

# **School District U-46**

## **Middle School Science Curriculum**

### **2023-2024**

## **Board of Education Presentation**

### **Presenter**

Deb McMullen, Coordinator for K-12 Science and Planetarium

Frankie Valenzia, Science Instructional Coach

Celia Banks, Director of Curriculum and Instruction

Dr. Josh Carpenter, Assistant Superintendent of Teaching and Learning

## **February 27, 2023**



# Purpose



This proposal outlines the standard distribution specific to the 7th and 8th grade science curriculum and seeks approval to initiate the use of these standards for the 2023-2024 school year.

[Middle School Proposal \(7th and 8th Grade\)](#)





# Alignment to Strategic Plan



## U46 STRATEGIC PLAN AUG 2022 Revised



### Student Success

It is our responsibility to ensure all students are engaged in rigorous learning, receive quality core instruction, and can develop the skills they need for better life chances and opportunities. By helping students develop self and peer agency, they will develop a growth mindset as they learn to expand their perspectives.

### Effective & Engaged Staff

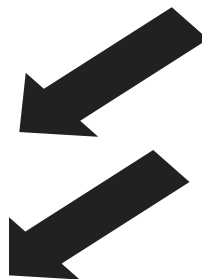
We will value, develop, recruit, and retain a forward-thinking, highly qualified, and diverse workforce. We will establish a robust process for measuring employee engagement to identify and proactively address employee engagement issues.

### Culture, Climate & Community

We will engage in meaningful and effective relationships with our students, families and the greater community and will ensure that our schools are welcoming and inviting places for all of our U-46 students and families. We will become a choice district that inspires families to join us.

### Excellence, Efficiency & Accountability

We will advocate for and utilize systems and resources that promote fiscal equity, operational excellence, efficiency and accountability. It is our moral imperative to change until all our systems measurably work for all students.



# Rationale



- The current middle school curriculum and resources were adopted by the U-46 Board of Education in the 2016 school year.
- The Illinois State Science Assessment is changing.
- Gap analysis of the science curriculum necessitates some changes K-12.
- School District U-46 is shifting to a middle school model requiring the science curriculum to expand.

# Process



- District Science Team formed to update common assessments
- Completed science gap analysis and created
  - U-46 [K-12 Science Alignment](#)
- Consulted the Illinois State Board of Education (ISBE) around Priority Standards
- Researched Middle School Models
  - [NGSS Appendix K](#)
  - [NGSS Model Course 1](#)
  - [NGSS Model Course 2](#)
  - [NGSS Course Maps for Middle School](#)
- Collected stakeholder feedback and made adjustments
- Reviewed current resources for compatibility

# SY 2021-22 District Science Team Members



## Subcommittee Members by Grade Band Teams

These are the members of each team who updated the common assessments.

K-2	3-5	6-8	Bio, Chem, Physics	AP Bio, AP Chem, AP Physics 1
Carolyn Rodgers Heather Fellows Peggy Hernandez	Theresa Pietrusiak Charity Diliberti Ashley Baldwin	Irene Osorio Becky Mulligan, Denise Joehl Michelle Rossi Holly Yee	Brittney Mallen Jesse Bossenga Devangi Sapra Katie Larsen Joanna Sharp	Victoria Griffin Chris Osberg
<b>Team Facilitator:</b> Deb McMullen	<b>Team Facilitator:</b> Vince Fosco	<b>Team Facilitator:</b> Frankie Valenzia	<b>Team Facilitator:</b> Deb McMullen	<b>Team Facilitator:</b> Deb McMullen

# SY 2021-2022 District Science Team Members



## Teaching Assignments and Certifications

Elementary Teachers	Middle School Teachers	High School Teachers
Irene Osorio, Creekside (Dual Language) Becky Mulligan, Sycamore Trails (Gen Ed) Theresa Pietrusiak, Washington, (Multigrade Gen Ed) Charity Diliberti, Century Oaks (Dual Language) Vince Fosco, ESC, Science Instructional Coach Peggy Hernandez, Planetarium Teacher	Ashley Baldwin, Tefft (Gen Ed) Denise Joehl, Abbott (SPED and Gen Ed) Michelle Rossi, Abbott (Bilingual SPED) Holly Yee, Ellis (ELL and Gifted) Carolyn Rodgers, Eastview (Gen Ed & Gifted) Frankie Valenzia, ESC, Science Instructional Coach	Heather Fellows, Teacher Leader for PD (Gen Ed) Victoria Griffin, EHS (Gen Ed and AP) Chris Osberg, EHS (Gen Ed and AP) Brittney Mallen, EHS (Gen Ed and AP) Jesse Bossenga, SEHS (Gen Ed and AP) Devangi Sapra, BHS (ELL) Katie Larsen, BHS (SPED) Joanna Sharp, SHS (Gen Ed)



# SY 2022-23 District Science Team Members

by subcommittee



Common Assessment Data Team	Middle School Model	High School	Honors Team	AP Team
Charity Diliberti Denise Joehl Katie Larson Julio Martinez-Suarez Karla Matus Heather Fellows Alexis Garcia  <b>Team Facilitator:</b> Vince Fosco	Michelle Rossi Holly Yee Carolyn Rodgers Theresa Pietrusiak Becky Mulligan  <b>Team Facilitator:</b> Frankie Valenzia	Peggy Hernandez Devangi Sapra Leticia Martinez-Valcuende Jesse Bossenga  <b>Team Facilitator:</b> Deb McMullen	JoAnna Sharp Victoria Griffin  <b>Team Facilitator:</b> Deb McMullen	Chris Osberg Brittney Mallen  <b>Team Facilitator:</b> Deb McMullen

# SY 2022-23 District Science Team Members



## Teaching Assignments and Certifications

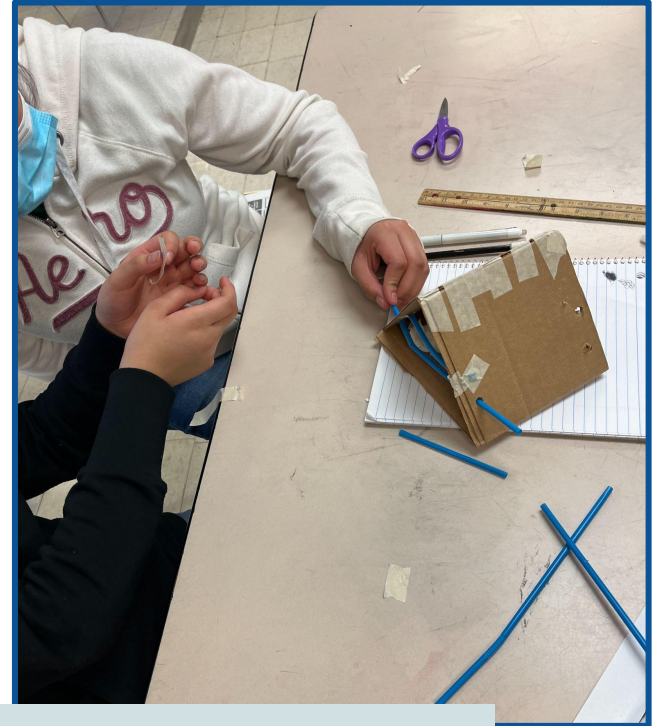
Elementary Teachers	Middle School Teachers	High School Teachers
Julio Martinez-Suarez, Coleman (DL) Karla Matus, Lincoln (DL) Alexis Garcia, Clinton (Gen Ed) Becky Mulligan, Sycamore Trails (Gen Ed) Theresa Pietrusiak, Washington, (Multigrade Gen Ed) Charity Diliberti, Century Oaks (DL) Vince Fosco, ESC, Science Instructional Coach Peggy Hernandez, Planetarium Teacher	Denise Joehl, Abbott (SPED, Gen Ed) Michelle Rossi, Abbott (Bilingual SPED) Holly Yee, Ellis (ELL & Gifted) Carolyn Rodgers, Eastview (Gen Ed & Gifted) Frankie Valenzia, ESC, Science Instructional Coach	Heather Fellows, Teacher Leader for PD (Gen Ed) Victoria Griffin, EHS (Gen Ed & AP) Chris Osberg, EHS (Gen Ed & AP) Brittney Mallen, EHS (Gen Ed & AP) Jesse Bossenga, SEHS (Gen Ed & AP) Devangi Sapra, BHS (ELL) Katie Larsen, BHS (SPED) Joanna Sharp, SHS (Gen Ed) Leticia Martinez Valcuende, BHS (DL)

# Proposal Recommendation



The Office of K-12 Science and Planetarium in collaboration with the District Science Team recommends that this distribution of standards implemented in the 2023-2024 school year.

## 6-8 Proposed Middle School Model **New Standards Bolded**



Go to slide 6 for the models used to develop the distribution of standards

# Recommended Resources



## Carolina Smithsonian STC

- Inquiry-based Instructional Resource
- Supports students answering questions/solving a problem
- Supports beginning with a phenomenon (big idea) and then works through tasks to build student understanding
- [OpenSciEd](#) Partnership
- English/Spanish



# Professional Development Plan



## We need science units that are:

- Bundled
- Storyline
- Phenomenon-based
- Three dimensional (SEP, DCI, CCC)
- Standards-Based Learning Assessments (SBLA)

## Practices that get us there:

- Reviewing model units and asking questions
- Build a unit with direct support and reflect using student evidence.
- Build a unit without direct support, get feedback from peers and make edits. Then reflect again with student evidence.
- Give feedback to a peer on a unit you didn't build.





# Professional Development Plan

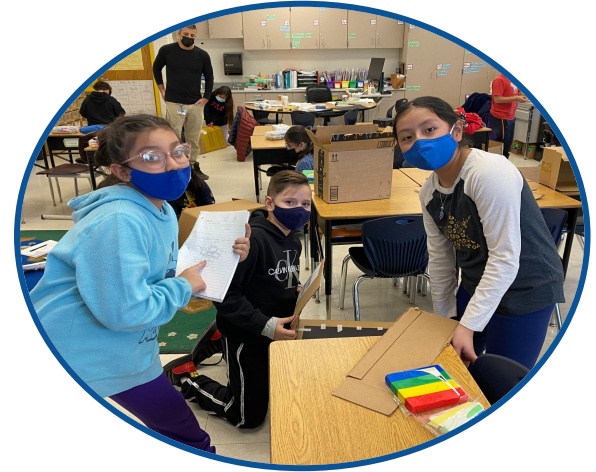


Date	Description
Summer 2023	PD to develop storylines that are bundled and supported with resources. (6-8th grade)
DCD/PPD	PD to develop storylines that are bundled and supported with resources. (6-8th grade)
Each Semester	Office of K-12 Science and Planetarium staff visit school to offer support to develop storylines.
Appointments	Instructional Coach support as individuals or in teams to develop storylines. Could be in-person or virtual.
Monthly	Middle School Science Committee - monthly meeting for the purpose of sharing resources and feedback. Each member would be responsible for carrying back what they learned to their school and grade level.
Open Enrollment	Access to asynchronous course that supports all aspects of UbD, 3Ds, and SBLA with timely, personalized feedback provided on all evidence submitted.
Summer 2024	PD to develop storylines that are bundled and supported with resources. (6-8th grade)

# Plans for the Evaluation of Change



- U-46 [Curriculum Cycle](#)
- Common Assessment Data Process
  - Data Analysis
  - Voluntary Reflection Forms
  - Provide supports for grade/course analysis of their data by school
  - Elementary, middle, and high school summary reports completed after each common assessment cycle and shared with stakeholders
- Professional Development Feedback



# Recommendations for Implementation



- Adopt the 7th and 8th Grade Curriculum Updates
- Implement them in the 2023-2024 School Year
- Support the Science Professional Development Plan for the Middle School Model
- Evaluate Science Curriculum and Instruction using common assessments and ISA data
- Continue to collect stakeholder feedback with Voluntary Reflection Forms and Discussion Boards





