |
|---|---|
| **Institution** | NYSCI |
| **Format** |  In-Person |

| In-Person Dates | Times |
|---|---|
| Tuesday, 1/12/27 | 9:00 AM - 3:00 PM |
| Tuesday, 2/2/27 | 9:00 AM - 3:00 PM |

# Middle School Year 2

## Topic(s)

## Plant Structures and Functions

## Description

Participants will engage as science learners in creating and revising scientific models to make sense of a physiological plant process. Learners will work together to consider various explanations and make arguments as they gather new evidence through direct interactions with plants, water and other materials as well as information from readings, diagrams and instruction.

As teachers, participants will examine how the learning sequence was structured to support learners in activating and expressing prior understanding, guide learners in sense-making talk around new evidence, and scaffold efforts to integrate and articulate new understandings. Participants will be able to apply these structures and strategies to their own teaching in various content areas.

**Institution** NYBG

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Saturday, 4/17/27 | 9:00 AM - 3:30 PM |
| Saturday, 5/8/27 | 9:00 AM - 3:30 PM |

# Middle School Year 2

## Topic(s)

## Conserving Populations

## Description

How can we strengthen students' connection to science content? By exploring strategies for eliciting student ideas, scaffolding and using models, participants will practice encouraging students to share their ideas and identify how their prior knowledge and experiences help strengthen their connection to scientific phenomena. Using zoo exhibits and resources, participants will explore issues related to species conservation and learn how modeling not only helps scientists communicate but also understand and solve real world issues.

| | |
|---|---|
| Institution | BXZ |
| Format |  In-Person |

| In-Person Dates | Times |
|---|---|
| Sunday, 5/2/27 | 9:00 AM - 3:00 PM |
| Sunday, 5/9/27 | 9:00 AM - 3:00 PM |

# Middle School Year 2

## Topic(s)

## Ecosystem Dynamics

### Description

New York forests relied on a diversely populated leaf litter layer that blanketed the forest floor, culminating in a balanced, interconnected ecosystem millions of years in the making. However, this balance was disrupted when an unassuming organism was brought to our region by European settlers. What can we learn from the observable legacies of colonization and globalization and how they continue to impact local forest ecosystems? Participants will track changes in thinking around forest floors by creating, sharing, and revising models. Through diverse discourse strategies, participants will question the language used to describe non-native/invasive species, animal adaptation and acclimations. Participants will engage in hands-on learning about decomposers and forest ecosystems.

| | |
|---|---|
| Institution | QBG |
| Format |  In-Person |

| In-Person Dates | Times |
|---|---|
| Thursday, 5/6/27 | 9:00 AM - 3:00 PM |
| Thursday, 5/13/27 | 9:00 AM - 3:00 PM |

# Curriculum Topic Study (CTS)

## Topic(s)

## CTS03 Designing Engineering

## Description

How can Curriculum Topic Studies strengthen teaching practice while fostering deeper student thinking? In this PL, teachers will learn how to use the Curriculum Topic Study process to deepen their understanding of a topic, inform their instructional choices, and consider how their teaching can better encourage divergent student thinking and sensemaking. Using Design Engineering as an example, teachers will explore how to support students in defining and delimiting meaningful engineering problems and using their thinking to develop possible design solutions.

**Institution** NYSCI

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Tuesday, 10/27/26 | 9:00 AM - 3:00 PM |
| Tuesday, 11/10/26 | 9:00 AM - 3:00 PM |

# Curriculum Topic Study (CTS)

## Topic(s)

### CTS08 Evaluating Evidence

## Description

How do we determine fact from frenzy? Making claims based on solid evidence and explanation enhances credibility. Sharks are fascinating to the public, yet media perception can cause mass misconceptions around these top ocean predators. The primary evidence being examined in this course will highlight the relationship between media coverage, shark incidents, and population changes. Shark perception will be explored in our Ocean Wonders: Sharks! exhibit. Based in the curriculum topic study (CTS) model, participants will use research findings on teaching and learning to reflect on the impact of evidence and explanations in arguments. Participants will also work towards developing effective teaching strategies for strengthening science literacy in these areas.

**Institution** NYA

**Format** In-Person

| In-Person Dates | Times |
|---|---|
| Saturday, 11/7/26 | 9:00 AM - 3:00 PM |
| Saturday, 11/21/26 | 9:00 AM - 3:00 PM |

# Curriculum Topic Study (CTS)

## Topic(s)

## CTS25 Biodiversity and Interdependency

## Description

All life is rooted in interdependency. Life has evolved over millions of years by collaborating, not just competing, with other organisms. Throughout the Curriculum Topic Study (CTS) framework, we will unpack the content and skills needed for students to be successful in understanding Interdependency Among Organisms. Through an asset-based lens, we will identify and leverage our student's skills and content knowledge to make learning accessible and actionable for all students. We will explore the Garden to make observations of the interdependency of all life at the Garden from bugs to birds to us. We will also unpack standards and research to determine what students should know and how best to support all learners through accessible and engaging pedagogical practices.

**Institution** QBG

**Format** In-Person

| In-Person Dates | Times |
|---|---|
| Wednesday, 12/2/26 | 9:00 AM - 3:00 PM |
| Wednesday, 12/9/26 | 9:00 AM - 3:00 PM |

# Curriculum Topic Study (CTS)

## Topic(s)

CTS01 Plate Tectonics

## Description

When tailoring curriculum to meet students' needs, how do you know what to modify and what is essential to keep in place? Leveraging the research behind how and what students need to know about plate tectonics, participants will experiment with tweaking lessons while maintaining the integrity of their curricula.

*Please note that asynchronous work begins 1 week before the first class meeting and will conclude 2 weeks afterwards as indicated below.

**Institution** AMNH

**Format** Async Sync

| Sync Dates | Times |
|---|---|
| Sunday, 1/10/27 | 9:00 AM - 12:30 PM |
| Sunday, 1/24/27 | 9:00 AM - 12:30 PM |

**Async Dates**

Friday, 1/1/27 through Sunday, 2/7/27

# Curriculum Topic Study (CTS)

## Topic(s)

### CTS18 Phases of the Moon

## Description

How can we support students in constructing an understanding of moon phases, and how can we advance students' ability to engage in science learning by doing so? We will use the Curriculum Topic Study format to explore research into what middle school students are developmentally capable of understanding about this topic and commonly held misconceptions; examine the core science ideas,cross-cutting concepts and science practices that students can use to make sense of this phenomenon; and consider implications for teaching this topic. We will examine how this topic is typically handled in classrooms and in commercially designed curricula such as Amplify, and consider how best to make modifications.

**Institution** NYBG

**Format**  Async  In-Person

| In-Person Dates | Times |
|---|---|
| Sunday, 1/24/27 | 9:00 AM - 3:00 PM |
| Sunday, 2/7/27 | 9:00 AM - 3:00 PM |

**Async Dates**

Thursday, 12/24/27 through Sunday, 2/7/27

# Curriculum Topic Study (CTS)

## Topic(s)

CTS02 Adaptation

## Description

How can we tailor curriculum to meet student needs? Following the Curriculum Topic Study (CTS) format, we will investigate the research behind both how natural selection creates adaptation and what students and adults need to know about this topic. We will explore Bronx Zoo exhibits and activities and explore how these resources can leverage student experiences and ideas to help all students learn science together. Through deeper understanding of curriculum goals and common misconceptions, participants will reflect on how we can most effectively teach this topic.

| | |
|---|---|
| Institution | BXZ |
| Format |  In-Person |

| In-Person Dates | Times |
|---|---|
| Wednesday, 3/10/27 | 9:00 AM - 3:00 PM |
| Wednesday, 3/17/27 | 9:00 AM - 3:00 PM |

# Curriculum Topic Study (CTS)

## Topic(s)

CTS23 Evolving Landscapes

## Description

This course is a Curriculum Topic Study (CTS) focuses on the systematic study of research, standards, and best practices related to science teaching and learning. Participants will explore resources to strengthen classroom instruction, curriculum, and assessment practices. The focus of this course is Biodiversity and Human Impact. Through each session, educators will examine misconceptions, investigate how students develop understanding, and explore how scientific knowledge builds across grade levels. Join us to collaboratively develop a shared understanding that enhances teaching and deepens student learning about biodiversity, ecosystems, and human activities. This course includes an in-person site visit to Freshkills Park.

**Institution** SIZ

**Format** In-Person

| In-Person Dates | Times |
|---|---|
| Saturday, 4/17/27 | 8:30 AM - 2:30 PM |
| Saturday, 5/1/27 | 8:30 AM - 2:30 PM |

# Middle School Year 3

## Course Goals

Year 3 teachers are required to take one of each of the following courses.

## Supporting Ongoing Changes in Thinking

1) Apply one or more strategies for encouraging all students to successfully talk about science ideas represented in their models / explanations

2) Apply one or more scaffolds to support learners with revising initial models / explanations as they are exposed to new sources of information

3) Articulate how the practice of individual and collective sense-making helps strengthen students' understanding relationships between ideas, representations or explanations

## Reflective Practice (RP)

1) Increase teacher confidence with deprivatizing practice through community-building, and applying protocols or processes

2) Strengthen the application of a strategy learned in UA using peer feedback, research, or protocols and processes for reflecting on practice

# Middle School Year 3

## Topic(s)

Pigeons

## Description

Participants will explore how human impact contributed to the rise and fall of two species of "superdove" AKA the passenger and rock pigeons. Through an examination of each organisms unique behaviors and traits, and differences in human responses to each, we will consider how our attitudes and beliefs can drive our actions and impact ecosystems.

**Institution** AMNH

**Format** In-Person

| In-Person Dates | Times |
|---|---|
| Thursday, 10/8/26 | 8:30 AM - 2:30 PM |
| Tuesday, 10/20/26 | 8:30 AM - 2:30 PM |

# Middle School Year 3

## Topic(s)

## Exhibit Design

## Description

Participants will explore and practice skills pertaining to helping their students work collaboratively, engage in collective sense making and providing thoughtful feedback. A group project focused on designing a model blueprint for a zoo exhibit will help participants achieve these objectives as they work together to revise initial models. Through group discourse, background research, exhibit visits and more participants will learn about exhibit design practices as well as the biology of their exhibit animal to help them further refine their models. Teachers will reflect with one another on the pedagogical practices utilized in this course and end the program by developing a plan for how they will implement some of these strategies in their own practice.

| | |
|---|---|
| Institution | BXZ |
| Format |  In-Person |

| In-Person Dates | Times |
|---|---|
| Saturday, 12/5/26 | 9:00 AM - 3:00 PM |
| Saturday, 12/12/26 | 9:00 AM - 3:00 PM |

# Middle School Year 3

## Topic(s)

## Exhibit Design

## Description

Participants will explore and practice skills pertaining to helping their students work collaboratively, engage in collective sense making and providing thoughtful feedback. A group project focused on designing a model blueprint for an aquarium exhibit will help participants achieve these objectives as they work together to revise initial models. Through group discourse, background research, exhibit visits and more, participants will learn about exhibit design practices as well as the biology of their exhibit animal to help them further refine their models. Teachers will reflect with one another on the pedagogical practices utilized in this course and end the program by developing a plan for how they will implement some of these strategies in their own practice.

**Institution** NYA

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Tuesday, 1/26/27 | 9:00 AM - 3:00 PM |
| Tuesday, 2/2/27 | 9:00 AM - 3:00 PM |

# Middle School Year 3

## Topic(s)

## Making Thinking Visible

## Description

This professional learning experience broadens participants' understanding of what student participation can look like in science. Sharing ideas, engaging in dialogue, and collaborating with peers are essential to how students develop, revise, and communicate their thinking. Teachers will explore different properties of light and sound, how humans use and manipulate these properties in urban environments, and how they can affect urban wildlife. Teachers will strengthen their practice by identifying equitable teaching moves that support diverse ways of demonstrating understanding and help make changes in students' thinking visible over time.

| | |
|---|---|
| **Institution** | NYSCI |
| **Format** |  In-Person |

| In-Person Dates | Times |
|---|---|
| Tuesday, 2/23/27 | 9:00 AM - 3:00 PM |
| Tuesday, 3/16/27 | 9:00 AM - 3:00 PM |

# Middle School Year 3

## Topic(s)

## Developing Models

### Description

Participants will take a deep dive into the practice of Developing & Using Models by constructing and revising a model to explain local phenomena. We will consider the NYS Culturally Responsive-Sustaining Education Framework to incorporate cultural perspective on the types of models we develop and how students talk about the effects of ecosystem change on populations of organisms.

| | |
|---|---|
| Institution | BBG |
| Format |  In-Person |

| In-Person Dates | Times |
|---|---|
| Thursday, 2/25/27 | 9:00 AM - 3:00 PM |
| Wednesday, 3/3/27 | 9:00 AM - 3:30 PM |

# Middle School Year 3

## Topic(s)

## Natural Selection

## Description

Come to the Staten Island Zoo to explore natural selection and how "survival of the fittest" shapes biodiversity. Using the zoo's exhibits and surrounding urban ecosystem as a real-world laboratory, participants investigate how environmental pressures determine which traits are passed across generations and how genetic variation drives adaptation. Through observation, data analysis, readings, expert insights, and wildlife examples, learners refine explanations of how gene combinations affect survival and reproduction. The course emphasizes revising thinking as new evidence emerges and supports collaborative sensemaking through structured discussion and peer interaction, strengthening understanding of relationships between organisms, environments, and evolution over time.

**Institution** SIZ

**Format** In-Person

| In-Person Dates | Times |
|---|---|
| Thursday, 3/11/27 | 8:00 AM - 2:00 PM |
| Thursday, 3/25/27 | 8:00 AM - 2:00 PM |

# Middle School Year 3

## Topic(s)

## Avian Adaptations

## Description

From mockingbirds to sparrows to starlings, to you and me, many call NYC home. How have organisms adapted to living here? Who has been welcomed and who has been excluded by rapid urbanization that has transformed sprawling forests and wetlands into the concrete jungle that we know today? Through observations, historical perspectives, and place-based learning, we'll track our changes in thinking by creating and revising models. We'll deepen our understanding of the nuanced interactions between ecosystems and animal adaptations. We will engage our prior knowledge to practice individual and collective sense making as we explore urbanization and the life that contests and shapes it. Finally, we will reimagine our communities to create a more welcoming, inclusive, and responsive space.

**Institution** QBG

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Sunday, 4/4/27 | 9:00 AM - 3:00 PM |
| Sunday, 4/11/27 | 9:00 AM - 3:00 PM |

# Reflective Practice (RP)

## Topic(s)

## RP53 Literacy Strategies

## Description

This online course helps teachers reflect on and strengthen their use of literacy strategies in science instruction. Participants will review various strategies, select one to focus on, and plan how to integrate it into a lesson. With support from colleagues and UA partners, they will revise, teach, and reflect on the lesson by analyzing student work samples. The course includes collaborative discussions, peer feedback, and opportunities to apply new strategies in practice. To earn credit, participants must complete required posts and attend all scheduled Zoom sessions. Active online participation is expected throughout the course.

## Institution

BXZ

## Format

 Async

 Sync

| Sync Dates | Times |
|---|---|
| Saturday, 10/17/26 | 9:00 AM - 11:00 AM |
| Saturday, 11/7/26 | 9:00 AM - 11:00 AM |
| Saturday, 11/21/26 | 9:00 AM - 11:00 AM |
| Saturday, 12/19/26 | 9:00 AM - 11:00 AM |

## Async Dates

Tuesday, 10/13/26 through Wednesday, 12/23/26

# Reflective Practice (RP)

## Topic(s)

RP55 Field Trips

## Description

Field trips are an important part of the New York City school experience, but planning for them can be stressful! Enter… the Museum and its digital resources! This session is designed to introduce participants to the wealth of digital resources that all UA institutions produce. We will also reflect on how these resources can be utilized to enhance pre-visit and post-visit learning and for planning and facilitating memorable field trip experiences. We will also discuss the place-based learning, the teacher's experience of field trips, and reflect on the dos and don'ts of field trips and field trip planning. The course will be held mostly online and culminates in an onsite session at American Museum of Natural History where teachers will learn how to confidently make use of the different digital technologies around the Museum during their own field trips as well as reflect on their own field trip planning experience.

## Institution

AMNH

## Format

 Async  In-Person

## In-Person Dates

Sunday, 12/13/26

## Times

10:00 AM - 4:00 PM

## Async Dates

Sunday, 11/8/26 through Sunday, 11/15/26
Sunday, 11/15/26 through Sunday, 11/22/26

# Reflective Practice (RP)

## Topic(s)

RP13 Student Centered Science

## Description

This course empowers educators to design science experiences that connect students to their communities, fostering curiosity and self-motivated learning. Aligned with NGSS practices, participants will explore strategies for guiding students to obtain, evaluate, and communicate information through meaningful, real-world phenomena. Participants will explore strategies that aim to inspire self-directed exploration, with the goal of supporting students in bringing their Science Stories and Adventures to the UA EXPO at the end of the year.

| | | |
|---|---|---|
| **Institution** | | AMNH & NYSCI |
| **Format** | Sync | In-Person |
| **Dates** | **Times** | **Format** |
| Thursday, 10/22/26 | 9:00AM - 2:00 PM | In-Person |
| Wednesday, 12/2/26 | 9:00 PM - 2:00 PM | In-Person |
| Wednesday, 2/24/27 | 4:00 PM - 5:30 PM | Sync |
| Wednesday, 5/5/27 | 4:00 PM - 5:30 PM | Sync |

# Reflective Practice (RP)

## Topic(s)

## RP70 Inter-Visitation (In-Person)

### Description

Have you been looking for rich examples of what powerful three-dimensional science instruction can look like? In this course, participants will reflect on and grow their practice by visiting veteran UA teachers (the UA Fellows) who have successfully integrated the program's tools and resources, and cutting edge research on teaching and learning, into their practice. You will develop a repertoire of tools for observation and implementing inter-visitation in your schools. This course includes a one 5.5-hour day of professional learning and one classroom visit day (equivalent to full school day - includes travel time, pre-conference observation, and debrief; date & location of your choosing; substitute reimbursement provided to your school).

**Institution** AMNH

**Format** In-Person

| Dates | Times |
| --- | --- |
| Thursday, 12/10/26 | 9:00 AM - 2:30 PM |

*Visit date TBD

# Reflective Practice (RP)

## Topic(s)

### RP71 Building Our Practice

## Description

In this online course, we'll be applying the approach and resources of the NSRF to develop a Critical Friends Group (CFG) that will support one another as science teaching professionals! Our work will begin with asynchronous work in Moodle dedicated to building community, becoming more familiar with what a CFG looks like in practice, and the importance of protocols. During synchronous Zoom meetings, we will be taking a deeper dive into CFG work, including preparing for giving and receiving meaningful feedback, and participants presenting their own puzzles of practice to get feedback from their peers. Puzzles of practice may include:

-Dilemmas related to student learning
-Examining and learning from student work
-Looking at and reflecting upon teacher work

| | |
|---|---|
| Institution | BBG |
| Format | Async / Sync |

| Sync Dates | Times |
|---|---|
| Sunday, 1/9/27 | 9:00 AM - 1:00 PM |
| Sunday, 1/30/27 | 9:00 AM - 1:00 PM |
| Sunday 2/27/27 | 9:00 AM - 12:00 PM |

## Async Dates

Monday, 1/4/27 through Friday, 3/5/27

# Reflective Practice (RP)

## Topic(s)

RP17 Collective Imaginations

## Description

It's important to recognize that traditional classrooms have implicitly and explicitly excluded students from marginalized communities. To uproot this, we will collaboratively construct an inclusive learning environment where the content is representative of its members and responsive to their needs. How might we begin to cultivate community building and to create safe learning spaces in our classrooms? In this course, we will review a variety of resources to inform our classroom communities and practice a variety of discussion protocols to make learning interdependent and accessible. Pairing "ways of knowing with habits of being" serves as an important point of reflection for our personal and professional growth.

**Institution** QBG

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Monday, 1/20/27 | 9:00 AM - 3:00 PM |
| Monday, 2/3/27 | 9:00 AM - 3:00 PM |

# Reflective Practice (RP)

## Topic(s)

RP12 Ambitious Science Teaching Study Group

## Description

Participants will work together to discuss and make sense of the book, Ambitious Science Teaching by Mark Windschitl, and workshop its practices in their classrooms. This course will meet over Zoom and require asynchronous work to read chapters from Ambitious Science Teaching, share ideas using Perusall, and apply ideas to personal practice. Zoom sessions will focus on discussing the reading and reflecting on classroom practice.

This course will be held ONLINE in the form of four 1.5 hour facilitated Zoom sessions, with 1.25 hours of asynchronous work before each session. Attendance and active participation in these Zoom sessions is required.

Teachers registered for this course must be available to login via Zoom for each of the date(s) listed. Please make your best effort to use a computer (not a phone or tablet) in a stationary, reasonably controlled location with stable wi-fi, no other obligations and minimal distractions. Teachers are also expected to actively participate in every aspect of the course (online activities, live discussions, breakout rooms, polls, discussion forums, quizzes, etc.).

## Institution

NYBG

## Format

Async

Sync

## Sync Dates

| Sync Dates | Times |
|---|---|
| Thursday, 2/25/27 | 4:30 PM - 6:00 PM |
| Thursday, 3/11/27 | 4:30 PM - 6:00 PM |
| Thursday, 4/1/27 | 4:30 PM - 6:00 PM |
| Thursday 4/15/27 | 4:30 PM - 6:00 PM |

## Async Dates

Monday, 2/1/27 through Monday, 4/15/27

# Reflective Practice (RP)

## Topic(s)

### RP08 Coaching Strategies

## Description

Teachers will engage in teacher-led coaching and questioning that will lead students to create rigorous and scientifically supported long-term investigations. This course emphasizes teacher collaboration in order to improve the implementation of science investigations in the classroom. Teachers will engage in collaborative, critical and supportive dialogue as they examine the strategies and artifacts they use to guide and support students in the design of their investigations.

**Institution** NYA

**Format** Async In-Person

| In-Person Dates | Times |
|---|---|
| Saturday, 3/6/27 | 9:00 AM - 2:00 PM |
| Saturday, 3/13/27 | 9:00 AM - 2:00 PM |

**Async Dates**

Saturday, 3/6/27 through Saturday, 3/13/27

# Reflective Practice (RP)

## Topic(s)

### RP05 Flock together

## Description

Birds of a feather reflect together, so join us in building your collaborative flock of thoughtful educators to support growth in your teaching practice. For true growth to happen, you need to experience support, collaboration, positivity, and reflection. This course provides a space for personal and professional growth assisting participants in improving their practice. We'll work together to build trust and create a collaborative community of educators through the use of protocols. In this course you will experience opportunities to reflect with colleagues, share obstacles you're facing, and receive actionable feedback. The goal of creating a "FLOCK", or network of support, that will continue through the remainder of the school year and beyond.

| Institution | | SIZ |
|---|---|---|
| Format | Sync | In-Person |
| Dates | Times | Format |
| Saturday, 3/20/27 | 8:30 AM - 1:30 PM | In-Person |
| *Sync dates TBD will be after school hours | | Sync<br>Sync |
| Saturday, 4/3/27 | 8:30 AM - 1:30 PM | In-Person |

# Middle School Year 4

## Course Goals

Year 4 teachers are required to take one of the following courses.

## Making and Justifying Claims in a Science Community

1) Apply scaffolds to help learners develop and deliberate explanatory, evidence-based claims with peers related to phenomena or relevant issues

2) Recognize that science, as both a body of knowledge and process, is:

a. dynamic
b. done collaboratively
c. influenced by identity and sociopolitical context

3) Articulate the critical role the regular practice of engaging in argument plays in helping scientists and students clarify what "we" know, why "we" believe what we do, what "we" should do next

# Middle School Year 4

## Topic(s)

## Lanternflies

## Description

How can we support students in developing and defending evidence-based claims about complex environmental issues? Using the case of spotted lanternflies, we will explore how scientists and communities use evidence and stakeholder perspectives to address real-world problems. Participants will investigate the ecological impacts of invasive species, examine competing management strategies, and engage in structured argumentation about what actions should be taken. We will use tools and scaffolds that help students construct, critique, and revise claims, and consider how these practices can be adapted for the classroom. The course takes place across two learning environments: Day 1 at the New York Botanical Garden and Day 2 at the Bronx Zoo.

**Institution** BXZ & NYBG

**Format**  In-Person

| In-Person Dates | Times | Location |
|---|---|---|
| Tuesday, 10/27/26 | 9:00 AM - 3:00 PM | NYBG |
| Monday, 11/2/26 | 9:00 AM - 3:00 PM | BXZ |

# Middle School Year 4

## Topic(s)

## Ghosts of Evolution

### Description

When we consider reviving extinct species like the wooly mammoth or giant sloth - do we ever consider the impact on those plants for which they once dispersed the fruit? Just as science is done collaboratively, Brooklyn Botanic Garden and the American Museum of Natural History work together in this workshop to engage participants in numerous angles of this content. To help sort through multiple claims, participants will gain confidence using scaffolded guides for writing claims and incorporating feedback to help peers develop the most credible arguments possible.

| | | |
|---|---|---|
| **Institution** | | AMNH & BBG |
| **Format** | |  In-Person |
| **In-Person Dates** | **Times** | **Location** |
| Saturday, 2/6/27 | 9:00 AM - 3:00 PM | BBG |
| Saturday, 3/6/27 | 9:00 AM - 3:00 PM | AMNH |

# Middle School Year 4

## Topic(s)

## Community Science

## Description

What comes to mind when you think of a scientist? You might picture someone in a white lab coat conducting experiments in a laboratory. While that image represents some scientists, science is a collaborative, dynamic process that anyone can participate in. In this course, participants will explore how community science engages students in investigating local phenomena, collecting and analyzing data, and contributing to real scientific research. Through hands-on activities, educators will learn strategies to help students develop and defend evidence-based claims, engage in scientific argumentation, and recognize how scientific knowledge is shaped through collaboration, diverse perspectives, and societal contexts. Join the Staten Island Zoo to bring authentic science into your classroom.

**Institution** SIZ

**Format** In-Person

| In-Person Dates | Times |
|---|---|
| Saturday, 2/27/27 | 8:00 AM - 2:00 PM |
| Saturday, 3/6/27 | 8:00 AM - 2:00 PM |

# Middle School Year 4

## Topic(s)

## Bring the Noise

### Description

In the city that never sleeps, we are constantly bombarded by sounds. How is noise pollution affecting our communities? In this class, we will explore the differences between sound and noise and the impacts it has on our daily lives. By conducting outdoor observations, recording sound measurements, and reflecting on our own lived experiences, we will make claims describing the impact of noise pollution and exploring solutions to mitigate this potential harm. Our data exploration of how noise is distributed throughout the city will be informed by various resources including government data and citizen science. We will also explore how sound is tied with justice, both the right to make noise and to be free from harmful noise pollution.

### Institution

QBG

### Format



In-Person

| In-Person Dates | Times |
|---|---|
| Saturday, 3/6/27 | 9:00 AM - 3:00 PM |
| Saturday, 3/13/27 | 9:00 AM - 3:00 PM |

# Middle School Year 4

## Topic(s)

## Claims and Argumentation

### Description

How can we prepare students to develop strong scientific claims and evaluate those they encounter in and beyond the classroom? In this professional learning experience, teachers will explore scaffolds that support students in developing and deliberating evidence-based claims with peers. Teachers will examine science as a dynamic, collaborative process shaped by identity and sociopolitical context, while considering how argumentation helps learners clarify what we know, why we believe it, and what actions should follow.

**Institution** NYSCI

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Thursday, 4/1/27 | 9:00 AM - 3:00 PM |
| Thursday, 5/6/27 | 9:00 AM - 3:00 PM |

# Middle School Year 5

## Course Goals

Year 5 teachers are required to take one of the following courses.

## Pressing for Evidence-based Explanations

1) Apply one or more strategies to encourage diversity and to support equity in how explanations are generated

2) Identify opportunities for co-constructing and implementing "gotta have checklists" (success criteria) with learners to be included in final explanations or models

3)Articulate the important connection between students regularly generating working versions of explanations and their ability to draw together multiple forms of evidence to explain a phenomenon at the end of a unit

4) Recognize the role that scientific explanations play in helping scientists and students advocate for change.

# Middle School Year 5

## Topic(s)

## Insect Decline

### Description

One of the goals for the Year 5 core courses is to "Recognize the role that scientific explanations play in helping scientists and students advocate for change." Along those lines, this course will explore the topic of insect decline and how the current hypotheses for the causes of these declines may inform actions we can take to respond to this phenomenon. Actions may include school yard habitats that may address various needs of these organisms, pesticide use reduction, participator science monitoring projects. We will employ a variety of strategies to engage students in locally meaningful actions, some of which may overlap with the UA Course RP13, a UA place-based science course.

| | |
|---|---|
| Institution | AMNH |
| Format |  In-Person |

| In-Person Dates | Times |
|---|---|
| Saturday, 10/17/26 | 9:00 AM - 3:00 PM |
| Saturday, 11/7/26 | 9:00 AM - 3:00 PM |

CANCELLED

# Middle School Year 5

## Topic(s)

Wildlife Trade

## Description

Global trade is constantly evolving, but what happens when trade involves illegal activities? How does illegal wildlife trade impact ecosystems and the daily lives of people worldwide? This course explores these questions by examining the Illegal Wildlife Trade, global efforts to combat it, and the connections between society and conservation. In partnership with the U.S. Fish & Wildlife Service, participants will learn about the tools and techniques used to identify, confiscate, and prosecute those involved in illegal trade. Using evidence from multiple scientific and social perspectives, participants will construct explanations about the impacts of wildlife trafficking and create a conservation plan that connects science learning, real-world action, and the role of zoos in conservation.

**Institution** SIZ

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Friday, 2/12/27 | 8:00 AM - 2:00 PM |
| Friday, 2/26/27 | 8:00 AM - 2:00 PM |

# Middle School Year 5

## Topic(s)

## Landfill to Landscape

## Description

Explore why converting waste dumps into parks acts as a significant climate change solution. Engage in immersive experiences at a former dump site and at garden spaces. Participants will  build on prior UA courses on models and leave with new strategies for joining together multiple pieces of evidence, pressing for gapless explanations, and offering critique to students.

**Institution** BBG

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Sunday, 4/11/27 | 9:00 AM - 3:00 PM |
| Sunday, 4/18/27 | 9:00 AM - 3:00 PM |

# Middle School Year 5

## Topic(s)

## Explanations

### Description

Supporting all students in developing stronger scientific explanations over time requires intentional and equitable instructional practices. In this professional learning experience, teachers will explore strategies for generating explanations, while identifying opportunities for students to revise working explanations and models throughout a unit. Teachers will examine how these ongoing practices help students draw together multiple forms of evidence to explain a phenomenon in their final work.

| | |
|---|---|
| Institution | NYSCI |
| Format |  In-Person |

| In-Person Dates | Times |
|---|---|
| Sunday, 4/18/27 | 9:30 AM - 3:30 PM |
| Sunday, 5/16/27 | 9:30 AM - 3:30 PM |

# Middle School Year 5

## Topic(s)

## Coastal Resilience

### Description

In this in person course, teachers will  use the New York Aquarium as a learning laboratory to study how coastal restoration and infrastructure within NYC help mitigate storm surge. Participants will learn how to support equitable diverse explanation-making and see the connection between revising explanations and creating final explanations. Through exploring both manmade and natural solutions, participants will learn how to help students recognize themselves as scientists who can use their explanations to advocate for change.

### Institution

NYA

### Format



In-Person

| In-Person Dates | Times |
|---|---|
| Monday, 5/3/27 | 9:00 AM - 3:00 PM |
| Monday, 5/10/27 | 9:00 AM - 3:00 PM |

# Middle School Year 6+

## Course Goals

Year 6+ teachers are required to take the following course.

## UA Commencement Course

Participants will:

1) Reflect on growth and instructional shifts accomplished through UA course work over time
2) Identify clear next steps as science educators and leaders based on what they have learned in UA.

Vision for UA Alumni:

1) Feel confident sharing your teaching beliefs and practice with others.
2) Norm not knowing the answer with your students as they construct and revise evidence-based explanations; science is iterative!
3) Recognize the central role that talk plays in how students learn science over time, and build this into your classroom routines.
4) Integrate the unique perspectives and experiences of your students into instruction to strengthen students' ability to construct evidence-based explanations.
5) Make phenomena relatable, helping students see the "why" behind science and the critical role they play.
6) Routinize trips to our institutions to inspire learning in a way that is integrative and not additive.

# Middle School Year 6+

## Topic(s)

## UA Commencement Course

## Description

The UA Capstone is a summative experience designed to support teachers at the end of their UA tenure in reflecting on their learning, making meaning of their growth, and articulating how their UA experience will carry forward into their classrooms, leadership, and professional practice. This experience supports meaningful end-of-program reflection and an explicit transition moment for both Elementary and Middle School teachers.

Participants are required to attend one of the following sessions offered below

**Institution** AMNH

**Format**  In-Person

| In-Person Dates | Times |
|---|---|
| Saturday, 5/8/27 | 9:00 AM - 2:30 PM |
| Tuesday, 5/11/27 | 9:00 AM - 2:30 PM |
| Sunday, 5/16/27 | 9:00 AM - 2:30 PM |

# Parent Coordinator Workshops

## Topic(s)

## Climate Action for Stronger Communities

### Description

Climate action begins with informed and engaged families. Our PC workshops will help Parent Coordinators build confidence in connecting families to climate and environmental learning through meaningful, hands-on science experiences. Participants will explore how climate issues affect communities across New York City, discover resources from our partner institutions, and learn practical strategies for engaging families in conversations and activities that promote environmental stewardship, community well-being, and everyday actions that make a difference. These workshops will make connections to NYC Public Schools Climate Action Days.

### Format

 In-Person

| Dates | Times | Institution |
|---|---|---|
| Tuesday, 11/17/26 | 9:00 AM - 3:00 PM | AMNH |
| Thursday, 12/10/26 | 9:00 AM - 2:30 PM | NYSCI |
| Thursday, 1/28/27 | 9:00 AM - 2:30 PM | BXZ |
| Wednesday, 2/10/27 | 9:00 AM - 2:30 PM | BBG |
| Tuesday, 3/2/27 | 9:00 AM - 2:30 PM | SIZ |
| Tuesday, 3/16/27 | 9:00 AM - 2:30 PM | NYA |
| Tuesday, 3/23/27 | 9:00 AM - 3:00 PM | NYBG |
| Thursday, 4/1/27 | 9:00 AM - 3:00 PM | QBG |

# Administrator Breakfasts

**Topic**

## CRSE Family Engagement and Classroom Connections

**Format**  Sync

| Date | Time |
|---|---|
| Wednesday, 10/21/26 | 9:00 AM - 11:00 AM |

**Topic**

## “Leadership in the Lab”: A Professional Learning Community for UA Admins

**Institution** AMNH

**Format**  In-Person

| Date | Time |
|---|---|
| Wednesday, 12/16/26 | 9:00 AM - 12:00 PM |

# Administrator Breakfasts

## Topic

Using Class Trips to Reap the Rich Benefits of a Localized Curriculum

**Format**  Sync

| Date | Time |
| --- | --- |
| Wednesday, 3/17/27 | 9:00 AM - 11:00 AM |

## Topic

Beyond the Standard: Leading Climate Education That Centers Students

**Institution** AMNH

**Format**  In-Person

| Date | Time |
| --- | --- |
| Wednesday, 5/19/27 | 9:00 AM - 12:00 PM |

