

Wade Institute for Science Education
1354 Hancock St., Ste. 302
Quincy, MA 02169



Join the Wade Institute for Science Education this spring for a professional learning workshop and explore storyline teaching and phenomena, or coding and engineering concepts!

Wade Institute for Science Education

Approved Courses for MA DESE's Accelerating Science:
Open Access Professional Learning

Building the Storyline

A Focus Workshop for Grades 9-12 Educators

or

Engaging Students in the Engineering Process Using Sensors

A Focus Workshop for Grades 6-12 Educators



Register Today!
wadeinstitutema.org/oapl



Wade Institute for Science Education

Approved Courses for MA DESE's Accelerating Science: Open Access Professional Learning

Building the Storyline

A Focus Workshop for Grades 9-12 Educators

Explore how to use storyline routines and anchoring phenomena to shift your curriculum to student-centered science learning as you explore the relationship between humans and the natural environment!

In this workshop, you'll follow a storyline unit focused on sustainability, management of natural resources, ecosystems health, design solutions, and more. You'll engage in lessons from the unit as a learner, including the anchoring phenomenon routine and student-driven inquiry investigations, then reflect on those experiences as a teacher. During the workshop, you will learn how to construct a storyline unit, incorporate relevant phenomena, and utilize best practices for DEI in the STEM classroom, including establishing classroom norms and processes that value all student resources. You will leave the program with an outline of a storyline unit, inquiry investigations to use in your classroom, and resources for developing your own storyline unit using culturally relevant phenomena.

Using the storyline approach, we will:

- Explore an anchoring phenomenon that sparks wonder at the start of the unit.
- Identify phenomena relevant to your local community.
- Demonstrate the importance of biodiversity in an ecosystem.
- Evaluate competing design solutions for minimizing impacts to the natural environment.
- Observe the relationship between humans and nature.
- Participate in place-based learning experiences.

Dates and Times: April 3rd - 4th, 2023 (8:30 AM - 3:30 PM ET)

Collaborating Partner and Location: Blackstone River Valley National Heritage Corridor, Worcester, MA.

Cost: FREE for eligible MA educators that qualify through MA DESE's OAPL program and includes \$150 substitute pay. \$200 per educator from non-qualifying schools.

PDPs and Optional Graduate Credit: 14 PDPs available without graduate credit. 22.5 PDPs and 1 graduate credit from Cambridge College available for \$75. Additional work is required for graduate credit.

These courses are FREE for eligible MA educators through MA DESE's Accelerating Science: Open Access Professional Learning Courses. Visit www.wadeinstitutema.org/oapl to find out if you qualify.

Engaging Students in the Engineering Process Using Sensors

A Focus Workshop for Grades 6-12 Educators

Investigate coding & engineering design concepts through fun, hands-on projects!

Join the Wade Institute for Science Education for a two-day professional learning experience as we explore coding and engineering design concepts through fun, engaging, hands-on projects. Delve into a variety of investigations that explore using Arduino Sensors with your students. Build a control panel for your Starship, create a Love-O-Meter, design a Color Mixing Lamp, experiment with a Motorized Pinwheel and make your own Light Theremin (a musical instrument you play by waving your hands). Then create another device of your own choosing with guidance from our instructors.

We will model how to engage students with hands-on lessons that develop an understanding of the engineering design process, including using engineering design drawings and bread boards, as we explore the concepts of current, voltage, and digital logic as well as the fundamentals of programming. Experience how to guide student driven learning through critical thinking and collaborative learning activities as your students work to solve problems. We will share how the technology is used in real world applications in a wide range of industries that affect our lives as well as how this technology is used in scientific studies. As the final component of the workshop, you will be asked to select a design challenge you would like to incorporate into your own curriculum and brainstorm with your peers to identify opportunities for students to embed sensors into their projects. You will leave the workshop with an Arduino kit to start using these materials and investigations in your classroom.

Workshop highlights:

- Examine and design engineering drawings to create your own device.
- Identify how Arduino can be used to address Problem-Based Learning in any science course
- Walk away with your own sensors kit and lessons to use in your classroom.
- Gain access to on-line program software for students to use to create projects.
- Make connections with industry partners as a classroom resource.
- Gain hands-on practice with sensors as you work with middle and high school teachers who use these devices in their classrooms.

Dates and Times: April 27th - 28th, 2023 (8:30 AM - 3:30 PM ET)

Location: Massasoit Community College, Canton, MA.

Cost: FREE for eligible MA educators that qualify through MA DESE's OAPL program and includes \$150 substitute pay. \$250 per educator from non-qualifying schools.

PDPs and Optional Graduate Credit: 14 PDPs available without graduate credit. 22.5 PDPs and 1 graduate credit from Cambridge College available for \$75. Additional work is required for graduate credit.

