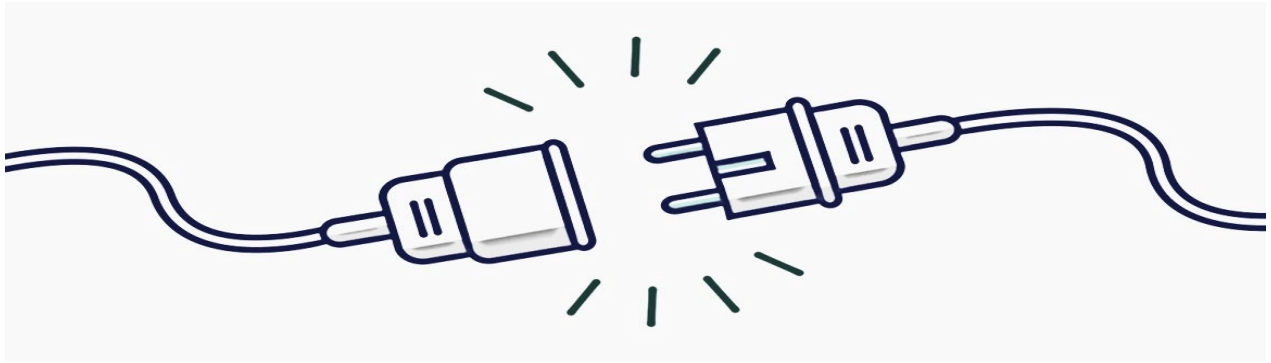
Making the Connection with Schools



Using Standards to design and promote STEM programs to teachers and learners.

Isabel Castro, West Orange Public Library, NJ
icastro@westorangelibrary.org

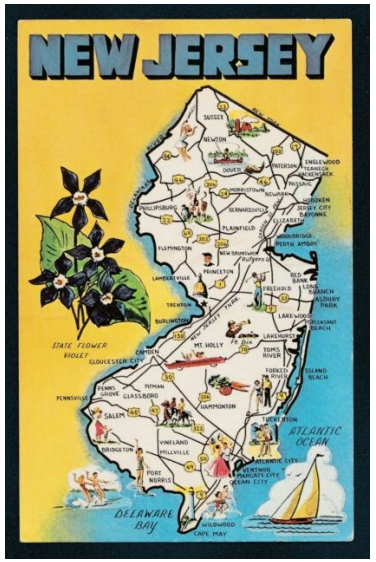
Elementary School Teacher

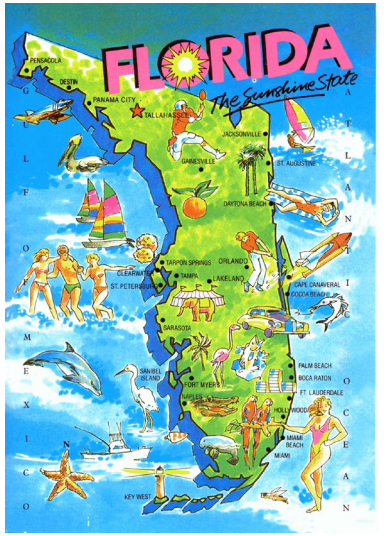
Reference Librarian

Children's Museum Educator

STEAM Equity Project Advisor

New Jersey, Florida, & California



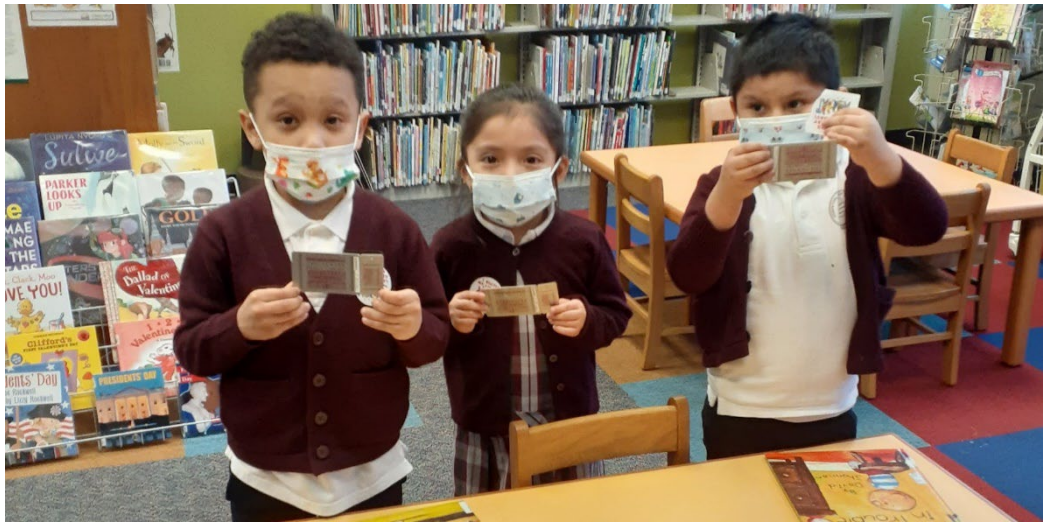


Palm Springs Public Library, Palm Springs, FL

Soy Super/ I'm Super

Why aren’t schools bringing students BY THE BUSLOADS to see this?!

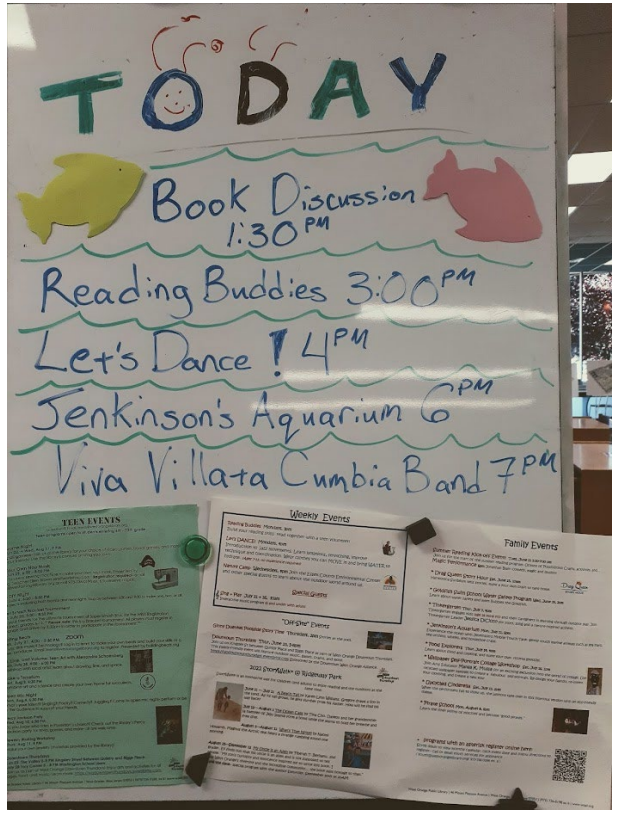
The One and Only Library Field Trip



- Usually between 3rd Grade "Learning to Read" and 4th Grade "Reading to Learn"
- Students get a library card and information about libraries.
- Visit supports Language Arts standards regarding Reading, Research, etc.
- Many students never visit the public library again and rely on the school library/media center or classroom library

What's going on at the library?

- Think beyond Summer Reading
- Promote exhibits and special programs; flyers, etc.
- Board Liaison, Director reach out to Superintendent
- Library card application
- Seek out opportunities for Face to Face interactions
- Read Across America, Back to School night, STEM Fair
- Relationships with school librarian, individual teachers, principals
- Outreach, bring activity/exhibit to class, ex: solar telescope kit



Kelly Elementary School
& West Orange Public Library
Presents

Multilingual Library Night

Monday, December 5th from 7:00 - 8:00 PM

at the West Orange Public Library

46 Mt. Pleasant Avenue, West Orange

Children welcome!

Tour the library!

Get a library card!

Introduction to computer classes!

Review of library resources!

WEST ORANGE PUBLIC LIBRARY
Where Bright Ideas Begin!

Questions?
Contact mquiroz@westorangeschools.org

Kelly Elementary School and the **West Orange Public Library** co-hosted a Multilingual Library Night on Dec. 5.

Parents enjoyed a tour of the library, learning about the resources and programs available to their children and the community.

Several families signed up for their first library cards and borrowed their first books.

Students from the **West Orange High School Spanish National Honor Society** were on hand to read to Kelly students and help them explore the children's section of the library.

School Collaboration From the Inside Out NJLA Annual Conference - June 2023

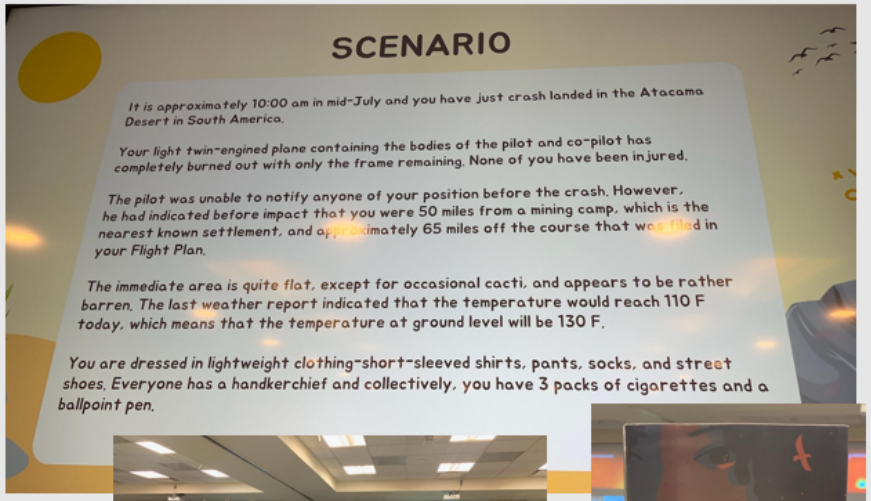
Library Partnerships Supporting Standards

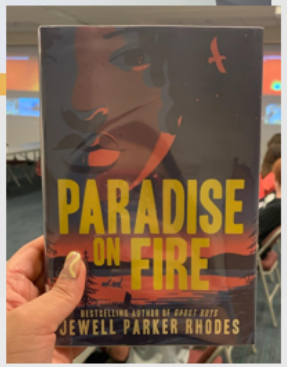
Cherry Hill HS West
Cherry Hill Middle Schools

Project Lit Retreat, 2022

- Club Field Trip (during school day) to CHPL.
- Project Lit: Paradise on Fire, Jewell Parker Rhodes
- Language Arts/English teachers, School Media Specialists, Curriculum Supervisor, and Teen Librarians were involved in planning
- CHPL provided space and teen librarians ran a breakout activity: Survival Simulation.
    - Students were read a scenario and ranked survival items in order of most to least important.

ELA:Speaking and Listening (Flexible Communication and Collaboration) EX: Grade 7 (page 9)





Comprehension and Collaboration NJSLSA.SL1. Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.

The Collaboratorium: Media Literacy in Science

"I was truly surprised to learn that the NGSS Science and Engineering Practices Learning Progression includes multiple media and information literacy concepts…."

"Now that I know more about the NGSS, I can help the science staff, and all our students, get a better handle on misinformation. "

"Media Literacy: Not Just for English Anymore!"

Steve Tetreault, school library media specialist

Holmdel (NJ) Township School District

One new thing

I have worked extensively with my school's ELA teachers in the past, but hardly at all with my science teachers. But I recently learned that the Next Generation Science Standards have a science media literacy component! This school year, I'm looking forward to collaborating with my science teachers to help students improve their media literacy skills regarding science in news and current events. And since the foundational skills are highly transferable, I want to carry those skills into other subject areas, too!

Staying positive

I get so much joy from seeing students write down titles of books when I booktalk with their classes. Before talking, I give each student a color-in bookmark; the back gives them room to write down "Titles I want to check out!" At the very least, they have a place to doodle. But seeing kids excited to look more deeply into a book I've told them about always makes me smile!

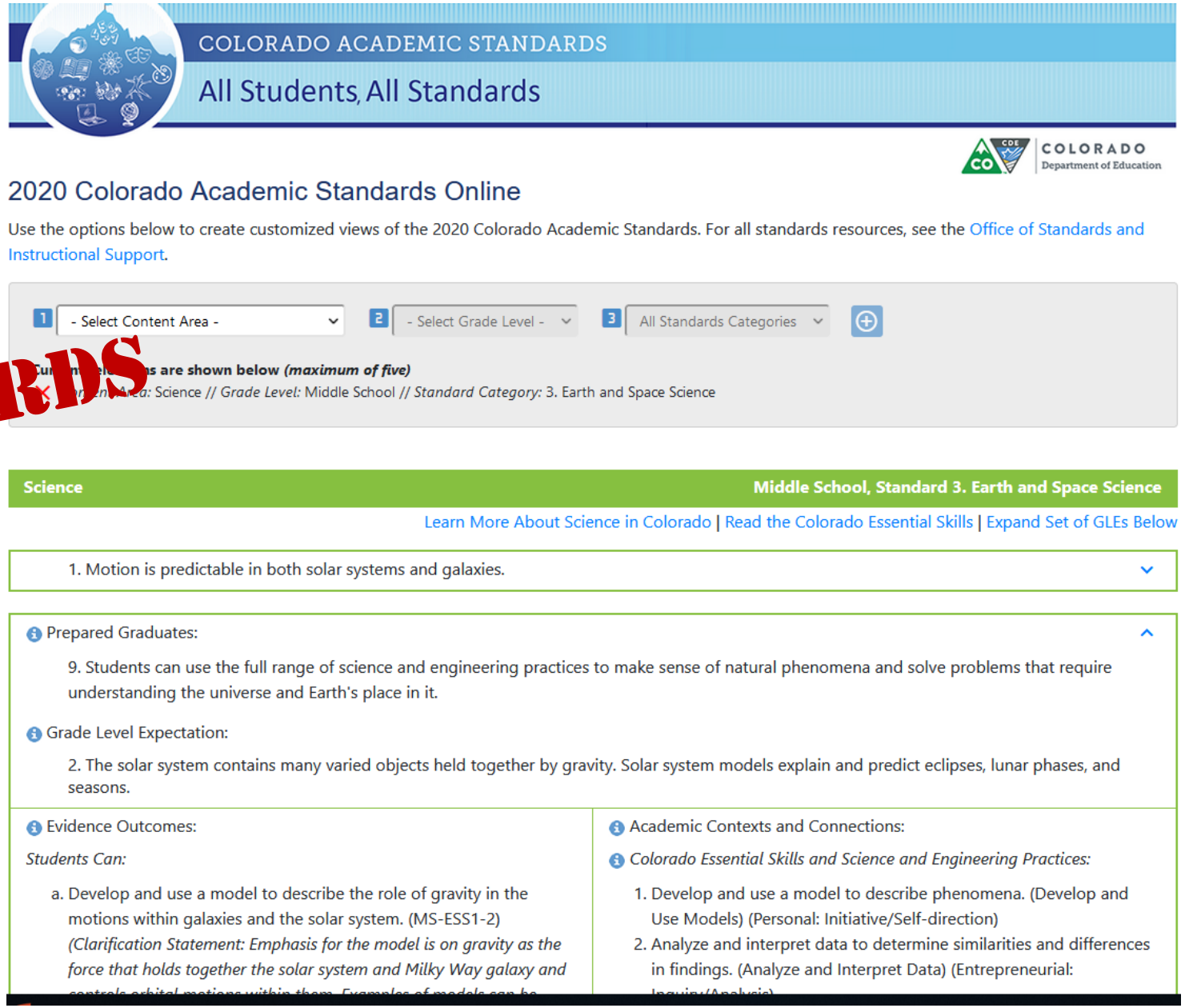
I have also started to attend school librarian-focused professional development opportunities, particularly in person. I get so pumped up from spending time in the same space as folks who care as deeply as I do about school librarianship, supporting staff, and helping students succeed! This year I was fortunate enough to attend several such events, starting with SLJ's 2022 Leadership Summit, which was AMAZING! The joy and excitement was palpable, and I came away feeling empowered and energized!

https://www.slj.com/story/12-School-Librarians-Back-to-School-Hacks-for-2023-24

Library, Not Just for English Anymore!

- School librarian, public librarians can offer STEM programming that is aligned with the standards
- At the library or at the school
- Create your own mini science museum exhibits!

THE STANDARDS



https://www.cde.state.co.us/apps/standards

Middle School, Standard 3. Earth and Space Science

Science — **Middle School, Standard 3. Earth and Space Science**

Learn More About Science in Colorado | Read ... Colorado Essential Skills | Expand Set of GLE ... elow

1. Motion is predictable in both solar systems and galaxies.

Prepared Graduates:

9. Students can use the full range of science and engineering practices to make sense of natural phenomena and solve problems that require understanding the universe and Earth's place in it.

Grade Level Expectation:

2. The solar system contains many varied objects held together by gravity. Solar system models explain and predict eclipses, lunar phases, and seasons.

Evidence Outcomes:

Students Can:

a. Develop and use a model to describe the role of gravity in the motions within galaxies and the solar system. (MS-ESS1-2) *(Clarification Statement: Emphasis for the model is on gravity as the force that holds together the solar system and Milky Way galaxy and controls orbital motions within them. Examples of models can be physical [such as the analogy of distance along a football field or computer visualizations of elliptical orbits] or conceptual [such as mathematical proportions relative to the size of familiar objects such as students' school or state].) (Boundary Statement: Does not include Kepler's Laws of orbital motion or the apparent retrograde motion of the planets as viewed from Earth.)*

b. Analyze and interpret data to determine scale properties of objects in the solar system. (MS-ESS1-3) *(Clarification Statement: Emphasis is on the analysis of data from Earth-based instruments, space-based telescopes, and spacecraft to determine similarities and differences among solar system objects. Examples of scale properties include the sizes of an object's layers [such as crust and atmosphere], surface features [such as volcanoes], and orbital radius. Examples of data include statistical information, drawings and photographs, and models.) (Boundary Statement: Does not include recalling facts about properties of the planets and other solar system bodies.)*

Academic Contexts and Connections:

Colorado Essential Skills and Science and Engineering Practices:

1. Develop and use a model to describe phenomena. (Develop and Use Models) (Personal: Initiative/Self-direction)
2. Analyze and interpret data to determine similarities and differences in findings. (Analyze and Interpret Data) (Entrepreneurial: Inquiry/Analysis)

Elaboration on the GLE:

1. Students can answer the question: What are the predictable patterns caused by Earth's movement in the solar system?
2. ESS1:B Earth and the Solar System: The solar system consists of the sun and a collection of objects, including planets, their moons, and asteroids that are held in orbit around the sun by its gravitational pull on them. This model of the solar system can explain eclipses of the sun and the moon. Earth's spin axis is fixed in direction over the short-term but tilted relative to its orbit around the sun. The seasons are a result of that tilt and are caused by the differential intensity of sunlight on different areas of Earth across the year. The solar system appears to have formed from a disk of dust and gas, drawn together by gravity.

Cross Cutting Concepts:

1. Patterns: Patterns can be used to identify cause ... and ... effect

Search for the school district's **Curriculum Map** or **Scope and Sequence**

Courses

Course Search

Courses by Grade Level

Courses by Department

Standards

Unit Details

Physical Science - Energy

Back

Department: Science **Grade Level(s):** 4th

Course: Grade 04 Science

: 3 Months

tion

lodule provides firsthand experiences in physical science dealing with the anchor phenomenon of energy. The ions focus on the concepts that energy is present whenever there is motion, electric current, sound, light, or t energy can transfer from one place to other. The driving question for the module is how does energy transfer ems?

stigate electricity and magnetism as related effects and engage in engineering design while learning useful f electromagnetism in everyday life. Students conduct controlled experiments by incrementally changing etermine how to make an electromagnet stronger. They investigate how the amount of energy transfer changes different masses hit a stationary object. Students explore energy transfer through waves (repeating patterns of esults in sound and motion. They gather information about how energy and fuels are derived from natural d how that affects the environment. They explore alternative sources of energy that use renewal resources.

rpret data from graphs to build explanations from evidence and make predictions of future events. They develop resent how energy moves from place to place in electric circuits and in waves. Students gain experiences that to the understanding of crosscutting concepts of patterns; cause and effect; systems and system models; and atter.

tion of each investigation in Energy and correlations to the Next Generation Science Standards, download the le Overview PDF.

	Duration
1: Energy and Circuits	Ongoing
2: The Force of Magnetism	Ongoing
Investigation 3: Electromagnets	Ongoing
Investigation 4: Energy Transfer	Ongoing
Investigation 5: Waves	Ongoing

School District of the Menomonie Area

SDMA Elementary Curriculum (Scope/Sequence) and Resource Report

K-5 Science - Resource Adoption - FOSS Science (Spring 2018)

Bookmark

rds adopted 2017. SDMA staff will update curriculum scope/sequence following year one of implementation/use of new science

Grade	Trimester I	Trimester II	Trimester III
	Earth Science - Units	Physical Science - Units	Life Science -Units
K	Trees and Weather	Materials and Motion	Animals Two by Two
1	Air and Weather	Sound and Light	Plants and Animals
2	Pebbles, Sand, and Silt	Solids and Liquids	Insects and Plants
3	Water and Climate	Motion and Matter	Structures of Life
4	Soils, Rocks, and Landforms	Energy	Environments
5	Earth and Sun	Mixtures and Solutions	Living Systems

HAMILTON EAST PUBLIC LIBRARY

FIELD TRIPS

GRADES 4-6

Fairy Tale STEM

Explore fairy tales through a different lens for both a literary and STEM focus!

BRING YOUR CLASS TO VISIT THE HAMILTON EAST PUBLIC LIBRARY IN FISHERS!

We have designed library experiences in the Youth department and in Ignite Studio for students in grades Pre-K through 12 around Indiana's Academic Standards to provide an interdisciplinary experience for your group.

- **Learn how the library works behind-the-scenes**
- **Explore the Youth department with a Librarian as a guide**
- **Participate in a literacy-focused activity**
- **Take part in hands-on maker activity in our Ignite Studio (Only for Grades 3 and up)**

Latinas in STEM Conference

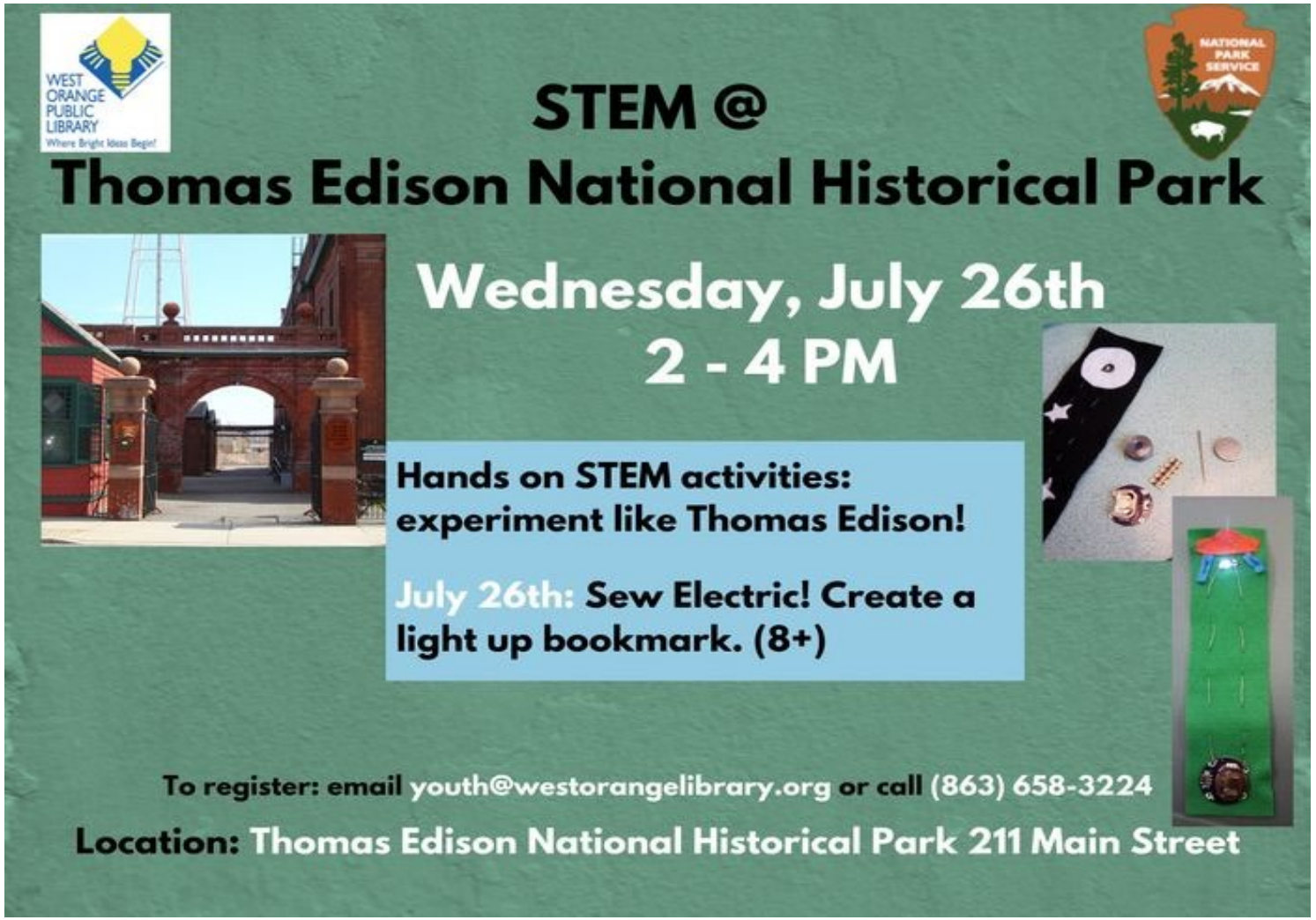
Alexander J. Sullivan School, Jersey City, NJ

latinasinstem

latinasinstem Thank you to everyone who help make the Latinas in STEM 101 conference at Alexander J. Sullivan School a success! We had a great time sharing our love for STEM with the students! #njstemmonth #latinasinstem

24w

Latinasinstem.com



This activity supports NJ Science Standards:

- 3-5-ETS1: Engineering Design

- 4-PS3: Energy:

Apply scientific ideas to design, test, and refine a device that converts energy from one form to another.

Resources

Colorado Academic Standards

https://www.cde.state.co.us/apps/standards/

Dr. Steven Tretrault, The Collaboratorium: Media Literacy in Science

https://knowledgequest.aasl.org/the-collaboratorium-media-literacy-in-science/

School Librarian Back-to-School Hacks for 2023-24

https://www.slj.com/story/12-School-Librarians-Back-to-School-Hacks-for-2023-24

Latinas in STEM

latinasinstem.com

Sew Electric Light up Bookmark project

Sewelectric.org

STAR net STEAM Equity Project

https://www.ala.org/tools/programming/steamequity

Strengthening Underserved Communities through Collaboration Between Librarians and Media Specialists.

https://www.alsc.ala.org/blog/2023/09/strengthening-underserved-communities-through-collaboration-between-librarians-and-media-specialists/

Photos of Multilingual Night:

https://www.woboe.org/site/default.aspx?PageType=3&DomainID=4&ModuleInstanceID=22&ViewID=6446EE88-D30C-497E-9316-3F8874B3E108&RenderLoc=0&FlexDataID=16556&PageID=1